

Trauma Team
Response;
“If You Build It,
They *Will* Come”



TEAM

- ▶ A small number of people with complimentary skills who are committed to a common purpose, performance goals, and approach for which they hold themselves mutually accountable
 - Katzenbach JR, Smith DK. The Wisdom of Teams: Creating the High Performance Organization 1993
- ▶ A loosely coupled system of mutually interacting interdependent members and technology with a shared goal of patient care.
 - Weick and Roberts. Collective Mind in Organizations: Hoodful Interrelating on Flight Decks 1993

Benefits

- ▶ Ability to accomplish more tasks in a timely manner
- ▶ Sounding board
 - Multiple brains = more solutions/ideas
 - Multiple brains = higher chance of catching errors
- ▶ Brings ancillary services/skills
- ▶ Builds trust and support among all members

Effective teams

- ▶ Effective teams possess five characteristics of success:
 - *Commitment*
 - *Common goals*
 - *Competence*
 - *Consistency*
 - *Communication*

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Commitment-practice, practice, practice

Common goals-everyone shares the same goals and has the same priority-the patient!

Competence-skills days, know equipment, drill

Consistency-have guidelines, practice, review, debrief

Communication-effective, clear, closed loop, respectful

Why have a trauma team response?

Organization and delivery of resources optimizes the episodic critical care of the injured patient.

This can be accomplished by:

- ▶ Pre-organization based on need
 - team activation triggers/guidelines
 - pre-identified and defined members/roles
 - accessible and functional equipment & supplies
 - specifically designed forms (trauma flow sheet)

in procedures

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We know critical care is best delivered in a pre-organized team framework. Ideally, that process involves identification of the type of team needed and the components to make the team response effective:

- When the team should be mobilized
- What types of team members are required
- The location and configuration of the response
- Responsibilities and tasks of the team members
- Organization of required equipment, supplies and medications used during the response
- Documentation forms, orders, checklists, policy/procedures and references
- Methods for notifying team members to respond

Other Teams

- ▶ Code/Resuscitation Teams
- ▶ OB/Delivery
- ▶ Rapid Response Teams
- ▶ Fire Response, evacuation
- ▶ Disaster/Emergency Preparedness
- ▶ Out-of-Control/Show of Force
- ▶ Pediatric
- ▶ Abduction/missing patient



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We have many types of teams that have proven successful and effective for a variety of situations.

This is a photograph from 2008 Advanced Disaster Life Support Course with Billy Oley, MD, Red Lodge; Chris Benton, RN Red Lodge; Tim Sinton, PA-C, Choteau and Jason Mahoney, EMT-P, Billings.

Trauma Team

- ▶ What's different about a Trauma Team?
 - Potential **Surgical** focus
 - **Early** identification and **intervention** of life-threatening injuries
 - **Prioritized** coordination of care
 - **Early** recognition of need to **transfer** definitive care
 - **Stabilization** interventions
 - Documentation "to go"
 - COBRA/EMTALA procedures



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Consider the differences that make developing a Trauma Team different than other types of team responses

Key to this is the early identification of life-threatening injuries-CHI with GCS < 8, hemopneumothorax, tension pneumothorax, internal and/or external belleding, intraabdominal injuries to spleen, liver, kidneys, bowell, pelvic fractures

Documentation to go includes TFS, EMS report, imaging, H&P, labs

What are we trying to accomplish?

Goal:

Patient Safety

Identify and treat life-threatening injuries in a timely manner.



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It is important to recognize the over-riding “guiding principle” in developing an effective Trauma Team.

How do we accomplish that goal?

- ▶ Rapid assembly and immediate provision of:
 - Multidisciplinary** personnel and equipment
 - ATLS** assessment/intervention
 - Coordinated, interdependent & standardized** approach
 - Optimal** communication
 - Timely** treatment, stabilization, and transfer (if unable to provide definitive care).

Components

Trauma Team – defined roles
+
Trauma Activation Criteria - known and accessible
+
Activation/Notification Procedures
+
Equipment/supplies/forms-organized/easily accessible
+
Practice
+
The review of timeliness and appropriateness of care

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The Trauma Response consists of these specific components and the successful process of “linking” them together locally.

Trauma Team

- ▶ Who
 - Activates? EMS, RN, Physician, Non-physician provider. Define and publish.
 - ▶ What are our resources?
 - Team composition will vary with hospital size, available resources and staff
 - Equipment - organized and readily available with team members knowledgeable in the setup and use.
 - ▶ When
 - Early notification allows for team to assemble prior to patient arrival.
 - ▶ Why
 - To provide **timely** assessment, identification of life-threatening injuries, and treatment, stabilization and transfer.
- ✓ **Communication with EMS is critical. EMS must know what the activation criteria is and be able to "activate" the trauma team from the field in order to provide time for team preparation.**

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These are some hallmark questions to ask when developing your Trauma Response procedures. The answers to these specific questions provide for design of the process that will be most effective.

