Montana Trauma System Legislative Report 2018-2020

Title: Montana Trauma System Report – Implementation of 50-6-402 (3) MCA

Abstract: This report describes trauma system strategies that are aimed at preventing and/or minimizing injury and death, as well as improving outcomes of victims of traumatic injury. The report describes prevention and treatment activities including:

- Continual development of an inclusive, regionalized system which includes trauma-educated healthcare providers and hospitals;
- Sustained implementation of rules which authorize designation of trauma centers and provides professional recognition of facilities that meet trauma standards of care; and
- Maintain solid data collection through a statewide trauma registry that is actively used for performance improvement.

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Trauma Systems

Montana's statewide trauma system seeks to make the delivery of trauma care cost effective, reduce the incidence of inappropriate or inadequate trauma care, prevent unnecessary suffering and reduce the personal and societal burden resulting from trauma. The goals and objectives of a trauma care system include:

- Providing optimal care for the trauma victim;
- Preventing unnecessary death and disability from trauma and emergency illness; and
- Conducting trauma prevention activities to decrease the incidence of trauma-related injuries.

STCC and RTACs - Administratively, Montana's trauma system is divided into a State Trauma Care Committee (STCC) and three Regional Trauma Advisory Committees (Western RTAC, Central RTAC and Eastern RTAC) each with a regional council.

The State Trauma Care Committee (STCC) meets quarterly and consists of fifteen Governor-appointed representatives. The purpose of the STCC is to reduce the incidence of trauma injuries in Montana and to promote and advance excellence in the care of the injured patient. Statewide reports as well as state-level registry reports are presented at each meeting by trauma staff. Statewide performance improvement and peer review occurs by regularly analyzing the effect of the statewide trauma care system on patient care, morbidity and mortality.

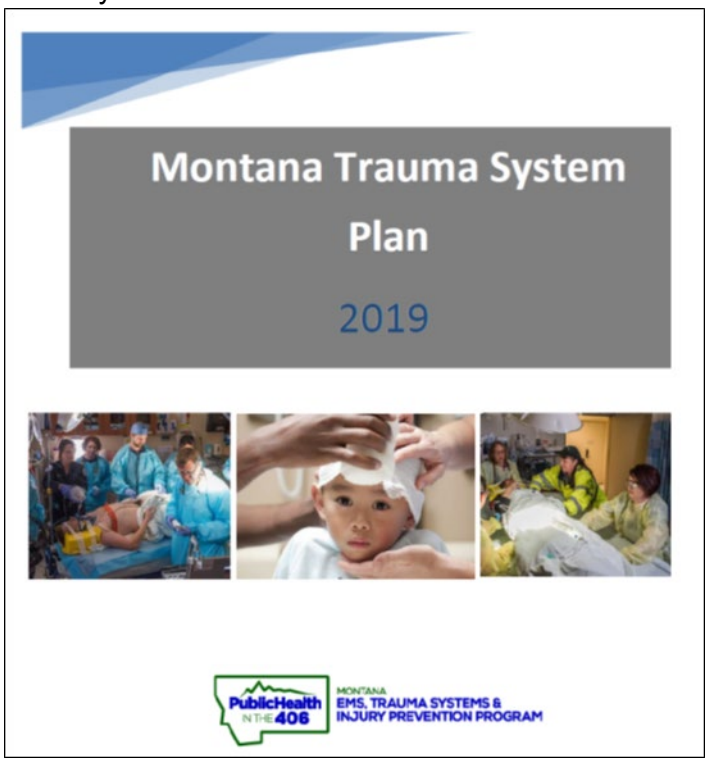
Also, in concert with each STCC meeting, the Designation/PI subcommittee meets to discuss trauma facility designation activities and recommendations. The Education subcommittee plans a variety of statewide trauma education projects. In 2018, the Education subcommittee focused on the Geriatric Trauma Course. In 2019, the Education subcommittee focused on both updating the TEAM (Together Everybody Achieves More) course to standardize instruction across the state and the Trauma Treatment Manual to reflect the most recent patient care information.

