



09-324

Louisiana Emergency Response Network Board

Vision

Louisiana will have a statewide comprehensive and integrated network that decreases deaths and incidents of morbidity and mortality due to trauma and time-sensitive illness in Louisiana by maximizing the integrated delivery of optimal resources for patients who ultimately need acute trauma, stroke or STEMI care. The network will also serve as a vital resource for disaster preparedness and interface with local and state resources in support of Louisiana's all disasters response.

Mission

The mission of the Louisiana Emergency Response Network (LERN) is to safeguard the public health, safety, and welfare of the people of the state of Louisiana against unnecessary trauma and time-sensitive related deaths and incidents of morbidity.

Philosophy

The Louisiana Emergency Response Network, as a statewide comprehensive and integrated system for trauma, stroke, and STEMI is dedicated to providing access to high quality, definitive care for all in the state of Louisiana. LERN is committed to proactively building integrated systems that are responsive to the provider communities and citizens around the state. LERN is driven by the basic principle that any preventable death resulting from treatment delay is unacceptable.

Executive Summary

Each year, thousands of Louisianans suffer and die needlessly from traumatic injuries, strokes, and STEMI incidences (commonly called heart attacks). In the vast majority of cases, the difference between life and death hinges on a well-coordinated team response and specialized medical training plus the public awareness and modern technology to tie it all together.

LERN continues to build upon lessons learned post-hurricanes Katrina, Rita, Ike, Gustav, and Isaac. Disaster planning and response are an integral part of LERN's day-to-day operations. LERN assists in everything from small scale Mass Casualty Events via routing patients to definitive care, sending electronic notifications via collaboration with the Designated Regional Coordinator Network (DRC Network) to larger events by leading the Emergency Medical Services Tactical Operations Unit (EMS-TOC). LERN stands ready to serve when called upon, and to ensure success, LERN participates in regional drills throughout the state with key stakeholders.

LERN was granted the necessary funding to begin the implementation of a system that coordinates the patient's day-to-day emergent care needs with the closest most appropriate facility and the resources to provide definitive trauma and time-sensitive care. LERN is well on its way to improving access to regional trauma patient care and safeguarding the people of Louisiana

against deaths and incidents of morbidity due to trauma. Recently, the LERN Board of Directors approved protocols to address STEMI and stroke.

LERN's nine Regional Commissions continue to engage local pre-hospital providers, doctors and nurses, and homeland security professionals in the development and implementation of protocols to improve trauma and time-sensitive illness response in their region. Through these commissions, partnerships between public and private health care entities continue to meet the mission of LERN. These committed individuals working together demonstrate Louisiana's commitment to implement best-in-class, evidence-based trauma, STEMI, and stroke response care. There is no question that this work translates into saved lives.

LERN has participation agreements with EMS and hospital providers in all regions of the state. These agreements facilitate the use of LERN's pre-hospital destination protocol which is designed to deliver trauma patients to definitive care. LERN will continue to refine integration with the Governor's Office of Homeland Security, specifically ESF-8, to ensure that the communication and information sharing systems between state emergency operations centers and regional response systems are comprehensive and effective.

LERN Goals

- Goal I** *Decrease risk adjusted trauma-related deaths and incidents of morbidity and mortality due to trauma in Louisiana.*
- Goal II** *Maximize the return on investment (ROI) of state dollars and supplement of general fund dollars with alternative funding sources.*
- Goal III** *Ensure that all citizens gain access to the statewide networks for trauma and time sensitive related illnesses.*
- Goal IV** *Establish and codify protocols that specify the role of LERN in ESF-8 activities.*

Accomplishments Since 2011:

- Signed MOU with DHH and Emergency Support Function 8 (ESF-8) Health and Medical Response. This requires LERN to serve as the information coordinator for unfolding events in Louisiana on a 24/7 basis.
- LERN Board approved business associate, data use, and participation agreements for the State Trauma Registry and the State EMS Registry.
- LERN Board approved the data dictionary for the State Trauma Registry and the State EMS Registry.
- Seven hospitals are submitting data to the State Trauma Registry for CY 2015. That is an increase of 1 hospitals from 2014. There are approximately 39,936 patient records in the registry. A comprehensive registry is paramount in performance improvement and outcomes reporting. The development of this registry represents huge progress for the state and efforts will continue to expand the number of hospitals submitting data.

