Regional Trauma Plan

JULY 2015 – JUNE 2017

Developed by the NCRTC Executive Committee
Cayle Goertzen, MD, Chairman
State of Kansas
Governor Sam Brownback

Kansas Department of Health and Environment
Susan Mosier, MD, Secretary

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Message from the NCRTC

On behalf of the North Central Regional Trauma Council (NCRTC), we present to you the July 2015 – June 2017 NCRTC Regional Trauma Plan, as our roadmap for improvement of the NCRTC Trauma System. This plan is an adaptable and evolving document that will change as best practices and opportunities for performance improvement are identified and implemented.

The North Central Region of Kansas is committed to the development and implementation of a cohesive and inclusive trauma system including injury prevention and control, public access to emergency medical dispatch; prehospital emergency response and care, definitive hospital care, rehabilitation access, regional system evaluation, disaster preparedness and trauma registry and research.

Each piece of the NCRTC trauma system continuum-of-care is essential to prevent injuries and save lives within our region. The NCRTC and its many trauma system partners have continued to expand partnerships and collaborative efforts to strengthen and ensure the successful implementation of the NC regional trauma system.
Executive Summary

The Regional Trauma Councils (RTCs) are the cornerstone of the Kansas Trauma System. In accordance to regional bylaws, leadership for the RTCs are elected by the general membership and include physicians, nurses, hospital administrators, EMS and health department representatives. The RTC is comprised of members representing all areas of the trauma system: hospital, prehospital/EMS, and health departments.

The NCRTC serves as the coordinating and oversight body for the NC regional trauma system and is responsible for development and implementation of a comprehensive/inclusive regional trauma system. In collaboration with stakeholders and trauma system partners, the NCRTC writes the Plan which guides regional system development, implementation and evaluation. The development of this NC regional plan is an orchestrated “bringing together” of all trauma system stakeholder groups that contribute to the effective and efficient care of trauma patients in our community. The RTC meets at least quarterly to oversee implementation of the Plan, but may meet more frequently as determined by system demands.

The Kansas Department of Health & Environment (KDHE) was charged, under K.S.A. 75-5665, as the lead agency for development, implementation and evaluation of the statewide trauma system including support of the RTCs and administering a trauma registry.

In 1999, the Kansas legislature established the Advisory Committee on Trauma (ACT) Committee. Members are appointed by the Governor and are advisory to the Secretary of KDHE. The ACT members are recognized for their significant expertise and commitment to trauma care and system development in Kansas. They provide input and guidance to KDHE on developing a comprehensive, statewide trauma system. The ACT gives major stakeholders a voice in the policy process and functions to integrate the activities of the RTCs. A member from the NCRTC represents the region on the ACT. The ACT meets quarterly.

The Plan is composed of administrative and clinical components. The Plan goals are adapted from the state trauma plan, the Benchmark, Indicator, and Scoring (BIS) assessment, and NCRTC strategic planning priorities. This plan is used to guide the NCRTC strategic planning priorities.

Administrative Components

**System Leadership:** The RTC is responsible for regional assessment, planning and assurance of the trauma system for their region. KDHE is the lead agency of the Kansas Trauma Program and provides coordination, planning, and support to the RTC. The ACT provides input and guidance to KDHE on developing a comprehensive, statewide trauma system and gives major stakeholders a voice in the policy process, and it functions to integrate the activities of the RTC.

**System Development:** The development of a strong, efficient, well-coordinated regional trauma system is vital in providing optimal trauma care. The challenge to the trauma system is to ensure that
progress is made in a systematic and measured way. This plan addresses the need for a successful integration of a quality philosophy in all aspects of the trauma system and implementation of objectives and strategies and performance improvement that move the region toward the accomplishments of identified local and regional goals. Advancing the regional trauma system by being the best we can be through a continuum of care from injury prevention through return to the community with the highest quality of life possible needs to be embedded in all aspects of the regional council work.