You cannot depend on resources you don't have, so each facility's procedures are truly dependent on identification and organization of its resources with design of procedures putting them to best use.

EMS should be considered the "first phase of care", an essential part of the local Trauma Team Response and must be knowledgeable about local Trauma Team Activation criteria. They must understand and be active in early identification of the Trauma Patient, provide early and effective communication to the hospital so staff may act on that information and activate the Trauma Team Response.

Pre-organized and pre-assembled Trauma Team members ready to greet the trauma patient on arrival at the hospital provide more effective, well-prioritized care.

Trauma Team

- How will we notify Trauma Team members to respond?
 - Overhead pages
 - Beepers
 - After-hour call tree
- In house and out-of-house staff
 - Clear understanding of who contacts who and when
- At what point do we need more than the trauma team? What then? Define it

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Develop a method for notifying Trauma Team members consistent with the available local communication capabilities.

Trauma Team activation “after hours” may involve calling in specific staff. Depending on the time of day, Trauma Team activation MAY involve utilizing staff currently in-house and available. Either way, the situation and whether the patient meets activation criteria determines trauma team activation, NOT time of day or whether staff were “already here so we didn’t have to call anyone in”.

When does a facility need to activate MORE than its Trauma Team? At what point does a facility need to activate its Disaster/Emergency Response Plan?

Each facility needs to determine the base number of simultaneous patients or critical patients it is truly capable of providing effective care to (in many cases it’s 2-4 patients, either arriving at the same time or critically ill/injured). Once that number of multiple or very sick patients has been determined, be sure it’s addressed in the Disaster/EP and all staff are educated.

An effective Trauma Team Response process allows staff to improve their delivery of effective care to one patient at a time. This improved “patient-by-patient” proficiency of care is an effective method for increasing quality of care for multiple patients, enhancing Disaster/EP capabilities.

“An effective trauma system is the backbone of the Disaster/EP system”*

Trauma Team Members

Team Leader: Surgeon, Emergency Physician,
Mid-level/non-physician provider

Anesthesia, CRNA, OR Team

Emergency/Other RNs (x 2-3)

Charge/House Nursing Supervisor

EMTs stay/assist

Respiratory therapy

XRAY, CT, Radiologist

Lab, Blood bank

Documentation/Scribe

LPN, Aide, HUC, Support Staff

Social Services, Chaplain

Other Medical Specialties if/as available:

ENT, Ortho, NS, Pediatricians, etc.



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Specific members of your Trauma Team depend on the professional resources you have

Building your Trauma Team

- ▶ Identify what standard actions need to be accomplished during your activations
- ▶ Identify which role is going to do it, assign in advance
- ▶ How many people are to be in the room to meet these action goals?
- ▶ Where do they position themselves?

Procedure:

- ▶ The charge nurse, House Supervisor or designee will assign roles if possible prior to patient arrival. Roles will be assigned as described below if enough staff is available.
- ▶ If staff is not available, roles will be assigned and adapted as indicated by the charge nurse and/or provider.

Guidelines for Roles and Responsibilities

<u>Role</u>	<u>Staff/Type</u>	<u>Duties</u>	<u>Position</u>
<u>Airway:</u>	RT/EMT	Ventilation, Assist with intubation Keep patient informed	Head of Trauma bed
<u>C-Spine:</u>	EMT	Maintain c-spine stabilization Alert MD of any change in LOC	Head of Trauma Bed
<u>IV/Procedures:</u>	RN	Insert large bore IV Remove clothing from left side of body, Neuro assessment, assist with procedures Intake/output	On patient LEFT side
<u>Provider Assistant:</u>	RN	Assist with procedures as directed	On patient LEFT side
<u>Vitals & Recorder:</u>	LPN/EMT	Take, monitor and record vitals	spot where monitor and pt can be visualized
<u>Scribe:</u>	EMT/LPN/RN	Record case on white board	White board
<u>IV/Med:</u>	RN	Insert large bore IV, draw labs Remove clothing from right side of body Attach/observe cardiac monitor Prepare/administer medications Foley as appropriate	On patient RIGHT side
<u>Runner:</u>	Ward Clerk/Secretary/EMT	Retrieve equipment, supplies, Make copies, assist with ER traffic control, Answer/make phone calls	ED Desk
<u>Team Captain</u>	PROVIDER:	Manage/direct team efforts, AIRWAY, Initiate interventions, care	Head of patient Mass Casualty Coordinator Course 2015

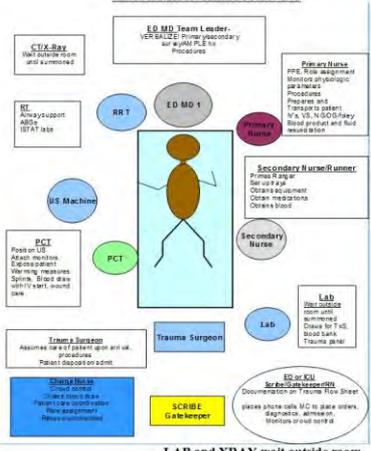
This busy diagram illustrates a very basic team, its members ,their identified duties. and physical positions in relation to the patient.

