

MICHIGAN ANNUAL REGION 1 TRAUMA REPORT-2021

REGION 1

Statutory Reference: R325.132 Rule 8 (3) (a) At least quarterly, a region shall submit evidence of ongoing activity, such as meeting notices, minutes to the department. Annually the regional trauma advisory council shall file a report with the department which describes progress toward system development, demonstrates ongoing activity, and includes evidence that members of the regional trauma advisory council are currently involved in trauma care.

OVERVIEW AND ASSESSMENT OF RESOURCES

Region 1 is home to Lansing, Michigan's capital, and per the 2020 census has a population of 983,857 million citizens. The region, covering 9 counties, has 11 hospitals, 74 Emergency Medical Services (EMS) agencies and 8 health departments. The region's 7 Medical Control Authority Medical Directors are actively engaged in the Regional Trauma Network (RTN) activities. The RTN Board continues to work with the Region 1 hospitals and EMS agencies as new trauma facilities become verified and designated to update the triage and transport process and get the right patient to the right facility in a timely manner.

The Region 1 Trauma Network started in 2014 with one Level I trauma facility in the entire region. One of the priority areas over the past 6 years has been supporting trauma facility development, despite staff changes and COVID-19 continuing to surge already crowded hospitals. In the past year many of the Region 1 facilities were at 90% capacity or greater for extended periods. Region 1 still has 4 facilities yet to go through the verification and designation process, which has been slowed due to the pandemic.

The Regional Trauma Coordinator (RTC) continues to work with the trauma program staff readying facilities for verification. Trauma staff have excelled in supporting the system, sharing examples of PIPS documents, policies, or activation criteria they developed, despite being reassigned to support the care of COVID-19 patients. The seasoned trauma program staff continue to mentor newer programs and serve as subject matter experts (SME's) on the regional committees. At the end of 2021 Region 1 had one American College of Surgeons (ACS) Level I trauma facility, one ACS Level II trauma facility, one ACS Level III trauma facility, two State of Michigan verified Level III trauma facilities, and two State of Michigan verified Level IV facilities. There are four facilities that has applied for State of Michigan Level 4's and are awaiting verification visits.

Medical Control Authorities:

MCA Name	Medical Director
Tri County Medical Control Authority	Robert Orr, DO
Jackson County Medical Control Authority	Michael Fill, DO
Washtenaw/Livingston Medical Control Authority	Robert Domeier, MD
Lenawee County Medical Control Authority	Donald Brock, DO
Gratiot County Medical Control Authority	Tonya Baker, RN
Hillsdale County Medical Control Authority	Osama Sheth, MD
Shiawassee County Medical Control Authority	Don Edwards, DO

Designation Status of Facilities in Region:

Facility Name	Designated Yes or No	Level of Designation
Sparrow Hospital	Yes	Level I
Henry Ford Allegiance	Yes	Level II
Mid-Michigan Gratiot	Yes	Level III
McLaren Greater Lansing	Yes	Level III
Eaton Rapids Medical Center	Yes	Level IV
Sparrow Clinton	Yes	Level IV
Memorial Healthcare	Yes	Level III
Sparrow Eaton	No	Provisional Level IV
ProMedica Charles and Virginia Hickman Hospital	No	Provisional Level IV
Hillsdale Hospital	No	Provisional Level IV
St. Joe Livingston	No	Provisional Level IV

Governance:

Regional Trauma Network (RTN) Board

	Name and Title
Chairperson	Robert K Orr, DO
Vice Chairperson	Vacant

Regional Trauma Advisory Council (RTAC)

	Name and Title
Chairperson	Robert K Orr, DO
Vice Chairperson	Vacant

Regional Professional Standards Review Organization

	Name and Title
Chairperson	Ben Mosher
Vice Chairperson	Penny Stevens

Governance Activity Report:

- **Regional Trauma Network Board (RTN Board):** The Region 1 RTN Board continues to provide guidance on regional trauma network building, inclusion of EMS in trauma activities and development of the RPSRO. Region 1 continues to struggle with regular attendance of the MCA Medical Directors at meetings, and the RTC continues to work on educating MCA Medical Directors on the role they play in the RTN. The RTC and RTN chair continue stress the importance of meeting attendance. COVID-19 continues to affect the meeting attendance and frequency. The MCA Medical Directors who have remained constant educate the regional trauma partners on the protocol updates and evidence-based paramedicine regarding the care of trauma patients. The District 1 Healthcare Coalition Medical Director provides preparedness updates and education at the RTAC meetings. 2021 found Region 1 faced with several surges in COVID-19 activity, and the continued reassignment of hospital trauma staff to help care for the hospitalized and critical care patients with the virus. Many of the trauma programs are still not back to full staffing, as Michigan is still dealing with the ongoing surge of patients.
- **Regional Trauma Advisory Council (RTAC):** The RTAC meetings have continued to evolve as the trauma network matures. In 2021, the RTAC meetings focused heavily on addressing injury prevention topics of focus, updating the regional injury prevention plan, and developing injury prevention materials for facilities to use for their communities. 2021 also found a shift to looking at special populations, most notably the care of pediatric patients. With the RTC involved in BETP pediatric committees, much of the information was shared at RTAC meetings. One RTAC meeting was held during a pediatric MCI exercise for the District 1 Healthcare Coalition (D1RMRC) partners. Trauma staff was able to give input on how the trauma staff would respond to this type of disaster event.

In 2021, and with the continued surge of hospitalized and critical care patients due to COVID-19, the Region 1 Trauma Network has worked very closely with the D1RMRC to ensure a continued connection between trauma and preparedness. The D1RMRC has provided regular updates regarding COVID and has provided supplies like PPE and medical countermeasures to hospitals. The trauma network adopted the D1RMC's communication plan and continues to educate trauma partners on the alternate communication options available if there is an event causing the loss of the normal means of communication. The RTAC created a one-page document with the different communication options available. At every RTAC meeting there is an agenda item regarding preparedness, pediatrics, and injury prevention. Injury Prevention picks a different topic every month to do injury prevention awareness on. The tools created by the committee include informational flyers, brochures, and social media ready posts.

- **Regional Professional Standards Review Organization (RPSRO):** The Region 1 RPSRO has established processes for meetings and data review. Each facility has designated staff to participate on the RPSRO, and at the upcoming meeting the group will select a new chairperson. The RPSRO inventories are completed every 6 months and presented to the committee.

Work Plan Objective Progress and Highlights

Injury Prevention

Indicator 306.2: The RTN is active within the region in the monitoring and evaluation of regional injury prevention activities and programs.

Regional Score: (3) The RTN monitors and evaluates injury prevention activities and programs in the region.

Objective: The RTN will request and review available Region 1 injury data which will be used to provide guidance on regional injury prevention plans and IP education and outreach needs. Data will be monitored quarterly.

Progress: Completed - Based on past injury prevention data the region continues to focus on falls and seat belt usage. For 2021 they included suicide prevention education, hunter safety, seatbelt and car seat usage, TBI education, falls and intimate partner violence. Stop the Bleed courses have been conducted in all Region 1 counties and all hospitals have trainers for their communities. Most courses have been put on hold due to COVID concerns, however the RTC was able to help incorporate the training into Concealed Pistol License (CPL) courses held at a local business. This was very well received by the course attendees.

Indicator 203.5: The RTN has developed a written injury prevention plan. The injury prevention plan is data driven and targeted programs are developed based upon high injury risk areas. Specific goals with measurable objectives are incorporated into the injury prevention plan.

Regional Score: (3) There is a written plan for coordinated injury prevention programs within the region that is linked to the regional trauma system plan, and that has goals and time-measurable objectives.