**System Public Information and Education:** The NC region strives to provide education and inform local policy makers and members of the public as to the benefits of a trauma system and the importance of prevention.

**System Finance:** The goal of trauma system financing is to provide the public with an efficient system that provides optimal trauma care for injured patients. Trauma systems need sufficient funding to implement a statewide and regional system of care—one focused on each component of care from prevention through acute care and rehabilitation, including all-hazards preparedness. A major NCRTC goal and system need is to be a good steward of the contract funds provided through the State and support all system components.

**Clinical Components**

**Injury Prevention and Control:** Injury prevention and control is a key component of the regional trauma system because it offers the greatest potential for reducing the financial burden of trauma care, as well as reducing morbidity and mortality. The RTC focuses on injury prevention based on trauma registry data. Regional data shows that teen motor vehicle crashes and elderly falls are the primary cause of unintentional death and injury in the region and statewide. The RTC has identified the need to continue to provide funding support for evidence based injury prevention activities in the area of teen drivers and falls.

**Emergency Preparedness:** Each disaster is unique and places tremendous strain on communities. Disaster planning requires a cooperative multidisciplinary effort by the local medical community; police and fire departments, local, regional, and national governments and industry to devise a comprehensive strategy to minimize mortality, injury, and destruction of property.

**Prehospital Care:** Prehospital care and access is a critical component of the regional trauma system. The prehospital trauma system is driven by the goal of getting the right patient to the right place at the right time. The goals of the prehospital component of the trauma system are to prevent further injury, initiate resuscitation, and provide safe and rapid transport of injured patients. Treatment protocols should be established to guide trauma patient care, and patients should be taken directly to the center most appropriately equipped and staffed to handle their injuries.

**Acute Hospital Care:** Care of the injured takes place at various hospitals within the health care system ranging from critical access hospitals to designated trauma centers. While it is recognized
that hospitals have varying resources committed to the care of the injured patient, rural hospitals are
often the port of entry for many patients and they, as well as other hospitals, should have consistent
standards, adequately trained trauma care workforce and a performance improvement program.

**Special Populations:** For the purpose of the Plan, special populations include the elderly, pediatric
and morbidly obese populations. The elderly population have different spectrum of injury patterns
such as greater number of falls, higher mortality and morbidity from similar injuries when compared to
younger adults. There are also significant physiologic changes and a greater number of co-
morbidities.

More children die of injury than of all other causes in Kansas. For injured children who survive,
severe disability may become a lifelong problem requiring functional or custodial care. Injured
children require special resources. Effective care of injured children requires a comprehensive
approach by developing and implementing effective strategies for injury prevention, improving system
of emergency medical care for children, and provide the best trauma care at every level available.

The prevalence of obesity in the country continues to increase steadily. In trauma, obesity is
associated with higher morbidity and mortality. Treatment and care of morbidly obese patients
involves compassion, respect, and dignity. Without appropriate equipment, management of these
patients can be a risk for both the healthcare provider and patient. Regional trauma councils are
encouraged to identify the resources and equipment that are available within the region to assist in
providing care for these patients. Hospitals and EMS providers should know the specifications of
their equipment for weight, girth, and width limits.

**Rehabilitation Availability:** Trauma rehabilitation plays a key role in returning the injured patient back
to their community with the highest quality of life. Acute care should be consistent with preservation
of optimal functional recovery. The ultimate goal of trauma care is to restore the patient to pre-injury
status. Not only is this effort best for the patient, it also is less costly. When rehabilitation results in
independent patient function, there is major cost savings compared with costs for custodial care and
repeated hospitalizations.

**System Evaluation:** Data collection, system evaluation, and performance improvement are essential
for function of the trauma system. It involves a continuous multidisciplinary effort to measure,
evaluate, and improve both the process of care and the outcome. All hospitals collect and submit
data to the State trauma registry.