- LERN is a partner with the Louisiana Ambulance Alliance in the Electronic-Rural Health Information Technology (E-RHIT) grant. This grant award is for \$900,000 over a three year period. The grant funds will allow for the Alliance to buy equipment (laptops, toughbooks, etc.) and pay for the linkage fee to the State EMS Registry. The development of the pre-hospital electronic medical record will facilitate performance improvement initiatives in the pre-hospital setting.
- Since the initiation of the E-RHIT grant, there are now 28 providers submitting data to the State EMS registry. This is up from 9 participants in 2014 and 23 participants in 2015. This expansion has been facilitated in large part by a data analyst LERN hired with grant funds provided by the Louisiana Highway Safety Commission.
- Established the LERN Newsletter in an effort to facilitate coalition building and to inform stakeholders and the public regarding LERN initiatives, accomplishments, and key events related to building systems of care. Established a Facebook page to promote injury prevention, promote LERN educational initiatives and recognize regional partners.
- Enhancements were made to the LERN Website which serves as another avenue for communication to LERN stakeholders, policy makers, and the public regarding the need for and evolution of the trauma and time-sensitive illness systems.
- Capitalized on federal match dollars by entering into a Low Income Needy Care Collaborative Agreement (LINCAA) for the LERN Communication Center staffing contract.
- The American College of Surgeons (ACS) verified a Level II Trauma Center established in Region 6 (Alexandria) and in Region 2 and Our Lady of the Lake Hospital. LERN provided consulting support to Rapides Regional Medical Center and Our Lady of the Lake which facilitated the ACS trauma center verification.
- Routed 14,846 trauma patients in CY 2012 – an 18% increase in volume from CY 2011. In 2014 the LERN Call Center routed 15,602 patients. In 2015, the LERN Call Center routed 16,641 patients (highest volume/year to date).
- Completed comparative research to understand the breadth of funding alternatives utilized by selected other state trauma systems. Research completed on existing state dedications that could serve as practical alternative sources of recurring funding for LERN.
- Negotiated communication center redundancy operations via the AMR staffing contract. This resulted in the closure of LERN's Shreveport Communication Center. All consoles and equipment moved to the Baton Rouge Center for a cost savings of \$100,000.
- LERN Board approved moving forward with the development of statewide systems of care for STEMI and stroke. Functional statewide stakeholder work groups continue to meet and develop the components of these systems.
- Hired a part-time cardiologist to lead the development of the STEMI Network.
- Hired a part-time vascular neurologist to lead the Stroke Network.
- LERN Board approved LERN Stroke Hospital Levels and the LERN Stroke Care Guideline.
- LERN Board approved the following for STEMI:

- Triage protocol for pre-hospital providers,
 - LERN STEMI Care Process Flowchart,
 - STEMI Receiving Center Requirements, and
 - Thrombolysis guideline for STEMI Referral Centers.
- Conducted and taught 32 Trauma Nursing Core Curriculum (TNCC) classes in CY 2012. A total of 290 students obtained certification in the TNCC. LERN Continues to teach this course – 15 classes in CY 2014 (202 nurses). Since 2012 LERN has conducted 80 TNCC classes and 912 registered nurses have obtained certification.
 - Began teaching Emergency Nursing Pediatric Course in 2014. Since 2014, LERN has facilitated 22 classes and 226 registered nurses have obtained certification.
 - In 2015, LERN developed a 12 Lead EKG Course for pre-hospital and hospital providers. Since then, we have conducted 14 classes and 447 students have completed the course. The instructors for this course volunteers that LERN has partnered with as we built the STEMI Network. This is led by the STEMI Physician Champions on the LERN Regional Commissions. Classes have been held in Regions 1, 6, 7, and 8. We look forward to expanding to all regions.
 - LERN Board approved a revision of the agency’s strategic priorities – February 2016.
 - LERN developed a white paper titled *Development of a System of State-designated Trauma Centers in Louisiana* to describe and promote the development of an ideal trauma center network in Louisiana.
 - LERN developed a white paper titled *Building a STEMI System in Louisiana* to describe and promote the development of an ideal STEMI network in Louisiana.
 - LERN developed a white paper titled *Building a Stroke System in Louisiana* to describe and promote the development of an ideal Stroke network in Louisiana.
 - All CEO’s across the state attest every two years to stroke and STEMI capability based on requirements set by the LERN Board.
 - As of October, 2015 there 4 verified trauma centers in the state. In 2010 there were only two. 52.9% of the population has access to a Level I or Level II trauma center within a 60 minute drive time. North Oaks Medical Center in Hammond awaits designation report from the American College of Surgeons for Level II Trauma Center. They were surveyed in February of 2016.
 - LERN Board adopted Trauma Program Requirements for those centers working towards trauma center designation. As of October, 2015 there were two trauma programs – North Oaks Medical Center and Lakeview Regional Medical Center. As of 6/8/2016, Lafayette General has also attested to a Level II Trauma Program with plans to seek verification from the ACS in the next 12 months.
 - Promulgated rules for Stroke and STEMI Center Recognition for Louisiana.
 - Recognized at the 2016 International Stroke conference as one of 12 states that have enacted policies around the recognition of multi-level stroke facility designations.
 - Developed a Regional STEMI Report.