Your facility's team may look different, but this general template can serve as a guide for developing your team composition and role responsibilities.

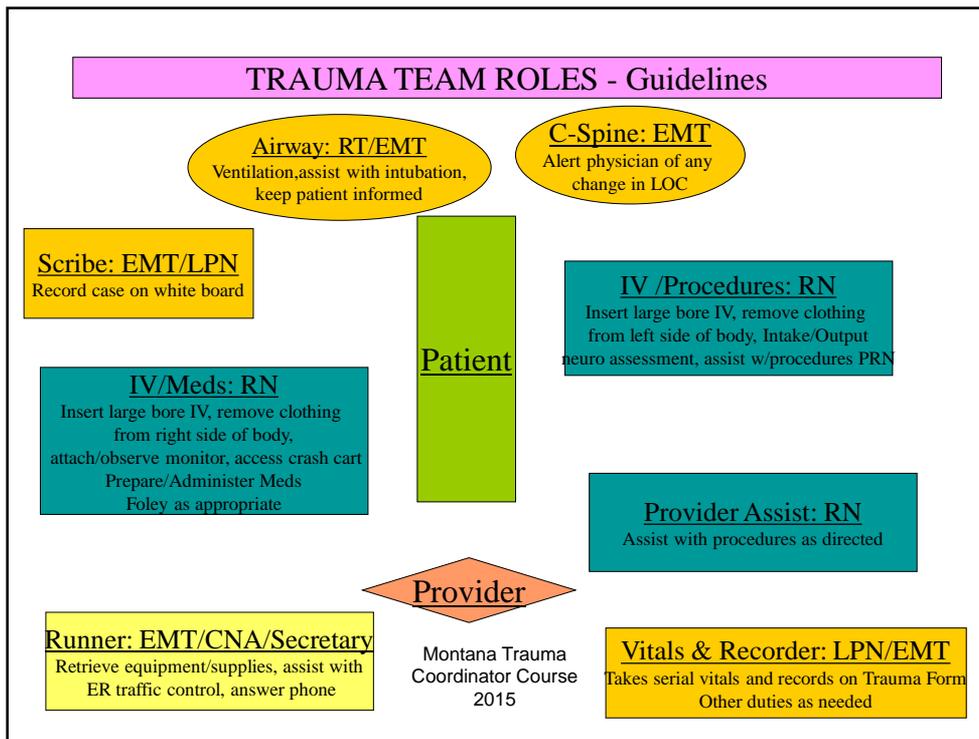
Be sure to include your facility's available team members.

Educate staff and provide the guide for all to easily refer to during a Trauma Team Response.

RESUSCITATION TEAM POSITIONING



LAB and XRAY wait outside room



This diagram physically illustrates positioning and general responsibilities of a basic Trauma Team. This guideline should be customized to your facility, receive staff education focus and be easily referred to during a Trauma Team Response. It is helpful for staff not only to know what to do but where to be positioned to minimize confusion



This is an illustration of the "ideal" trauma team structure with team members' positions in relation to the patient

Other Trauma Team Roles

- ▶ Lab, XRAY, RT
- ▶ Family Support
- ▶ Team Support
- ▶ Child Care
- ▶ Next shift needs
- ▶ Coordinate the rest of the Department & Hospital