Each of the three Regional Trauma Advisory Committees meet quarterly. Trauma staff attend each of the 12 meetings to provide State trauma reports. Each RTAC has specific performance improvement indicators that are updated and approved annually. Data is queried using the State Trauma Registry to pull individual patient cases that meet each specified performance improvement (PI) indicator. These cases are then discussed as part of a dynamic, interactive PI process. Clinical indicators trigger trauma practitioners to look more closely at care provided to a patient. Some examples of clinical PI indicators being examined include:

- Use of tourniquets
- Glasgow Coma Scale (GCS) ≤ 8 without advanced airway and greater than 2 attempts
- Air medical trauma transfers dismissed from the Emergency Dept. (ED)
- Age ≥ 55 who met physiological criteria but no trauma team alert
- Transfer of patient after admission at first facility or > 3 hours

- IV Fluids > 2000 ml before blood products
- CT of children ≤14 years old with dosage
- GCS documented by EMS with a >2-point discrepancy between EMS and initial ED GCS
- Transfers of patient outside of region and why

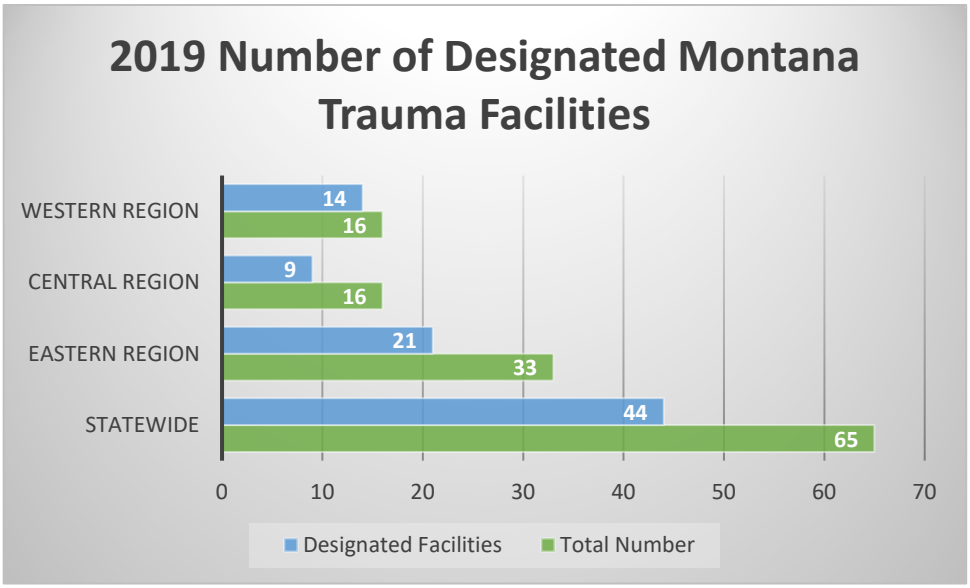
Administrative Rules Update – In July 2019, the new Administrative Rules pertaining to the Montana Trauma System Plan were certified by the Secretary of State. These rules updated the State Trauma Plan, which includes the Trauma Facility Designation Criteria. This plan describes in detail Montana Trauma System's current organization and operations. The plan also provides summary descriptions of Montana Trauma System's work-in-progress and planned next steps in the continued development of an inclusive statewide trauma system for Montana. A list of strategic priorities has been determined to guide organizational planning and decision-making across the major components of Montana Trauma System activity.



1. **Strengthen the sustainability of Montana Trauma System's mission, including the effective administration of state office operations and the continued development of an ideal statewide network of designated trauma centers.**
2. **Build support for the development and maintenance of an ideal statewide network of designated trauma centers in Montana which includes the goal of at least 80% of all facilities becoming designated trauma centers.**
3. **Establish statewide trauma registry data consistent with national standards for facilitating statewide and regional injury prevention efforts and trauma system performance improvement.**

In September 2020, ARM 37.104.3025 was amended to allow for a temporary waiver of designation requirements for trauma facilities in limited circumstances. Renewal of a trauma facility's designation requires the department to perform an on-site review and assessment of the facility at least every three years. During the COVID-19 pandemic it has become clear that a rule change was needed to allow for a waiver under certain limited circumstances such as a public health emergency or disaster when the department is unable to physically perform designations due to the safety of persons involved in the designation review.

Trauma Facility Designations continue to be a key activity of the EMSTS trauma program. Designation verifies a significant hospital commitment to the trauma care they provide and the continual performance improvement to improve patient care over time. State staff, nurse consultants and trauma surgeons perform designation visits for 4 levels of trauma designation: Regional Trauma Centers (RTC); Area Trauma Hospital (ATH); Community Trauma Facility (CTF); Trauma Receiving Facility (TRF). Marcus Daly Memorial Hospital, Hamilton and Northern Rockies Medical Center, Cut Bank were the newest additions in 2018. In 2019, two new CTFs (Miles City and Glasgow) were added to the list of designated facilities. Thus, 68% of eligible facilities are now designated across the state.