**Region Demographics**
The North Central region is comprised of 12 counties: Clay, Cloud, Dickinson, Ellsworth, Jewell,
Lincoln, Mitchell, Osborne, Ottawa, Republic, Saline, and Smith. The region is primarily rural in
nature: one county classified as semi-urban, one classified as densely settled rural, six classified as
rural, and four classified as frontier. There are 16 EMS agencies (Appendix A) and 13 hospitals
(Appendix A) within the NC region that provide trauma care. The North Central region has one ACS verified and state designated level III trauma center and two state designated level IV trauma centers:

**ACS Verified and State Designated Trauma Centers**

**Level III**

Salina Regional Health Center  
400 S. Santa Fe  
Salina, Kansas 67402

**State Designated Trauma Centers**

**Level IV**

Mitchell County Hospital Health Systems  
400 W. Eighth  
Beloit, Kansas 6720

Republic County Hospital  
2420 G Street  
Belleville, Kansas 66935
**ADMINISTRATIVE COMPONENTS**

**System Leadership**

<table>
<thead>
<tr>
<th>Goal 1</th>
<th>There is a viable and active NCRTC comprised of multi-disciplinary representatives; hospital administrators, physicians, nurses, health departments, and EMS to plan, implement, and evaluate an inclusive regional trauma system.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective 1:</td>
<td>RTC will review council general membership, annually, for compliance with the NCRTC bylaws.</td>
</tr>
<tr>
<td>Strategy 1:</td>
<td>Conduct a review of the general membership annually and revise/update membership as appropriate.</td>
</tr>
<tr>
<td>Strategy 2:</td>
<td>Review membership structure for possible other positions needed to advance the regional system.</td>
</tr>
<tr>
<td>Objective 2:</td>
<td>NCRTC executive committee will encourage general membership members, stakeholders, and trauma partners to attend executive committee meetings and become engaged in implementing and evaluate regional trauma system initiatives and activities.</td>
</tr>
<tr>
<td>Strategy 1:</td>
<td>Identify and maintain a membership recruitment committee.</td>
</tr>
<tr>
<td>Strategy 2:</td>
<td>Ensure that members, stakeholders, and trauma partners have access to regional council and subcommittee meeting dates, agendas, minutes and meeting materials through email alerts (sent in advance) and website postings.</td>
</tr>
<tr>
<td>Strategy 3:</td>
<td>Conduct an annual general membership meeting to promote participation in RTC activities, trauma system implementation, and evaluation.</td>
</tr>
<tr>
<td>Strategy 4:</td>
<td>Act as a forum for regional trauma issues to providers and consumers within the trauma care continuum.</td>
</tr>
<tr>
<td>Strategy 5:</td>
<td>Monitor component compliance with the Plan.</td>
</tr>
<tr>
<td>Strategy 6:</td>
<td>Encourage participation by stakeholders in the annual statewide leadership meeting of the executive committees.</td>
</tr>
</tbody>
</table>
| Objective 1: NCRTC will plan, implement, and evaluate a comprehensive trauma system for the North Central region that will complement the statewide system and be revised as needed. | Strategy 1: Encourage input from the trauma community on regional trauma system design, operation, and evaluation, and develop a process to expeditiously implement changes.  
Strategy 2: Distribute the Plan to stakeholders in the North Central region. |
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Objective 2: Support trauma center standards for Level I, II, III and IV designation.</td>
<td>Strategy 1: Facilitate resource development to meet the identified trauma resource needs of the North Central region.</td>
</tr>
</tbody>
</table>
| Objective 3: Identify and promote guidelines for resuscitation and early transfer of major trauma patients from emergency receiving facilities to designated Trauma Centers with appropriate resources. | Strategy 1: Develop trauma transfer guidelines which can be adopted by all facilities treating injured patients in the North Central region.  
Strategy 3: Promote transfer/communication agreements.  
Strategy 4: Update the regional transfer card on an annual basis. |
| Objective 4: Encourage participation in data collection, trauma training, performance improvement programs, and other mechanisms of system improvement. | Strategy 1: Monitor the trauma registry report (missing data & benchmark indicators) at executive committee meetings and address any identified needs.  
Strategy 2: Review regional benchmark data report and make recommendations for system change.  
Strategy 3: Monitor progress using a regional priority dashboard.  
Strategy 4: Encourage active participation in regional PI committees, processes, and planning.  
Strategy 5: Provide financial support as available for trauma education, trauma registry and performance improvement training. |
| Objective 5: Assure that RTC funds awarded are utilized appropriately to meet the needs of the region. | Strategy 1: Provide oversight to assure that hospital and EMS agencies are accountable and responsible for appropriate use and expenditure of funds. |
## Public Information and Education