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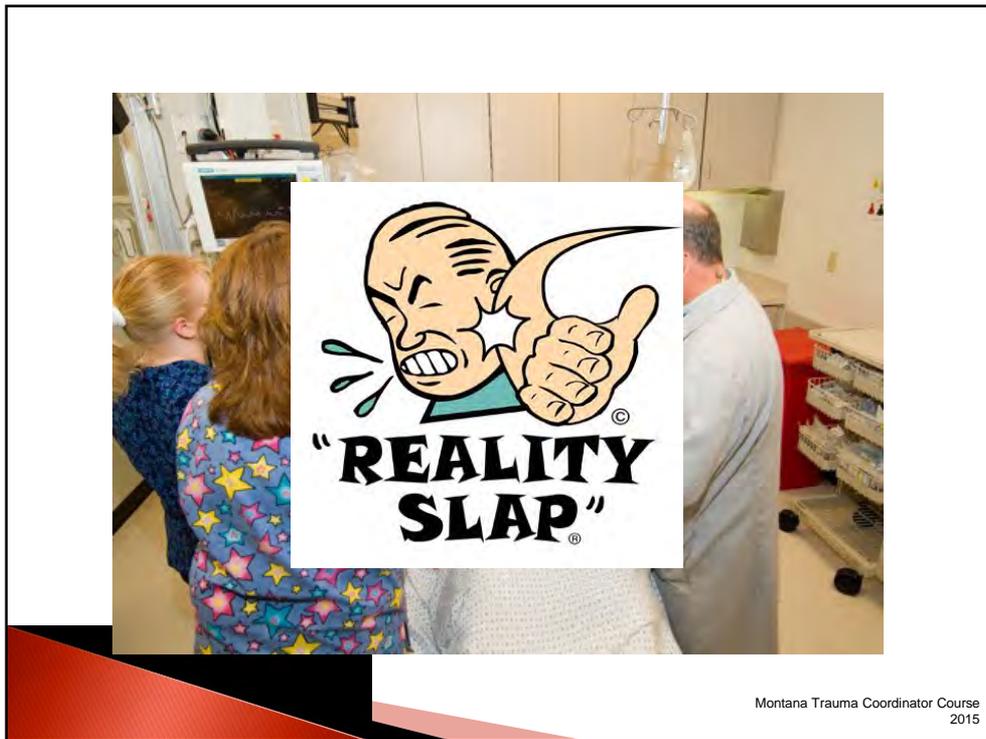
There are other Trauma Team roles to consider (again based on your facility's available resources) that can meet important needs.

Depending on facility size and scope of the situation, consideration may also need to be given to identifying resources for coordinating the rest of the Emergency Department, subsequent shifts and the rest of the hospital.



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Plenty of help, lots of resources and all of the necessary equipment at our fingertips!
We're a well-oiled machine!
THIS IS GREAT!!!



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Here is the **reality** of the Trauma Team members, resources and equipment we may actually have available.

Crew Resource Management

- ▶ Leadership and “followership?”
- ▶ Does the team communicate and validate communication before and after arrival?
- ▶ Can the team prioritize?
- ▶ Can the team adapt to different patient scenarios?
- ▶ Is everyone on the team in touch with what is going on and distributing the workload?
- ▶ Is there cross checking of data and activities as well as performance monitoring?
- ▶ Are members willing to challenge each other in a reasonable way and do they have conflict resolution skills?

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Effective teams don't just happen. Becoming a team takes good leadership, preparation, definition, commitment and PRACTICE. These are concepts to consider and think about when organizing, developing and educating your staff in the realities of becoming a team.

Team Leader

- ▶ Studies show that the presence of a single identified trauma resuscitation team leader leads to a better secondary survey, ATLS adherence, and team coordination.

Townsend RN. Et.al. ATLS-based videotape trauma resuscitation review: education and outcome 1993

Trauma and Teams

- ▶ Nurses, physicians, and EMS are educated in isolation of one another
 - We all learn the same ABC of ATLS trauma care but, we learn to do so as if we are alone
- ▶ Trauma patient care is delivered by a team of these individuals who know what *they* are doing but may not know *what each other* are doing.
- ▶ “Situational awareness” is especially important in a task-oriented structure
- ▶ Models have been developed to teach Teamwork

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We all have education, experience and background preparation. Melding those varying skills, personality styles and leadership abilities into effective Teamwork CAN be challenging!



We MUST have a plan all “players” know about and can follow AND train/practice together

Team Leader

- ▶ Leadership matters: effective leadership is a powerful combination of well-executed knowledge , direction and approach
- ▶ Understanding of the roles & responsibilities
- ▶ Effective communication
- ▶ Cooperation
- ▶ Organized
- ▶ Leads the pre-arrival briefing/post debrief

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Effective team leadership is based on experience and wise application of calm, collected, reasonable, well-prioritized direction. Even inexperienced staff will perform well if effectively led and directed.

Teams do not perform well when leadership is fragmented, chaotic and disorganized.

More importantly, **patients** do not do well if care is fragmented, chaotic and disorganized.

Working as a Team

- ▶ Assigning roles BEFORE patient arrives
- ▶ Use closed-loop communication: once asked to do something, team member repeats back to clarify & ensure correct info
- ▶ Only one person talking at a time.
- ▶ Delegate task to individual, not to everyone
- ▶ Challenge culture; anyone on team may validate decisions or provide input into care
- ▶ Communicate plan to whole room/team
- ▶ Practice on EVERY ED patient

These tips will assist staff in becoming a more effective team.

Trauma Team Pitfalls

- ▶ Identification of individual members by name, instead of roles
- ▶ Not defining team members duties once activated - who does what?
If you plan to use EMS, define how/when and include them in practice/drills
- ▶ Not keeping team contact information updated
- ▶ Not planning for coverage due to illness, vacations, etc.
- ▶ Lack of orientation for new members (locums)
- ▶ Failure to debrief or not including the whole team in the debriefing

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These are some of the organizational issues that can derail a Trauma Team Response structure.