Montana Department of Transportation / Highway Traffic Safety Collaboration – There continues to be strong collaboration between the trauma program and traffic safety programs at the MDT and their Highway Traffic Safety Program. This includes collaboration with the MDT advisory committee, occupant protection, impaired driving, and roadway departure emphasis areas. In 2018, the Trauma program participated in an Impaired Driving Assessment to discuss impaired driving in the trauma system and the injury prevention work aimed at reducing impaired driving in Montana. In 2020, a new emphasis area was created, After-Crash Care, which is chaired by the Trauma Manager and focuses specifically on the EMS & Trauma system's response to motor vehicle crash victims.

Another example of collaboration with MDT includes the continued funding for each of the three RTACS to provide TEAM courses. This Montana course helps a hospital assess their preparedness as a trauma facility and their role in the trauma system. Through a grant with MDT, funding is set up to provide a minimum of two TEAM courses in each region with an additional six courses available for any region to use, as needed. A TEAM Instructor meeting was held in 2019 to update the TEAM course format so that the information being taught across the state is consistent in each region and reflects the current clinical trauma care guidelines. In 2020, the Covid-19 pandemic made it very difficult to continue offering these in person courses, but they are still occurring when all necessary safety measures can be ensured.

Stop the Bleed –Stop the Bleed is a national effort to save lives by teaching the civilian population to provide vital initial response to stop uncontrolled bleeding in emergency situations. Montana's 'Stop the Bleed' campaign continues to be an important public education offering across the state. An interactive map is available on the EMSTS website which allows the public to easily locate an instructor in their area. An email listserv allows for dissemination of information and communication between instructors across the state. This national initiative has become the current program most injury prevention programs across the state are implementing in their communities. Montana branded Bleeding Control Kits are available for purchase by citizens and course participants.

Trauma Coordinator Webinar – Being a trauma coordinator or trauma medical director is a job many nurses and providers rarely accept with a full understanding of the position. It is not a skill set learned in school. Annual education is required to learn proficiency at trauma PI and processes, far exceeding the standard clinical care of patients. For this reason, we offer an annual four-hour webinar in early spring for all Montana trauma coordinators, trauma registrars and trauma medical directors. This webinar specifically focuses on issues identified within the system and provides education to address them.

Advanced Trauma Life Support (ATLS) – The ATLS program teaches the systematic, concise approach to the care of a trauma patient for physicians and practitioners across Montana. In 2019, a new updated version, the 10th edition, was instituted. As is common in Montana's ATLS courses, almost 60% are advanced practice providers (APPs) which reflects our rural state and critical access hospital system.

Rocky Mountain Rural Trauma Symposium (RMRTS) - Each year trauma staff coordinate the planning for the annual RMRTS which rotates to a different region each year. This two-day conference has become one of Montana's premier trauma education offerings for physicians, advanced practice clinicians, nursing and prehospital personnel, with approximately 300 attendees each year. The conference sessions cover a wide variety of trauma-related topics from both in-state and out-of-state speakers. In 2020, the conference pivoted to a virtual platform to provide the presentations and was free-of-charge to all attendees, which reached over 670 individuals.

Montana Trauma Systems Conference (MTS) – Held the day before RMRTS, this one-day conference specifically for trauma registrars, trauma coordinators and trauma medical directors is conducted by trauma system staff to cover Montana specific trauma system and performance improvement issues. This is the one time all coordinators in the state can meet face-to-face and share information back-and-forth.

Trauma/Performance Improvement Network (PIN) – 2018 was the third and final year of the grant with HRSA/Rural Flex funds in which Trauma partnered with the Montana Hospital Association. The emphasis of the 2018 project was specifically focused on critical care requirements and documentation for providers and hospital staff.

Trauma Protocol & Guideline Development – In 2018, two clinical guidelines were developed and distributed statewide by STCC which address concerning trends in geriatric trauma care. Protocols for early recognition of trauma in the elderly and rapid anticoagulation reversal are associated with improved outcomes in injured patients. Providing clinical guidelines to facilities ensures patients across the state receive consistent and standardized care.