**Goal 3**
Edute the public about the NC trauma care system and the purpose of this plan is to inform the general public, decision-makers and the healthcare community about the role and function of the NC Regional Trauma System.

<table>
<thead>
<tr>
<th>Objective 1: Develop a public education plan.</th>
<th>Strategy 1: Implement a regional public information campaign to educate the public about the regional trauma system.</th>
</tr>
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<tbody>
<tr>
<td></td>
<td><strong>Strategy 2:</strong> Identify topics and talking points to increase public awareness of the system and value.</td>
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<td><strong>Strategy 3:</strong> Develop pre-packaged public information messages to send to media.</td>
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<td><strong>Strategy 4:</strong> May is trauma awareness month. Develop media release to recognize trauma awareness month with signing of proclamation with Governor, county and city elected officials and distribute trauma awareness materials.</td>
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<td></td>
<td><strong>Strategy 5:</strong> Develop a comprehensive list of media contacts.</td>
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<td><strong>Strategy 6:</strong> Develop a speaker’s bureau.</td>
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<thead>
<tr>
<th>Objective 2: Provide information to policy makers on key trauma system initiatives and system needs.</th>
<th>Strategy 1: Identify a regional legislative liaison on an annual basis.</th>
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<tbody>
<tr>
<td></td>
<td><strong>Strategy 2:</strong> Identify key policy makers and/or advocates for the trauma system.</td>
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<td></td>
<td><strong>Strategy 3:</strong> Develop a priority platform plan for distributing information about the trauma system including the trauma DVD and annual report.</td>
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<tr>
<td></td>
<td><strong>Strategy 4:</strong> Use the RTC specific trauma registry data to describe the trauma system.</td>
</tr>
</tbody>
</table>

| Objective 3: Share information with stakeholder organizations on key initiatives (i.e. EMS regional council, regional homeland security council, regional health department council). | Strategy 1: Provide NCRTC information to other stakeholder organizations. |
## System Finance

### Goal 4
There is adequate, long-term and sustainable funding to ensure a financially viable trauma system. The trauma system will be recognized as a public good and therefore valued and adequately funded not only for the clinical care actually delivered, but also for the level of readiness required to meet the needs of all injured patients in Kansas.

<table>
<thead>
<tr>
<th>Objective 1: On an annual basis, the NCRTC will develop and implement an operation budget that aligns with the identified goals, objectives and strategies of the Plan.</th>
<th>Strategy 1: Develop and implement an itemized budget annually based on priority needs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy 2: Review financial reports (budget, expenditure spreadsheet) at each executive committee meeting.</td>
<td>Strategy 3: Research alternate funding for initiatives and projects.</td>
</tr>
<tr>
<td>Strategy 4: Provide a quarterly report of expenditures to the ACT.</td>
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</tbody>
</table>
## CLINICAL COMPONENTS