Trauma Team Pitfalls

**Forgetting
the
PATIENT'S
Perspective**



It's important to remember the PATIENT as we pay so much attention to our available resources, organizational structures, technology, tasks and procedures!

Trauma Response

- ▶ Choices made based on each facility's resources, patient volumes and needs; be realistic
- ▶ ? Different levels of activation/response or "All Hands on Deck" single response structure: be realistic
- ▶ Determining factor: ? Surgeon available to direct trauma patient resuscitation & surgical services (OR, Anesthesia)

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As you develop your Trauma Team Response plan, remember to BE REALISTIC and use what you HAVE, not what you'd LIKE TO HAVE.

Should you develop different levels of Trauma Team Response? (larger volumes of trauma patients and larger pool of resources)

OR

Are your resources such that a single level of response will be most effective (fewer trauma patients, fewer resources)?

Can you offer different levels of response? Do you have a surgeon to direct trauma care or surgical services to provide operative intervention?

ALL of the time? SOME of the time? NEVER?

Activation of team response levels based on
pre-determined field and hospital trauma triage
criteria

KISS: Keep it Simple



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Whatever you do, to be successful, design it simply and
DO NOT OVER-COMPLICATE your procedures

MT Field Trauma Decision Scheme/Trauma Team Activation Criteria

Step 1. Physiologic Criteria; good predictor of severe injury
Obtain Vital Signs and Level of Consciousness ASAP

Systolic BP < 90
Glasgow Coma Scale \leq 13, decreased responsiveness
Severe respiratory distress or need for ventilatory support,
Respiratory Rate < 10 & > 29
< 20 infant

Pediatric; poor skin perfusion (color, cool extremities, weak distal pulses)
Heart rate;
child < 1 yr; < 60/min or > 130/min
child 1-8yr; < 80/min or > 120/min

EMS discretion

If "Yes" to any of the above, activate/contact Medical Control.
"No" go to step 2

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Montana Field Decision Scheme/Trauma Team Activation Criteria (consistent with CDC Field Triage Decision Scheme, with some revisions for Montana setting) to be utilized in the pre-hospital setting to contact medical control, advise hospital of patient status and advise Trauma Team Activation and/or utilized in the hospital to identify patients in need of Trauma Team Activation.

CDC Criteria have been developed to facilitate decisions to transport trauma patients to trauma centers. The rural nature and generally long distances between healthcare facilities in Montana necessitates using the same criteria for providing trauma response for all identified trauma patients.

When there ARE multiple healthcare facilities in close proximity to the scene, patients meeting these criteria should preferentially be transported to Trauma Facilities.

Physiologic Criteria provide a good predictor of severe injury and should be at the top of your activation criteria.

Step 2. Anatomic Criteria

May have “normal” VS & GCS but still have sustained severe injuries

All penetrating injuries of head, neck, torso and extremities proximal to knee/elbow

Chest wall instability or deformity (e.g. Flail Chest)

Paralysis

Pelvic fractures/instability

Open or depressed skull fractures

2 or more proximal long-bone fractures

Crushed, de-gloved, mangled or amputated extremity

Major burns

Hypothermia

If “Yes” to any of the above, Activate/Contact Medical Control

go to step 3

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Anatomic Criteria

Patients with these injuries may not meet “Physiologic” criteria, have “normal” Vital Signs and GCS, but still have sustained severe injuries

* Major Burns has been moved up to the Anatomic Criteria section for Montana. CDC Triage Criteria state

“ Burns without traumatic mechanism; triage to burn center”

“ Burns with traumatic mechanism; triage to trauma center”

Montana has no current burn centers, so “Major Burns” was moved to Anatomic Criteria for Trauma Team Activation

Hypothermia has been added for Montana due to the need for mobilization of facility resources

Step 3. Mechanism of Injury Criteria: CONSIDER
Do not always produce severe injury, but certainly CAN
so use to CONSIDER activation

Motor Vehicle Crashes

Ejection

Death of occupant in same vehicle

Intrusion, including roof; > 12 inches, occupant compartment

Extrication time > 20 minutes

Auto vs Pedestrian/bicyclist thrown, run over or significant impact

Contact Medical Control, advise of

of injury for early consideration of activation

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Mechanism of Injury criteria do not always produce severe injury, but certainly can, so should be utilized to consider Trauma Team Activation.

It's important that TTA does not occur ONLY only MOI criteria alone, as *over-triage can result. Assembling trauma team members based on MOI criteria alone repeatedly for patients who turn out to have insignificant injuries will result in team "burn-out", and reluctance to respond, undermining TTA process.

All TT Activations should be evaluated for appropriateness, *overtriage/undertriage and activation criteria broadened or tightened accordingly.