- Developed reporting process for Level III Stroke Centers. Data is reviewed by the Stroke Medical Director with feedback reports to each stroke center.

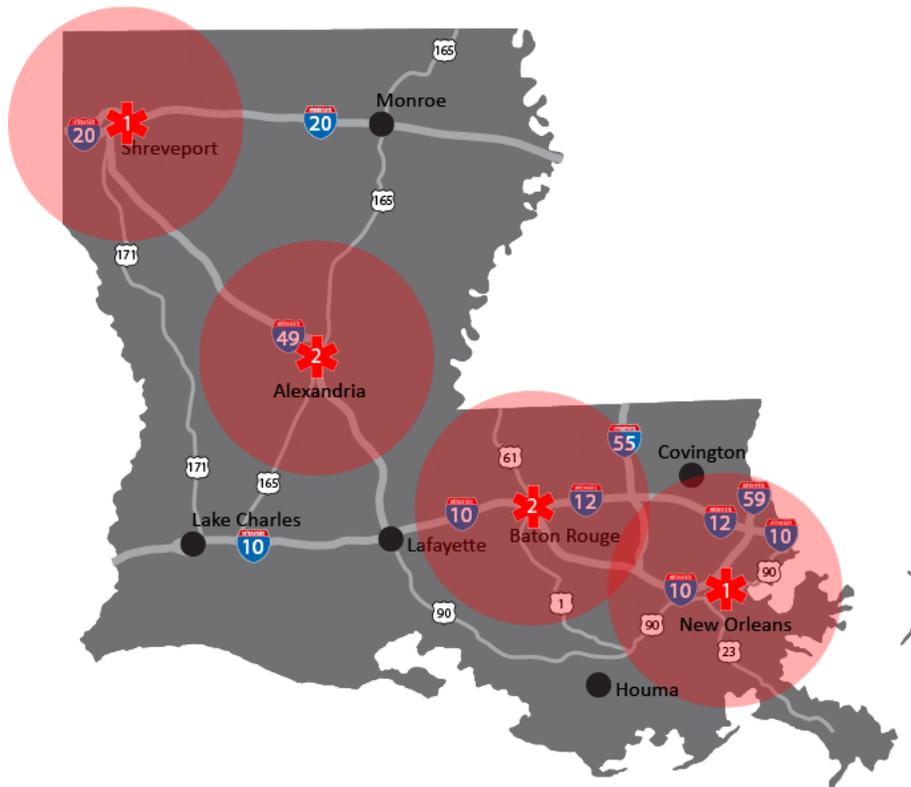
The LERN Board of Directors is committed to being good stewards of LERN’s resources as they work to achieve the metrics of the strategic plan. The priority is to save lives through the development and implementation of mature statewide systems to serve citizens suffering from traumatic injury, strokes, and STEMI incidents.

State Outcome Goal

State Outcome Goal No. 7 – Better Health:

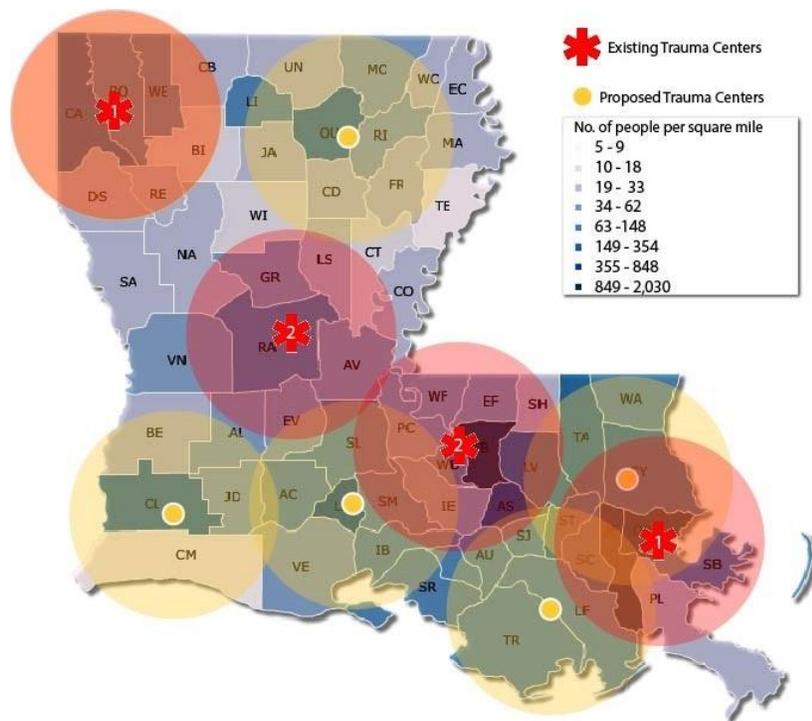
Traumatic injury is the leading cause of death for children and adults ages 1-44 in the United States today. The total cost of trauma, including years of productive life lost, prolonged or permanent disability, and the huge financial costs, makes traumatic injury one of the most important threats to public health and safety in the United States. While most injuries can be treated at a local emergency department, if you are severely injured, getting care at a Level I Trauma Center can lower the risk of death by 25 percent. Nearly 45 million Americans **do not** have access to a Level I or Level II trauma center within one hour (the “golden hour”) of being injured. The US Centers for Disease Control and Prevention ranks Louisiana as the 8th highest state for injury deaths (2007-2009). Given the dearth of trauma centers in Louisiana and given the importance of trauma centers to statewide trauma systems, the LERN Board of Directors has focused on promoting and facilitating the building of an ideal Louisiana network of trauma centers.

The red circles on the map depict trauma center access within the Golden Hour of injury.



This map depicts the LERN Board of Directors' vision of a comprehensive trauma center network that allows all citizens of Louisiana good access to a Trauma Center.

While LERN works with key stakeholders to achieve the Board's vision of nine trauma centers strategically located across the nine regions of the state, the LERN Communication Center continues to direct injured patients to the closest most appropriate hospital based on the resources required to meet patient needs.



Strategic Links

- United States Department of Homeland Security
- Goals I and III Healthy People 2010
- Governor's Office of Homeland Security and Emergency Preparedness
- Federal Emergency Management Administration
- Centers for Disease Control and Prevention

LERN Goals

Goal I *Decrease risk adjusted trauma-related deaths and incidents of morbidity and mortality due to trauma in Louisiana.*

Objective I.1:

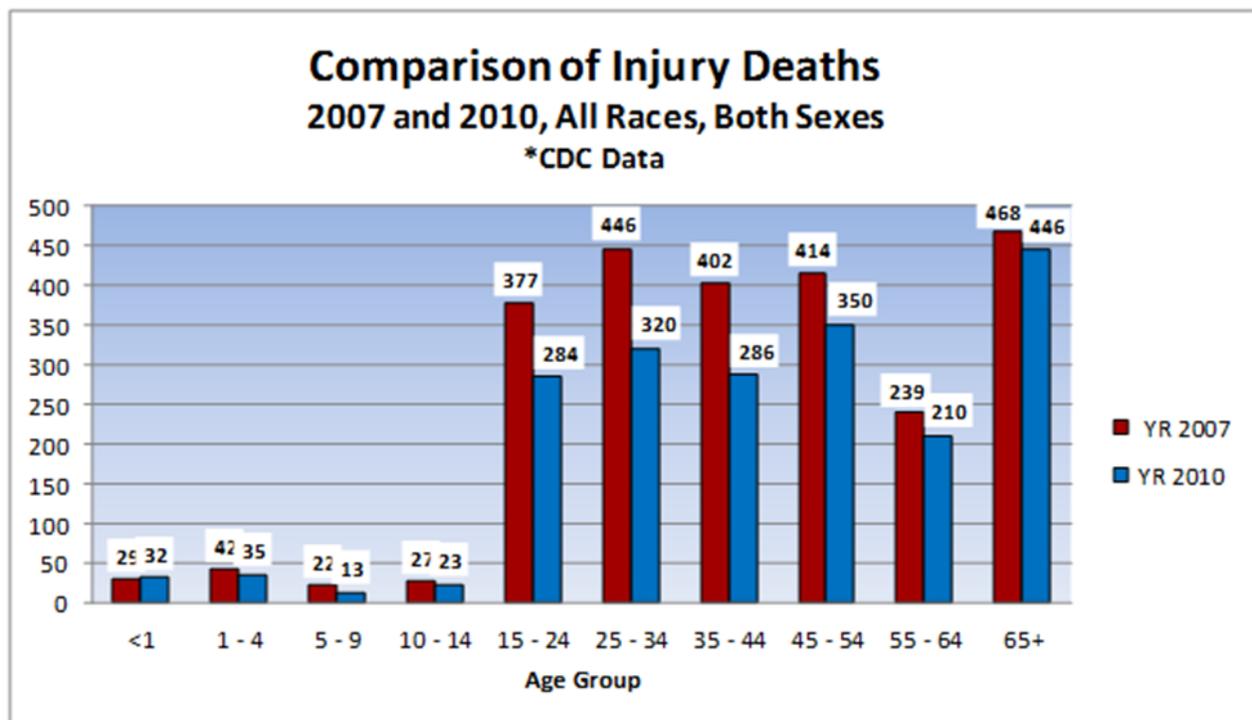
Decrease the percentage of risk adjusted trauma-related deaths by 5% by June 30, 2021.