### Injury Prevention and Control

<table>
<thead>
<tr>
<th><strong>Goal 5</strong></th>
<th><strong>Objective 1:</strong> NCRTC will promote evidenced-based primary injury prevention activities and projects regionally.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce injury-related morbidity and mortality in the region through primary injury prevention efforts, with trauma system partners, using trauma registry data to identify injury causes and evaluate program outcomes.</td>
<td><strong>Strategy 1:</strong> Annually, will identify the top injury causes using trauma registry data and other data sources as appropriate. <strong>Strategy 2:</strong> Work with EMS and public health systems to identify at least one evidence-based strategy in which will decrease the leading cause of injury for the region. <strong>Strategy 3:</strong> Work with local health departments and identified health care delivery systems, such as rural health clinics and physician offices, to disseminate injury prevention materials. <strong>Strategy 4:</strong> Identify available funding sources to support evidence-based and/or best practices activities. <strong>Strategy 5:</strong> Allocate funds (if available) based on identified injury prevention needs through a grant process that includes an evaluation component. <strong>Strategy 6:</strong> Coordinate with injury prevention partners to compile a regional (statewide) list of trauma center-based primary injury prevention activities, projects, and programs by county and injury mechanism to post on the Trauma program website <a href="http://www.kstrauma.org">www.kstrauma.org</a>.</td>
</tr>
</tbody>
</table>
### Emergency Preparedness

<table>
<thead>
<tr>
<th>Goal 6</th>
<th>Have a trauma system prepared to respond to emergency and disaster situations in coordination with regional and state disaster plans.</th>
</tr>
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<tbody>
<tr>
<td><strong>Objective 1:</strong></td>
<td>The trauma system, EMS, and all-hazard response plans will be integrated and operational.</td>
</tr>
<tr>
<td><strong>Strategy 1:</strong></td>
<td>Identify ways to integrate trauma system response into all-hazard state and regional disaster plans.</td>
</tr>
<tr>
<td><strong>Strategy 2:</strong></td>
<td>Invite emergency preparedness key stakeholders to participate at regional council meetings (i.e. provide verbal or written reports of activities in the North Central Region).</td>
</tr>
<tr>
<td><strong>Strategy 3:</strong></td>
<td>Encourage NCRTC leadership involvement in local and regional disaster preparedness planning and training.</td>
</tr>
<tr>
<td><strong>Objective 2:</strong></td>
<td>Perform a gap analysis on the resources assessment for trauma emergency preparedness.</td>
</tr>
<tr>
<td><strong>Strategy 1:</strong></td>
<td>Collaborate with regional emergency preparedness coordinators to assess resource gaps.</td>
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</table>
### Goal 7
**Establish and implement guidelines specific to prehospital care and transport of trauma patients that result in timely and safe delivery to trauma centers.**

<table>
<thead>
<tr>
<th>Objective 1: Encourage adoption of current standard of care trauma treatment guidelines to provide consistent prehospital trauma patient treatment.</th>
<th><strong>Strategy 1:</strong> Support the EMS Service Directors and EMS stakeholders in the implementation and education of state recommended prehospital trauma guidelines.</th>
</tr>
</thead>
</table>
| **Objective 2:** Promote the transport of trauma patients to the appropriate facility with the resources available to meet the patient’s needs. | **Strategy 1:** Regionally work closely with the EMS Medical Directors and EMS stakeholders to develop a strategy to implement the CDC field triage guidelines (Appendix B).  
**Strategy 2:** Support the EMS Service Directors and EMS stakeholders in implementation and education of the CDC field triage guidelines. |
| **Objective 3:** Promote the availability of an adequate, appropriately-trained, and diverse prehospital workforce. | **Strategy 1:** Determine number of PHTLS classes needed in the region annually (evaluate regional trauma training needs).  
**Strategy 2:** Develop a plan to allocate funding support (if available) for PHTLS based on need. |
| **Objective 4:** Ensure that EMS personnel have a basic knowledge and awareness of the regional trauma system elements and system functions. | **Strategy 1:** Integrate information on the state and regional trauma system into PHTLS classes.  
**Strategy 2:** Provide presentation at annual state EMS conferences (i.e. KEMTA, KEMSA).  
**Strategy 3:** Support an information exchange forum through social networking technology (i.e. Facebook, Twitter, etc.).  
**Strategy 4:** Encourage trauma centers to network with EMS agencies to provide information on the trauma system. |
### Acute Hospital

#### Goal 8
Establish and maintain a regional (statewide) network of trauma centers, meeting or exceeding standards, for operation and provision of quality trauma care in coordination with all other trauma system participants.