***Overtriage:** Activation w/discharge home from ED

OR Using mechanism/comorbidities to activate for patient not meeting clinical (Physiologic/Anatomic) criteria and patient discharged to home

***Undertriage;** No activation and patient transferred to higher level of care, admitted to ICU/OR or died

OR no activation when patient met Physiologic/Anatomic criteria

3. Mechanism of Injury Criteria (CONTINUED):

Falls; Adult > 20 ft

Children > 10 ft or 2-3x height of child

Horse/Animal rollover/ejection

Motorcycle/Snowmobile/ATV crash > 20MPH

**Contact Medical Control, advise of
mechanism for early consideration of
activation**

If "No", go to Step 4

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*MOI Continued:

Horse/Animal rollover/ejection added here for Montana

Snowmobile/ATV crash > 20MPH added here for Montana w/CDC Motorcycle criteria

4. Special Considerations: Comorbidities; Utilize to CONSIDER activation

May not meet physiologic, anatomic or mechanism criteria but underlying issues create higher RISK for severe injury

Older Adult; Risk of injury increases after > 55 years

SBP < 110 MAY represent shock after age 65 years

Low impact mechanisms (e.g. ground level falls) MAY result in severe injury

Child Age < 15 yr

Anticoagulation/Bleeding disorders (Coumadin/Warfarin, Plavix, Pradaxa, etc.)

Patients with head injury are at high risk for rapid deterioration

Time Sensitive extremity injury (Open fx, major joint dislocation/Fx/neurovascular compromise, etc.)

Pregnancy > 20 weeks

Multiple Patient situations

EMS/Provider judgement

Contact Medical Control, advise of comorbidities for early consideration of activation

CDC Field Triage Decision Scheme

CDC Home
Centers for Disease Control and Prevention
Your Online Source for Credible Health Information

A-Z Index: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Field Triage

Injury Home
Home & Recreational Safety
Injury Response
Acute Injury Care
Alcohol Screening

Field Triage
Blunt & Explosion Injuries
Mass Casualties
Motor Vehicle Safety
Traumatic Brain Injury
Violence Prevention
A-Z Injury Topics

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Injury Home » Injury Response

Field Triage Decision Scheme

Decide to Save Lives
Field Triage Decision Scheme: The National Trauma Triage Protocol
Each year, the approximately 800,000 emergency medical services (EMS) providers have a substantial impact on the care of injured persons and on public health in the United States. The profound importance of on-scene triage decisions made daily by EMS providers is reinforced by CDC-supported research that shows that the overall risk of death was 25 percent lower when care was provided at a Level 1 trauma center than when it was provided at a non-trauma center.

The "Field Triage Decision Scheme: The National Trauma Triage Protocol" (Decision Scheme) educational initiative was developed to help EMS providers, EMS medical directors, trauma system leadership, and EMS administrators learn about and implement the revised 2006 Decision Scheme. The Decision Scheme is intended to be the foundation for the development, implementation, and evaluation of local and regional field triage protocols.

As part of this initiative, CDC has developed easy-to-use materials for EMS professionals. Each of these materials provides information that EMS professionals can use to take an active role in improving the health outcomes for persons injured in their communities.

To order these materials at no cost, click here

Materials

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CDC Field Triage Decision Scheme materials can be found on the CDC website

To order these materials at no cost, [click here](#)

Materials

 **MMWR Recommendations and Reports:**
"Guidelines for Field Triage of the Injured Patients, Recommendations of the National Expert Panel on Field Triage"

 **Poster:**
"Field Triage Decision Scheme: The National Trauma Triage Protocol"

 **Pocket Card:**
"Field Triage Decision Scheme: The National Trauma Triage Protocol"

 **Resource Guide: Coming Soon!**
"A Guide to the Field Triage Decision Scheme: The National Trauma Triage Protocol"

 **Power Point Presentation:**
Coming Soon!
"Field Triage Decision Scheme: The National Trauma Triage Protocol"

Continuing Education (CMEs, CNEs, CEUs)

Continuing Education Activity credit is available through CDC's Morbidity and Mortality Weekly Reports (MMWR) Continuing Education Program. To access the report and accompanying exam, visit: www.cdc.gov/mmwr/cme/conted.html.

Important Information for EMS Providers:
This continuing education activity is approved by the Continuing Education Coordinating Board for Emergency Medical Services (CECBEMS).

CECBEMS Activity #: 08-CECB-F2-0879 CEU Number and Type: 2.0 Advanced

Once you have completed the online continuing education activity through CDC, you must submit the following form directly to CDC in order to receive CECBEMS credit:

For instructions on receiving CECBEMS credit and to download the required form, [click here](#)

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The CDC website contains information on ordering staff materials at NO COST to YOU

Activation Criteria Pitfalls

- ▶ **Long lists with too many/too broad criteria**
 - **will be ignored**
 - will return to “discretionary” activations only

- ▶ **Duplicate criteria:** confusing

- ▶ **Not establishing clear authority to activate**

Be aware of the organizational pitfalls that can derail effective use of TT Activation Criteria.