Strategies:

- 1.1 Review and accept the recommendations from the American College of Trauma Surgeons Consultation (conducted in June of 2009).
- 1.2 Conduct annual strategic prioritization workshops to refine LERN’s strategic priorities – utilizing available guidance from the American College of Surgeons (ACS) and LERN’s ongoing best practices research.
- 1.3 Develop a fully-functioning, integrated, and comprehensive statewide Trauma Registry by 2021.
- 1.4 Increase the number of state designated Level 2, and Level 3 trauma centers in the state.

Performance Indicator:

- Reduction in trauma-related morbidity and risk adjusted mortality rate for Louisiana.



Goal II *Maximize the return on investment (ROI) of state dollars and supplement of general fund dollars with alternative funding sources.*

Objective II.1:

Reduce the total percentage of LERN's budget devoted to administrative costs by an average of 3% per year through June 30, 2021.

Strategies:

- 1.1 Conduct periodic planning sessions to define and refine roles and responsibilities of LERN staff, contractors, and volunteers.
- 1.2 Identify grant sources to secure federal and private foundation dollars to support LERN's mission.

Performance Indicators:

- Administrative costs as a total percentage of the overall LERN budget.
- Non-state dollars generated to support LERN activities.

Goal III *Ensure that all citizens gain access to the statewide networks for trauma and time sensitive related illnesses.*

Objective III.1:

Through the LERN Central Office and Call Center Operations Activity, continue the operational activity of the LERN Central Office and the LERN Call Center located in Baton Rouge to encompass 100% of the citizens of Louisiana in directing the transport of traumatically injured patients to definitive care within sixty minutes of injury each year through June 30, 2021.

Strategies:

- 1.1 Continue operation of the LERN Communication Center.
- 1.2 Continue consultation services to hospitals seeking trauma center designation
- 1.3 Continue education efforts (TNCC, ENPC, Rural Trauma Team Development Course, Pre Hospital Trauma Life Support, Pediatric Care After Resuscitation, Trauma Care After Resuscitation) to facilitate a competent hospital workforce at trauma centers and community hospitals.

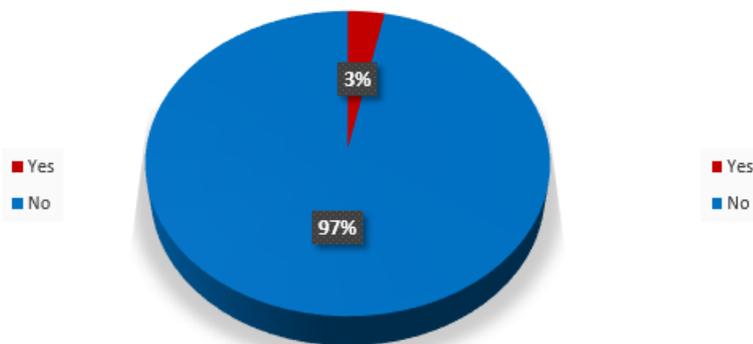
Performance Indicators:

- Percentage of patients routed by LERN who do not require a secondary transfer for definitive care. Goal of less than 6%.
- Percentage of traumatically-injured patients directed by LERN that are transported to an appropriate care facility within an hour of their injury
- Percentage of Louisiana citizens covered by the LERN network
- Number of state designated trauma centers.