<table>
<thead>
<tr>
<th><strong>Objective 1:</strong> Identify additional Trauma Center and Trauma System capacity needs within the region.</th>
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<tbody>
<tr>
<td><strong>Strategy 1:</strong> The region will complete a system inventory that identifies the availability and distribution of current capabilities and resources.</td>
</tr>
<tr>
<td><strong>Strategy 2:</strong> Support a statewide “how to” level IV trauma center designation workshop.</td>
</tr>
<tr>
<td><strong>Strategy 3:</strong> Support non-designated participating hospitals to be brought up to Trauma Center designation status.</td>
</tr>
<tr>
<td><strong>Strategy 4:</strong> Encourage that all hospitals work with local EMS agency (ies) to develop trauma treatment protocols.</td>
</tr>
<tr>
<td><strong>Strategy 5:</strong> Ensure that all trauma centers work with local EMS agency (ies) to develop trauma treatment protocols including level IV trauma centers.</td>
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<thead>
<tr>
<th><strong>Objective 2:</strong> All designated and non-designated trauma centers will actively participate in regional performance improvement programs.</th>
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<tbody>
<tr>
<td><strong>Strategy 1:</strong> Designated trauma centers will have representation at annual meetings and specific regional PI meetings as identified by the regional PI committee leadership.</td>
</tr>
<tr>
<td><strong>Strategy 2:</strong> Encourage non-designated trauma center participation in specific regional PI meetings as identified by the regional PI committee leadership.</td>
</tr>
<tr>
<td><strong>Strategy 3:</strong> Encourage active participation in regional PI committees, processes, and planning.</td>
</tr>
<tr>
<td><strong>Strategy 4:</strong> Funding priority for education will be given to those hospitals that submit data to the statewide trauma registry.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Objective 3:</strong> Assure the availability of an adequate, appropriately-trained, and diverse emergency and trauma care workforce.</th>
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</thead>
<tbody>
<tr>
<td><strong>Strategy 1:</strong> Develop a sustainable regional trauma education plan to meet the needs of TNCC®, ATLS®, and RTTDC® in the region.</td>
</tr>
<tr>
<td><strong>Strategy 2:</strong> Advocate and educate on the need for nursing personnel to be verified in TNCC®.</td>
</tr>
<tr>
<td><strong>Strategy 3:</strong> Advocate and educate on the need for emergency department midlevel practitioner and physician personnel to be certified in ATLS®.</td>
</tr>
<tr>
<td><strong>Strategy 4:</strong> Advocate and educate on the need for hospitals to host a RTTDC®.</td>
</tr>
<tr>
<td><strong>Strategy 5:</strong> Establish a trauma telemedicine network to link trauma centers to rural/community hospitals to provide trauma education.</td>
</tr>
</tbody>
</table>
# Special Populations

## Goal 9
The appropriate match of resources will be identified for injured patients with special needs, such as elderly, pediatric, and morbidly obese patients.