Activation Criteria Pitfalls

- ▶ **Criteria not known/accessible by all-
Where are they? Posted? Buried? Lost?**

- ▶ **No periodic review/evaluation/revision of
criteria:**
 - review all activations to be sure criteria work
 - review non-activations for appropriateness
 - revise your criteria to fix what's not working

Activation Criteria Pitfalls

- ▶ **Too many Scores; hard to calculate**

DELETE Revised Trauma Score for TTA:

Gained popularity as field trauma triage method for assessing patient severity

Well-established predictor of MORTALITY

Lack of primary evidence supporting use as primary triage tool & as predictor for outcomes other than mortality

Complex, difficult to use in field

No longer recommended

Revised Trauma Score: LOSE IT

- ▶ **ONLY** score to use is the GSC
AVPU too limited /need evaluation over time

The only SCORE to be utilized for Trauma Team activation should be the Glasgow Coma Scale. The revised Trauma Score has NOT proven to be an effective triage tool, is complex to determine, difficult to remember and isn't meaningful.

Revised Trauma Score

<u>Parameter</u>	<u>Finding</u>	<u>Points</u>
Respiratory Rate	10-29	4
	> 29	3
	6-9	2
	1-5	1
	0	0
Systolic BP	> 89	4
	76-89	3
	50-75	2
	1-49	1
	0	0
Glasgow Coma Score	13-15	4
	9-12	3
	6-8	2
	4-5	1
	3	0

RTS = points added for RR + Systolic BP + GCS Highest score = 12
If RTS < 11, take to trauma center

$$R = 32 (3) + SBP = 78 (2) + GCS = 10 (3) = RTS 8$$

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Here is the Revised Trauma score with an example of how to calculate it. Once a score is determined, what does it mean? TOO MANY NUMBERS.

It's complex to use, difficult to remember and hasn't proven to be an affective tool for staff to utilize in order prepare and respond appropriately to injured patients.

Activation Criteria Pitfalls

- **Expecting EMS to “activate” instead of “communicate”**
“We didn’t activate because EMS did not tell us to”
- **EMS unfamiliar with or does not know the Activation criteria**
- **Lack of stakeholder involvement/buy-in:**
 - EMS = poor/no hospital preparation
 - ERPs = return to discretionary activations only
 - ER RNs = lack of facilitation roles

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Once again, while it is essential EMS is knowledgeable in the Trauma Team Activation criteria and uses it to consistently notify the hospital early in the call to maximize advance preparation for the trauma patient, EMS is NOT responsible to activate the hospital team.

As EMS and hospital staff begin to work more closely together, establishing trust and effective communication, notification from the field that EMS is caring for an injured patient who meets activation criteria will result in appropriate and effective activations. It is important staff and providers recognize it is their decision to activate the team and assemble their resources whether EMS “tells them to” or not.

An important part of Performance Improvement is the process of reviewing all activations for appropriateness (including communication), making sure EMS & the hospital are working together and identifying opportunities for improvement.

If any of the “links” in the process are not fully engaged or participating, it’s important to find those reasons and fix them.

Activation Criteria Pitfalls

- ▶ **Not activating when patient meets physiologic and/or anatomic criteria**
= Under triage

Using mechanism of injury and comorbidities without clinical indications of patient status to activate

= Over triage

- ▶ **Not addressing lack of activation when indicated**

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In order to keep Trauma Team Activation effective, both Undertriage and Overtriage need to be tracked. Not activating when we should and activating when we don't need to can both undermine the process quickly. If criteria to activate aren't working, they need to be revised and changed.

What if we have criteria but are not consistently activating?

- ▶ Look at reasons:
 - Criteria too complex/lengthy/confusing?
 - Too many over-triage activations?
 - Not enough Physician buy-in?
 - Not enough “trust” w/EMS reports for accuracy?
 - EMS not playing?
 - Not enough administrative support?

It's important to identify reasons for not activating when a patient meets our criteria and address those reasons.

Levels of Activation Response

Larger Facilities with more patient volumes & resources (Level I, II, III, MT Regional/Area):

Three levels:

Trauma Alert/Full: Activation of full team w/immediate response of: Surgeon, OR crew, Anesthesia & time of response

Trauma Standby/Partial: Activation of portion of team w/ secondary response of Surgeon, expected time of response longer

Trauma Consult/Evaluation: general surgeon to see the patient, time not specific

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Trauma Team Activations may be implemented in different levels, based on volumes of patients and the size/resources of the facility. Larger facilities (ACS Level I, II or III/Montana Regional/Area Trauma Hospitals) may choose to implement three levels of Trauma Team Activation, with different responders and expectations for each level of activation.