Objective: By December 2020, and upon request through December 2023, all the Region 1 Facilities will update the RTN with current injury prevention activities offered. This information will be used to update the regional injury prevention resource and regional plan. The regional plan will include specific strategies to address regionally identified (data driven) issues relating to trauma. A priority focus will be driving safety (seatbelts, car seats, texting, etc.), gun safety, Amish buggy safety (Some R1 counties have a large Amish population, as well as the fact Michigan has had recent fatal buggy accidents with multiple victims) and Stop the Bleed education.

Progress: Completed, with updates done as needed.

Injury Prevention

Indicator 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. The RTN will promote evidenced based primary injury prevention activities and projects.

Regional Score: (1) There is no written public information and education plan on trauma system or injury prevention and control.

Objectives:

1. Throughout the application period the Region 1 Trauma Network partners will focus on utilizing evidenced based injury prevention programs for the injury prevention initiatives chosen for regional participation.
2. The Region 1 Trauma Network will continue to educate trauma partners and the community on the regional trauma initiatives and activities. The Injury Prevention Committee will develop a series of injury prevention social media posts to be shared on hospital and EMS social media sites.

Progress: The injury prevention committee created several injury prevention tools for use by hospital partners. These tools were created using evidence-based information from sources like the Centers for Disease Control, the Michigan Department of Natural Resources, and the National Highway Traffic Safety Administration.

Communications

Indicator 302.10: There are established procedures for EMS and trauma system communications for major EMS events or multiple jurisdiction incidents that are effectively coordinated with the overall regional response plans.

Regional Score: (4) There are written regional EMS communications procedures for major EMS events and multiple jurisdiction incidents that are coordinated with adjacent jurisdictions, with the overall regional response plan and with the incident management system.

Objective:

1. The Regional Trauma Network will encourage each Medical Control Authority to have a written communication plan for Mass Casualty Incidents and communicate plan changes or updates to their hospital partners and the RTN.
2. District 1 Healthcare Coalition leadership will be included in RTAC education sessions, to ensure understanding of preparedness plans as they relate to Trauma and Mass Casualty.

Progress: Completed - All Region 1 hospitals participate in the District 1 Regional Medical Response Coalition communications planning which addresses loss of communications. This plan and modes of communication are tested monthly. The RTAC meetings include healthcare preparedness education as an agenda item.

Indicator 302.9: There is a procedure for communications among medical facilities when arranging for inter-facility transfers including contingencies for radio or telephone system failure.

Regional Score: (2) Inter-facility communication procedures are generally included in patient transfer protocols for each medical facility but there is no regional procedure.

Objective:

1. Throughout the application period, the RTN will continue to educate and update trauma partners on the communication system redundancies that can be utilized for hospital inter-facility transfers during a communication failure incident. Preparedness staff will continue to update the RTAC during quarterly meetings.
2. The RTN will develop and disseminate a fact sheet for hospital staff outlining regional communication procedures and redundancies to be utilized in the event of a communication failure.

Progress: Completed - The RTAC created a one-page document with all the communication modes available to partners utilized by the region.

Communications

Indicator 105.7: An assessment of the needs of the general medical community, including physicians, nurses, pre-hospital care providers, and others, concerning trauma system information, has been conducted.

Regional Score: (2) Plans are in place to provide information to the broad medical community in response to a particular trauma system event or issue.

Objective:

1. By June 2021, the RTN will conduct an assessment of trauma partners concerning preferences for updates on trauma system information, updates and educational opportunities. Once the responses are collected the RTC will share the results and will utilize the preferred methods of communications.
2. The regional trauma coordinator will continue to utilize email communications to update partners on trauma related activities.

Progress: The R1 partners prefer email communication for time sensitive information, so the RTC continues to utilize this format. The regional partners have also expressed they want to continue the quarterly newsletters done by the RTC. In 2021, due to the COVID-19 workload, there were 2 newsletters sent out to the partners in May and November.