- Number of trauma courses and number of students certified in each course/year.

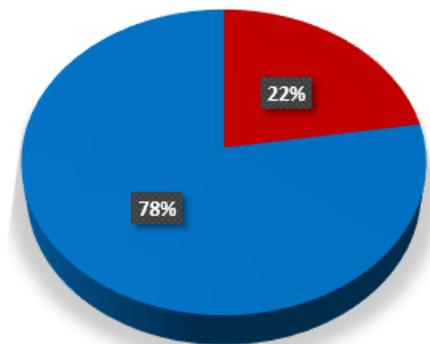
Only 4% of the patients directed by the LERN Call Center in 2015 required a secondary transfer.

Patients Directed by LERN



In comparison and noted in the figure below, when the LERN Communication direction is not followed, the secondary transfer rate for injured patients 22%.

Patients Not Directed by LERN



Objective III.2

Develop a statewide system of STEMI care to improve outcomes for Louisiana citizens regardless of where they live in the state. System to include components recommended by LERN's STEMI Design the System workgroup.

Strategies:

- 2.1 Provide annual update on STEMI system progress to the regional stakeholders.
- 2.2 Continue to map geographic distribution of STEMI Resources statewide.
- 2.3 Provide 12 Lead EKG Interpretation education in each region of the state.
- 2.4 Establish ACTION regional report to drive performance improvement.

- 2.5 Increase participation in ACTION registry and use regional report to assess outcomes of care for STEMI patients.

Performance Indicators:

- STEMI system physician champion appointed to each region to assist with regional presentations, education, and advocacy.
- Map updated and posted to LERN Website to coincide with attestations every 2 years.
- At a minimum, one 12 Lead EKG Course conducted in each region of the state by December 2016. To continue through 2021.
- ACTION regional report obtained from AHA quarterly beginning 1st qtr 2016.
- Increase number of participants by 4 by 2021 (current # of participants 11).

Objective III.3

Develop a statewide system of stroke care to improve outcomes for Louisiana citizens regardless of where they live in the state. System to include final recommendations from the Stroke Design the System Workgroup relative to: Public recognition of stroke symptoms and community education, Emergency/timely evaluation of all strokes, and EMS transfer protocols to facilitate timely administration of tPA when appropriate.

Strategies:

- 3.1 Establish stroke physician champions in each region of the state. Outreach to ED medical directors in regions without a physician champion to determine prospects.
- 3.2 Work with hospitals across the state to engage in Primary Stroke Center accreditation or the use of tele-medicine to increase access to vascular neurologists.
- 3.3. Launch stroke webinar series in order to cover the 11 areas of identified need for further education.

Performance Indicators:

- Stroke System physician champion appointed to each LERN region to assist with regional presentations, education, and advocacy.
- Increase the number of primary stroke centers in the state and the number of tele-medicine enabled centers.
- Complete Webinar series by December 2016 and post to LERN Website to facilitate access for future education.

Objective III.4

Develop a statewide EMS Registry consistent with national standards.

Strategies:

- 4.1 Continue work with the ERHIT group and the LERN Data Assistant to expand the EMS registry by a minimum of 5 EMS agencies.
- 4.2 Conduct research to identify common practices and standard reports utilized by other state EMS registries. Develop recommendations for LERN Board and EHRIT group.
- 4.3 Submit data to NEMSIS annually.

Goal IV *Establish and codify protocols that specify the role of LERN in ESF-8 activities.*

Objective IV.I:

LERN will establish protocols to effectively assist and participate in ESF-8 activities by June 30, 2019.

Strategies:

- 1.1 Expand LERN's role in ESF-8 activities to include manager of EMS Tactical Operations Center..
- 1.2 Engage designated regional coordinators network and promote regional MCI protocols.
- 1.3 Utilize the regional commission structure and regional partners to ensure involvement in one MCI/Disaster drill annually in each region of the state.

Performance Indicators:

- Percentage of hospitals having emergency room services that participate in the LERN network.
- Percentage of EMS agencies that participate in LERN.
- Percentage of Designated Regional Coordinators that participate in LERN directed MCI planning.