Geriatric Early Trauma Activation Guidelines

A geriatric trauma victim is a person ≥65 years of age, exhibiting one of more of the following:

PHYSIOLOGIC CRITERIA:

a. GCS score ≤13 with a known or suspected traumatic head/brain injury (defined as an indication that the brain has suffered an injury caused by an external force) including, but not limited to:
   i. Decrease in level of consciousness
   ii. Unequal pupils
   iii. Blurred vision
   iv. Severe or persistent headache
   v. Nausea or vomiting
   vi. Change in neurological status

b. Systolic BP <110 mmHg or absent radial pulse with carotid pulse present

ANATOMIC CRITERIA:

c. Known or suspected proximal long bone fracture sustained in a motor vehicle crash
d. Multiple body regions injured

MECHANISM OF INJURY CRITERIA:

e. Fall from any height, including standing falls, WITH evidence of traumatic head/ brain injury (see above)
f. Pedestrian struck by motor vehicle

SPECIAL CONSIDERATIONS:

g. Anticoagulation agents
h. Co-morbidities: diabetes, cardiac disease (CHF/HTN/arrhythmias), pulmonary disease (COPD), clotting disorder, immunosuppressive disorder or required dialysis

MAINTAIN A HIGH INDEX OF SUSPICION FOR INJURY AND PROMPTLY CONSIDER THE NEED TO TRANSFER TO A HIGHER LEVEL OF CARE

ANTI-COAGULATION AND TRAUMA (ACT) ALERT PROTOCOL

A. TRIAGE PARAMETERS

ACT ALERT TRIAGE PARAMETERS

1. Anticoagulation agents
2. Head trauma within past 24 hours

B. RESPONSE PROTOCOL

ACT ALERT RESPONSE PROTOCOL

1. Response team of ED provider, nurse and lab to see patient within 15 minutes of ACT.
2. Coagulation lab tests and INR test completed with 20 min of ACT.
3. STAT priority head CT completed within 30 min of ACT.
4. Immediately upon receiving notification of the above diagnostic information, if required, initiate reversal protocol per facility capabilities and policies.
5. MAINTAIN A HIGH INDEX OF SUSPICION FOR INJURY AND PROMPTLY CONSIDER THE NEED TO TRANSFER TO A HIGHER LEVEL OF CARE.

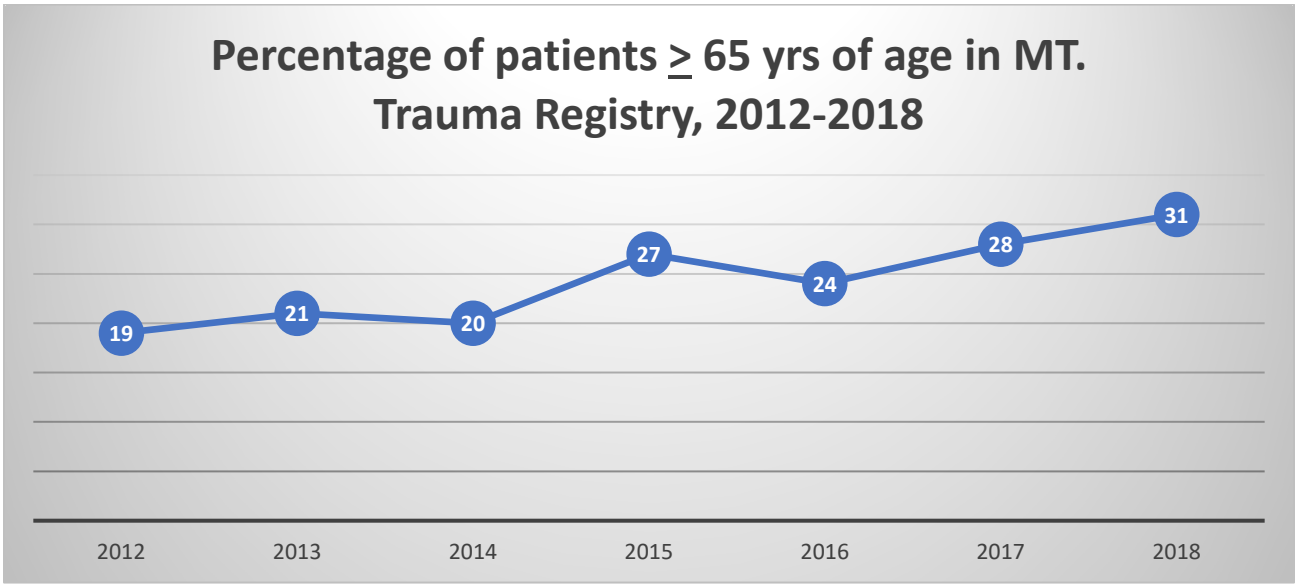
Trauma Data System

A critical element of a trauma system is the collection of data to support evaluation of the system and ongoing performance improvement at the local, regional and state levels. EMSTS maintains a central trauma registry that is a repository of data collected at the local level by software provided to them for that purpose. The version provided to larger facilities enables data collection and advanced reporting and performance improvement on their local data servers. The remaining facilities utilize a web-based system that enables them to enter their data electronically.