| Objective 1: Evaluate and identify the region’s ability to meet the pediatric care needs and make recommendations for further system development. | Strategy 1: Review trauma registry data for the age group 0-14 to identify trends in injury patterns.  
Strategy 2: Utilize regional data to develop recommendations for meeting pediatric care needs for further trauma system planning.  
Strategy 3: Develop and distribute a pediatric resource guide. |
|---|---|
| Objective 2: Evaluate and identify the region’s ability to meet the geriatric care needs and make recommendations for further system development. | Strategy 1: Identify an age standard for a geriatric patient.  
Strategy 2: Collaborate with regional EMS Medical Directors in developing prehospital geriatric treatment protocols (example: treatment protocol of patient on anticoagulants).  
Strategy 3: Utilize regional data to develop recommendations for meeting geriatric care needs for further trauma system planning.  
Strategy 4: Develop and distribute a geriatric resource guide. |
| Objective 3: Evaluate and identify the region’s ability to meet the morbidly obese trauma care needs and make recommendations for further system development. | Strategy 1: Identify available resources (such as CT scanners) that can accommodate the needs of the morbidly obese.  
Strategy 2: Identify prehospital transport systems that can accommodate the needs of the morbidly obese patient.  
Strategy 3: Promote utilization of EMResource for most current facility resources. |
<table>
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<tr>
<th><strong>Rehabilitation Availability</strong></th>
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</table>
| **Goal 10**  
The region will have well-integrated rehab programs. Post-acute care will focus on helping patients achieve greater independence, a higher degree of functionality, and a faster return to productivity. |
| **Objective 1:** Identify rehab programs that provide rehab services for injured patients. | **Strategy 1:** Develop a rehab program resource guide and distribute to hospitals in the region. |
| Objective 1: Develop mechanisms that support prehospital agency participation in data submission. | **Strategy 1:** Review regional trauma data for submission of EMS records as required by state statute.  
**Strategy 2:** Encourage completion and submission of a minimal data set to KEMSIS. |
|---|---|
| Objective 2: Review aggregate data on system performance to identify opportunities for improvement. | **Strategy 1:** Assure trauma center/hospitals participate in the state trauma registry.  
**Strategy 2:** Review and analyze missing and under reported data.  
**Strategy 3:** Recommend and review regional benchmark indicators to evaluate system performance, improve care, and further system planning in the region. |
| Objective 3: There is an organized and regularly monitored system to ensure the patients are expeditiously transferred to the appropriate, system-defined trauma facility. | **Strategy 1:** Identify indicators for inclusion in regional PI committee trending reports.  
**Strategy 2:** Analyze data variances related to utilization of CDC field triage guidelines for EMS transport.  
**Strategy 3:** Analyze data variances related to transfer of severely injured patients. |
| Objective 4: Develop a trauma system data linkage system from all entities in the region to include EMS, trauma centers, other medical facilities, and other data sources that may be available. | **Strategy 1:** Evaluate different methodologies linking trauma registry data and other data sets such as traffic records and death records. |
### Appendix A
#### NCRTC Hospital Listing

<table>
<thead>
<tr>
<th>Hospital Name</th>
<th>Address</th>
<th>City, State, Zip Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clay County Medical Center</td>
<td>617 Liberty</td>
<td>Clay Center, Kansas 67432</td>
</tr>
<tr>
<td>Could County Health Center</td>
<td>1100 Highland Drive</td>
<td>Concordia, Kansas 66901</td>
</tr>
<tr>
<td>Ellsworth County Hospital</td>
<td>1604 Alyward Street</td>
<td>Ellsworth, Kansas 67439</td>
</tr>
<tr>
<td>Herington Municipal Hospital</td>
<td>100 E. Helen</td>
<td>Herington, Kansas 67449</td>
</tr>
<tr>
<td>Jewell County Hospital</td>
<td>100 Crestvue</td>
<td>Mankato, Kansas 66956</td>
</tr>
<tr>
<td>Lincoln County Hospital</td>
<td>624 N. Second</td>
<td>Lincoln, Kansas 67455</td>
</tr>
<tr>
<td>Memorial Hospital</td>
<td>511 NE 10th</td>
<td>Abilene, Kansas 67410</td>
</tr>
<tr>
<td>Mitchell County Hospital Health Systems</td>
<td>400 W. Eighth</td>
<td>Beloit, Kansas 67420</td>
</tr>
<tr>
<td>Osborne County Memorial Hospital</td>
<td>424 W. New Hampshire</td>
<td>Osborne, Kansas 67473</td>
</tr>
<tr>
<td>Ottawa County Health Center</td>
<td>215 E. Eighth</td>
<td>Minneapolis, Kansas 67467</td>
</tr>
<tr>
<td>Republic County Hospital</td>
<td>2420 G Street</td>
<td>Belleville, Kansas 66935</td>
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<tr>
<td>Salina Regional Health Center</td>
<td>400 S. Santa Fe</td>
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</tr>
<tr>
<td>Smith County Memorial Hospital</td>
<td>614 S. Main Street</td>
<td>Smith Center, Kansas 66967</td>
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## NCRTC Emergency Medical Services (EMS)