Activation Response

- ▶ Level III/IV,
Area/Community:

Two Levels:

Trauma Alert/Full :Activation of full team
w/immediate response of: Surgeon and
OR/Anesthesia if available, time-specific

Trauma Standby/Partial: Activation of portion of
team; Surgeon may be ERP discretionary and/or
time differs from Full

ACS Level III/IV/Montana Area or Community Trauma Hospitals may utilize two levels of Trauma Team Activation

Activation Response

- ▶ Level III/IV,
Community/Trauma Receiving Facility:

One Level:

Trauma Team Activation: All identified Trauma Team members to immediately respond & time-specific



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ACS Level III/IV and Montana Community and Trauma Receiving Facilities may use a single level “all hands on deck” approach for Trauma Team Activation.

Documentation

Effective Documentation

ALWAYS AN ISSUE

- **Complete**, accomplished in “real time”,
- **Accessible** to staff, **accurate**, **legible**
- Ready to go with the patient when they go
- “Tells the entire story”
 - Time of Interventions with response to interventions
 - I/O’s, meds, imaging, VS, etc.
- Provides for evaluation of care processes so opportunities for improvement can be identified and action plans developed and reevaluated

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Documentation is an on-going issues for ALL facilities, EVERYWHERE. While documentation is important, other issues demand staff attention during patient resuscitation and scarce resources may mean documentation is sketchy and incomplete. The mantra everyone hears about the importance of documentation is “if it wasn’t documented, it wasn’t done”. While this is certainly true and there is legal risk involved as a result, it is simply not a truly compelling argument for the person providing care at the bedside.

A more effective approach for patient care staff is to emphasize that complete documentation really provides them with deserved credit for good care. Without complete documentation, it is difficult (if not impossible) to evaluate the care provided or identify opportunities for improvement.

Documentation

- Trauma Flowsheets
 - Forms organized to flow with the care of the patient
 - Provide “cues”/reminders as to what should be documented
 - Comprehensive, user-friendly, staff-designed
 - Accessible: kept where staff will USE them
 - “Tells the story”
- Pitfalls: too complex, not user-friendly, too much detail, imposed on staff, kept “elsewhere”, not organized to the flow of care

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What promotes effective, complete documentation for an injured trauma patient? The Trauma Flowsheet.

Many good examples exist. Involve clinical staff to “cut and paste” examples to design a comprehensive form that works for THEM. Implementing a form without staff support and “buy-in” means CERTAIN failure of that form.

Trauma flowsheets that are NOT utilized are too complicated, don’t flow well, designed by someone who doesn’t use them and not kept where staff can easily access them.

Electronic Medical Records present different issues. Episodic critical care (Medical or Trauma resuscitations) requires “real-time” documentation for accuracy. EMR documentation is extremely difficult to implement “as it happens” and often requires “re-construction” of events sometime later. For that reason, the American College of Surgeons strongly recommends that Trauma Team Activations be documented on paper Trauma Flowsheets and NOT in the EMR formats. Often, trauma patients must be transferred to higher/different levels of care. EMS & ED documentation must accompany the patient wherever they are transferred to.

Performance Improvement

- ▶ Review all activations:
 - Was ATLS followed?
 - Was care appropriate?
 - Were policy/guidelines followed?
- ▶ Review non-activations/appropriateness
- ▶ Review all trauma deaths
- ▶ Review all trauma transfers
- ▶ Review all trauma “Direct Admissions”
- ▶ Review Activation Criteria, revise as indicated

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Effective performance improvement for Trauma Team Activations includes evaluation of all of these components.

Education

- Activation Criteria
- Roles & Responsibilities of Team Members
- Development of teamwork
- Communication & Documentation
- Equipment , supplies and medications;
 - Storage, usage, procedures
- Specific injury management
- Transfer procedures & documentation
- “Mock Trauma” Practices
- Case reviews & PI: How did we do?
Were good decisions made & actions taken?

Education for all team members (including EMS) needs to consist of many components. This cannot be over-emphasized. Strides made managing trauma patients well as a team can be replicated for any other type of “time-sensitive” patient.



“When we became better at managing trauma patients , we became a better ER and a better hospital”

- Kirby Peden, MD

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TEAM Course conducted in Circle, MT being instructed by Kirby Peden, MD

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Resources

➤ EMS & Trauma Systems:

<http://dphhs.mt.gov/publichealth/EMSTS/traumasystems/tcresources.aspx>

- CDC Field Triage Decision Scheme: the National Trauma Triage Protocol
- FREE wall chart, written guide & pocket card
<http://www.cdc.gov/FieldTriage/>
- American College of Surgeons "Orange Book"
- Barach, Paul, and M. Weingart. "Trauma team performance." *Trauma: Resuscitation, anesthesia, surgery, and critical care*. New York: Marcel Dekker, Inc (2003): 96-150.
- American College of Surgeons Committee on Trauma ATLS 9th

Many resources are available to help you with this process.