Infrastructure

Indicator 302.1: There is well- defined regional trauma system medical oversight integrating the needs of the trauma system with the medical oversight of the overall EMS system.

Regional Score: (3) The RTN has adopted state approved regional trauma protocols.

Objective:

1. The RTN will review Region 1 EMS trauma protocols yearly, to continue integrating the needs of the trauma system with the medical oversight of the overall EMS system.
2. RTN will be available to convene upon request to address any recommended trauma protocol updates found during RPRSO reviews.

Progress: Completed - Any new EMS protocols regarding the care of trauma patients are shared during RTAC meeting and all partners are given copies of the protocols. The RTN remains available to convene upon request.

Indicator 302.2: There is a clearly defined, cooperative, and ongoing relationship between regional trauma physician leaders and the EMS system medical directors in the region.

Regional Score: (3) Trauma medical directors or designated trauma representatives participate in EMS oversight through participation in local medical control authority meetings. However, there is no formal written relationship.

Objective: By December 2023, the Region 1 Trauma Network will establish a formal meeting process for a cooperative, ongoing relationship between regional trauma physician leaders and Medical Control Authority medical directors.

Progress: Completed - The Steering Committee will be convened as needed.

Indicator 303.2: The regional trauma network plan should ensure that the number, levels, and distribution of trauma facilities are communicated to all partners and stakeholders. The RTN should develop procedures to ensure that trauma patients are transported to an appropriate facility that is prepared to provide care.

Regional Score: (3) There is a regional system plan and a diversion protocol that identifies the number, levels, and distribution of trauma facilities. System updates using available data not routine.

Objective: By the end of the application period, the Region 1 Trauma Network will develop, as part of the regional plan, and based on EMS triage and transport protocols an informational addendum that identifies the number, levels and distribution of trauma facilities based on available data.

Progress: Completed – Region 1 has identified all numbers, levels, and distributions of trauma centers. There is also a good understanding of trauma facilities outside of the region that receive patients based on proximity or patient preference.

Infrastructure

Indicator 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.

Regional Score: (2) There is a fragmented system, usually event based, to monitor the transfer of trauma patients.

Objective: Ongoing through the application period, utilizing available data, the Region 1 Trauma Network, working through the regional RPSRO will develop a process to monitor interfacility transfers based on available data.

Progress: Once Biospatial™ reports have been developed, monitoring the triage and transport protocol will be possible.

Indicator 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.

Regional Score: (3) Universal triage criteria are in the process of being linked to the management information system for future evaluation. (Biospatial™)

Objective: Ongoing through the application period, using available data, the Region 1 Trauma Network, working through the RPSRO will develop a process to evaluate the effectiveness of the EMS Trauma Triage and Transport protocol in identifying trauma patients and in ensuring that they are transported to the appropriate facility.

Progress: Once Biospatial™ reports have been developed, monitoring the triage and transport protocol will be possible.

Regional Performance Improvement

Indicator 206.1: The RTN generates data reports to evaluate and improve system performance.

Regional Score: (1) The RTN does not generate trauma data reports for evaluation and improvement of system performance.

Objective: In an ongoing process throughout the application period the RTN Regional Performance Standards Review Organization (RPSRO) will utilize data reports generated by the State of Michigan, ImageTrend™, MTQIP, the Regional Inventory, and individual hospital and EMS agencies to evaluate and improve regional trauma care and system performance.

Progress: Completed - The RPSRO Inventory reports are completed every 6 months and discussed in meetings.

Indicator 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.

Regional Score: (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.

Objective: In an ongoing process throughout the application period, the Regional Trauma Network RPSRO, working with the Regional Medical Control Authorities, will utilize data reports generated by the State of Michigan, ImageTrend™ and Biospatial™ to provide medical oversight of EMS trauma triage, communications, treatment and transport of trauma patients.

Progress: Once Biospatial™ reports have been developed, monitoring the triage and transport protocol will be possible.