### Type Legend
- **Type 1**: Paramedic or Nurse staffed 24 hours
- **Type 2A**: BLS Service with the capability/availability to upgrade to Type 1
- **Type 2**: BLS Service only

<table>
<thead>
<tr>
<th>Service Name</th>
<th>Address</th>
<th>City</th>
<th>State</th>
<th>Zip Code</th>
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<td>BENNINGTON AMBULANCE SERVICE</td>
<td>584 N 180TH RD</td>
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<td>LIFE TOUCH EMS INC</td>
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<td>SALINA</td>
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Appendix B
2011 CDC Guidelines for Field Triage of Injured Patients

2011 Guidelines for Field Triage of Injured Patients

1. Measure vital signs and level of consciousness
   - Glasgow Coma Scale ≤13
   - Systolic Blood Pressure (mmHg) <80
   - Respiratory Rate ≥20 breaths per minute, or need for ventilatory support
   - <20 in infant aged <1 year

   NO
   - Assess anatomy of injury
   - All penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee
   - Chest wall instability or deformity (e.g., flail chest)
   - Two or more proximal long-bone fractures
   - Crushed, depressed, mangled, or pulseless extremity
   - Amputation proximal to wrist or ankle
   - Pelvic fractures
   - Open or depressed skull fracture
   - Paralysis

   YES
   - Transport to a trauma center. Steps 1 and 2 attempted to identify the most seriously injured patients. These patients should be transported preferentially to the highest level of care within the defined trauma system.

2. Assess mechanism of injury and evidence of high-energy impact
   - Falls
     - Adult: >20 feet (one story is equal to 10 feet)
     - Child: >10 feet or two or three times the height of the child
   - High-risk auto crash
     - Intrusion, including roof: >12 inches occupant site; >18 inches any side
     - Ejection (partial or complete) from automobile
     - Death in same passenger compartment
     - Vehicle telemetry data consistent with a high risk of injury
     - Auto vs. pedestrian/bicyclist thrown, run over, or with significant (>20 mph) impact
     - Motorcycle crash >20 mph

   NO
   - Assess special patient or system considerations

   YES
   - Transport to a trauma center, which, depending upon the defined trauma system, need not be the highest level trauma center.

3. Assess special patient or system considerations
   - Older Adult
     - Risk of injury/health increases after age 55 years
     - SBP <110 may represent shock after age 65
     - Low impact mechanisms (e.g., ground level falls) may result in severe injury
   - Children
     - Should be triaged preferentially to pediatric capable trauma centers
   - Anticoagulants and bleeding disorders
     - Patients with head injury are at high risk for rapid deterioration
   - Burns
     - Without other trauma mechanism: triage to burn facility
     - With trauma mechanism: triage to trauma center
   - Pregnancy ≥20 weeks
   - tISS provider judgment

   NO
   - Transport according to protocol

   YES
   - Transport to a trauma center or hospital capable of timely and thorough evaluation and initial management of potentially serious injuries. Consider consultation with medical control.

When in doubt, transport to a trauma center.
Find the plan to save lives, at www.cdc.gov/FieldTriage