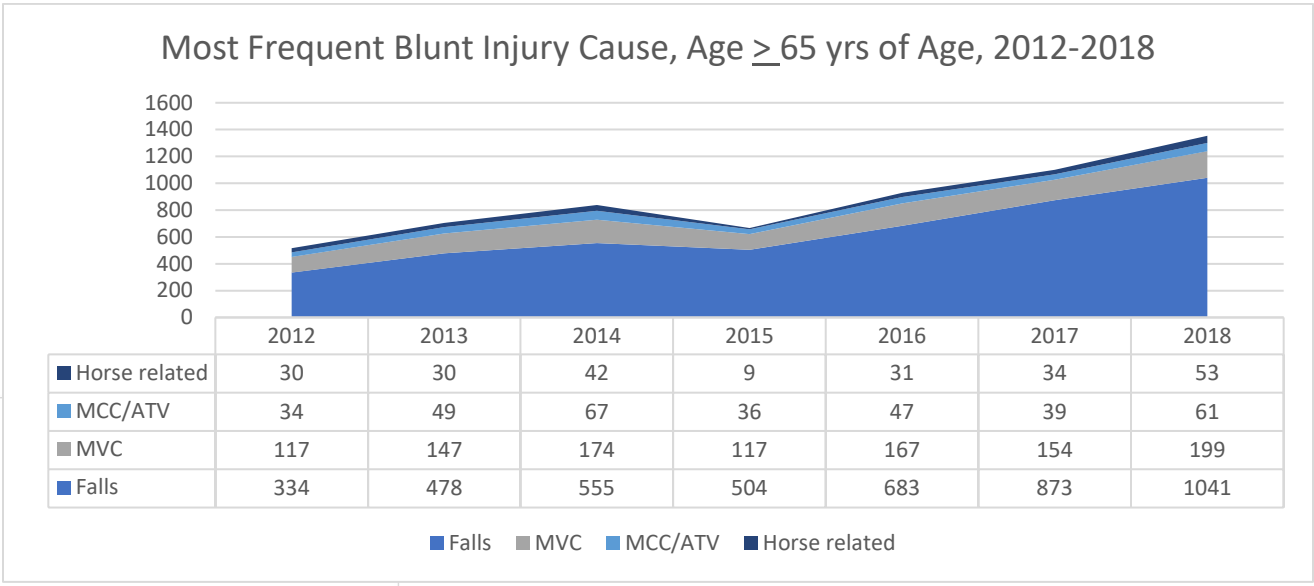
Trauma Registry Support – Implementing an evidence-based trauma system cannot be accomplished without data, therefore collecting data is a significant investment in time and resources at all levels. As such, EMSTS commits considerable resources to assure data collected is accurate, complete and timely. Advancements with coding, data functionality and data mapping has continued this biennium. Historical records from a previous version were migrated for the software users into their current trauma registry. Training, statewide and locally, has been a high priority. As facility trauma registrar/coordinator vacancies have been filled, we aggressively provide onsite and web-based training. The State trauma nurse coordinator assists hospitals with education and technical assistance with the trauma registry, statistical reports and performance improvement for their trauma patients. In conjunction with the EMSTS epidemiologist, facilities are provided reviews quarterly of the trauma cases they have entered concerning data accuracy, completeness, and identifying opportunities for case reviews and performance improvement.

Trends in Montana Trauma Registry Data - Analysis of the trauma registry data allows EMSTS, the STCC and the RTACs to understand if statewide efforts being made in our trauma system are making a difference and to identify trends and opportunities for improvement.

Traumatic Injury in the Elderly Population in Montana: The elderly account for the most rapidly growing segment of the U.S. population as well as Montana. In 2019, about 16.5 percent of the American population was 65 years old or over; a figure which is expected to reach 22 percent by 2050. This is a significant increase from 1950, when only eight percent of the population was 65 or over. The U.S. Census Bureau estimates that more than 30 percent of Montana's population will be over age 60 by the year 2030, an increase of 43% percent from 2012. This trend is reflected in the percentage of patients ≥65 years of age in the Montana Trauma Registry (MTR) from 2012-2018.



Correlating directly with the age increase of patients is the number of falls causing an increase in morbidity and mortality in the trauma system. Falls continue to be the leading cause of injury for patients age 65 years of older.



	2012	2013	2014	2015	2016	2017	2018
Horse related	30	30	42	9	31	34	53
MCC/ATV	34	49	67	36	47	39	61
MVC	117	147	174	117	167	154	199
Falls	334	478	555	504	683	873	1041