Indicator 205.2: Collected data from a variety of sources are used to review the appropriateness of all-inclusive regional trauma performance standards, from injury prevention through rehabilitation.

Regional Score: (2) There are written, quantifiable regional system performance standards for each component of the regional trauma system that conform to standards outlined in the Administrative Rules.

Objective: By December 2022, the RTN RPSRO, working with the Regional Trauma Advisory Committee will develop a Regional Performance Improvement Plan that includes an evaluation of trauma triage criteria and effectiveness, trauma center diversion, and provision of care. This plan will be based upon suggestions from the State of Michigan, the STAC, and recommendations from the American College of Surgeons.

Progress: In 2022, the RTAC will place the information the RPSRO guidance documents into the PI Plan format.

Regional Performance Improvement

Indicator 303.4: There is a regional trauma bypass protocol that provides EMS guidance for bypassing a trauma care facility for another more appropriate trauma care facility.
Regional Score: (4) There is a regional bypass protocol that allows bypass of an acute care facility and provides guidance on what the most appropriate facility is based on the patient's injury.
Objective: By December 2022, the RTN working with the Regional Medical Control Authorities will develop a regional bypass protocol that clearly defines the process for bypassing one trauma facility for another trauma center more appropriate for the patient's injuries or specialty needs (Pediatric, Burns, Obstetric). In an ongoing process, the RTN RPSRO will track and review incidents of trauma facility bypass and revise the protocol as needed.
Progress: Partially Completed - The Region 1 protocol addresses this through inclusion of the CDC Field Triage Guidelines. Currently, due to the capacity of inpatient beds, ICU beds and emergency room patients, Region 1 had over 200 hours of hospitals diverting EMS agencies in the first 6 months of 2021.

Continuum of Care

Indicator 308.1: The regional work plan addresses the integration and participation of rehabilitation services within the continuum of care for trauma patients.
Regional Score: (1) There are no written plans for the integration of rehabilitation services with the regional trauma system or with trauma centers.
Objective: <ol style="list-style-type: none">1. By March 2021, the Region 1 RTAC will identify key staff to represent Rehabilitation Services at the Region Trauma meetings.2. By June 2022, the RTAC will have a Rehabilitation Committee tasked with identifying rehabilitation facilities in Region 1 and the strengths and weaknesses in regional rehabilitation services availability.
Progress: Staff has been identified, but COVID-19 has put a hold on moving forward with this objective.

Trauma Education

Indicator 310.3,4,6: The regional trauma network establishes and ensures that appropriate levels of EMS, nursing and physician trauma training courses are provided on a regular basis.

Regional Score: (2) There are regional trauma training standards for EMS personnel, nurses, and physicians but there is no requirement for course attendance.

Objective: On an ongoing basis through December 2023, the Region 1 RTC will disseminate available trauma educational opportunities to all stakeholders. This education will include trauma patient care, injury prevention opportunities and District 1 preparedness educational offerings.

Progress: Completed - The region has an educational plan that includes ACS educational requirements, as well as suggested courses for differing areas of patient care. Information regarding available educational opportunities is shared with partners through email and regional newsletters.

Indicator 310.10: As new protocols and treatment approaches are instituted within the regional trauma system; structured processes are in place to inform or educate all personnel of those changes in a timely manner.

Regional Score: (2) The region has developed a process to inform or educate all personnel on new protocols or treatment approaches, but it has not been tried or evaluated.

Objective: The Region 1 RTC will disseminate information regarding any regional or statewide protocol changes or updates to all ED/Trauma/EMS/MCA partners.

Progress: Completed – This is done during RTAC meetings.

Regional Summary:

This annual report documents Region 1 Trauma System Development over the 1st year of the application period starting in 2021. The region was recognized as a regional trauma network in 2020 for a 3-year period by the Michigan Department of Health and Human Services (MDHHS) as required by statewide administrative rules. As noted in the report, with only a few exceptions, the workplan objectives that were developed in 2020 to continue to maintain a regional trauma system have been met, due in part to the commitment regional stakeholders have made to the system. The 2nd application year will focus on getting the last 4 hospitals verified and designated as scheduling allows and continuing to strengthen the gains made.

Region 1 has an educational plan, injury prevention plan, an injury prevention resource tool and RPSRO guidance that is updated yearly. The Regional RTAC meetings focus on education to help the regional hospitals build and maintain their trauma programs, standards of care, care of special populations, and policies needed to address the needs of trauma patients. The RTAC agenda includes information on preparedness, special populations and injury prevention in addition to the regular trauma network information is included for that meeting. Region 1 tries to recognize those areas of patient care in trauma that are high stress, specialized forms of care, like pediatrics.

On September 15, 2021, the District 1 Regional Medical Response Coalition (D1RMRC) conducted an exercise for the Pediatric Care Coordinating Center. The goal of the exercise was to look at how this type of asset would be used during a pediatric mass casualty incident. This included an at length discussion of pediatric resources within the region. The R1 Trauma Network had 15 partners in attendance and active in the discussion of how pediatric patients might be distributed in the region and what inpatient resources were available to keep them in the region vs. transfer to other regional hospitals. During the exercise, the regional healthcare coalition and the trauma network discussed the importance of updating the pediatric bed board in EMResource™ to track and locate patients. A discussion also stressed the importance of being aware of hospital resources (both in and out of the region) a patient may need (pediatric surgery, pediatric ICU, burn care).

The Region 1 Trauma Network acknowledges that in the event of a mass casualty event, the number of trauma patients will be high, and resources limited. It is because of this that Region 1 trauma partners work with the D1RMRC to ensure regional trauma center staff have knowledge of preparedness activities, and their role in a medical surge.

The Region 1 Regional Medical Control Network applied for and received a grant to provide Carter Kits for the EMS agencies in Region 1 to use when encountering children who are on the autism spectrum. Carter Kits™ Sensory Bags contain items known to comfort and appropriately focus children who are on the autism spectrum, as well as many other children who occasionally find themselves overwhelmed or otherwise impacted by traumatic events. Every MCA had the opportunity to receive enough kits to distribute 2 kits to each transporting agency, 1 kit to each MFR agency, and 1 kit for each hospital. If there were EMS agencies that already had kits, those extra kits were offered to local law enforcement.

In 2022, regional trauma network partners hope to conduct education for the EMS agencies regarding critical care interfacility transfers. Several trauma partners have expressed interest in helping to teach these courses. The goal will be to conduct them online and attach EMS credits.

Regional System Evaluation in accordance with Administrative Rule Requirements:

- √ Regional trauma network and committee meetings have taken place as scheduled (quarterly) in accordance with the Open Meetings Act.
If not completed, please explain: Missed one meeting due to COVID-19, but an email with information on all agenda items and state updates was sent to the RTN and RTAC.
- √ Schedule and information regarding RTN Board and RTAC posted on the trauma website
- √ Annual confirmation that members of the RTAC are currently involved in trauma care completed.
- √ All MCA's are participating in the RTN
If not, what efforts have been made to address:
- √ Documentation that all hospitals in the trauma network are participating in:
 - √ Regional Injury Prevention
 - √ Regional Performance Improvement
 - √ Submission of registry data to ImageTrend
- √ Regional trauma plans completed (attach copy of plan or state "in progress")
 - √ Regional Injury Prevention
 - √ Regional Trauma Education
 - Regional Performance Improvement – in progressIf not completed, which plans are missing and why?
- √ Regional PI process in place; Inventory data reviewed, and trends (if noted) are being monitored. PI process that includes two levels of review is place (as needed). RPRSO corresponds annually (at a minimum) with RTN regarding PI. Minutes, materials stored by RTC.
If not completed, please explain:

RTN Board Chairperson: _____ Date: _____

Regional Trauma Coordinator: _____ Date: _____