North Central Regional Trauma Advisory Council

North Central Regional Trauma Advisory Council
Regional Trauma Plan
May 25, 2017

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Introduction

The North Central Regional Trauma Advisory Council (NCRTAC) is part of the Wisconsin Trauma Care System. Membership in the NCRTAC is open and primarily includes hospitals and emergency medical services but other partners including public health departments, public safety answering points, educational institutions and emergency management are represented. Since the inception of RTACs around 2001, NCRTAC members have collaborated to improve care of the trauma patients in our region.

The NCRTAC regional trauma plan is part of our on-going efforts to have a lasting impact on reducing death and disability from trauma to patients of all ages. The NCRTAC will continue to actively participate in state-wide, regional, and local efforts to build and strengthen the Wisconsin Trauma Care System.

Mission Statement

The North Central Regional Trauma Advisory Council is dedicated to reducing the death, disability and suffering that result from traumatic injuries and mass casualty events by providing a comprehensive and integrated system of regional prevention and trauma care resources throughout the continuum of care.

- adapted from Wisconsin Trauma Care System Mission Statement

Demographics

The NCRTAC is made up of:

- 12 counties
- 12,069 square miles
- 466,975 citizens[#]
- 66 medical first responder agencies (Attachment 1)
- 63 transporting ambulance services (Attachment 1)
- 15 designated trauma care facilities (Attachment 2)
- 2 undesignated hospitals (Attachment 2)

[#] 2018 Population estimate US Census

According to Wisconsin Trauma Registry data*, trauma care in our region for the calendar year 2018 included:

- 4,533 trauma patients entered into the Registry
- 2,226 hospital admissions
- 464 intensive care unit admissions

* Some counts may include patients counted twice when referred to another facility

General Membership

The NCRTAC is an organized group of healthcare entities and other concerned individuals who have an interest in organizing and improving trauma care within a specified region of the State. The NCRTAC serves as the unifying foundation to bring together all local, county, and regional stakeholders, for the planning, education, training and prevention efforts needed to

assure the exemplary care needed pre, acute and post injury for all visitors and citizens in Wisconsin.

The NCRTAC is fortunate to be served by a loyal and growing group of representatives from the diverse agencies of our region. NCRTAC meeting attendance is tracked by the coordinator. By written, verbal, or electronic request the coordinator will email a meeting attendance report to any member or member facility for that specific member or members of the requesting agency.

The NCRTAC membership is made up of representatives within Wisconsin Health Emergency Region #2 (Clark, Forest, Iron, Langlade, Lincoln, Marathon, Oneida, Portage, Price, Taylor, Wood, and Vilas Counties) although border agencies are welcome to participate. This may be appropriate for members whose primary patient referral pattern is into our region.

Attachment 1: NCRTAC Licensed EMS Agencies
Attachment 2: NCRTAC Trauma Care Facilities

Other regular participants in the NCRTAC include:

- Mid-State Technical College
- Nicolet Area Technical College
- Northcentral Technical College

NCRTAC Bylaws

The NCRTAC Bylaws were most recently revised and approved by the general membership on July 1, 2017. Bylaws are posted at www.NCRTAC-WI.org and available by verbal, written, or electronic request to the NCRTAC chairperson or coordinator.

Executive Council

The NCRTAC Bylaws – Article IV, Section I states:
The Executive Council shall consist of not less than nine (9) or more than seventeen (17) Directors including:

(a) Not less than 2 prehospital affiliated members.
(b) Not less than 2 hospital affiliated members.
(c) At least one member representing education
(d) At least one member representing injury prevention
(e) Not less than 2 miscellaneous members (e.g. public health, law enforcement, education, elected officials, emergency management, concerned citizens, etc.)

Article IV, Sections V and VI require the Executive Council to meet at least four times per fiscal year.

Coordinating Facility

Aspirus Wausau Hospital, a Level II American College of Surgeons verified trauma center, and Marshfield Medical Center, a Level II American College of Surgeons verified adult and pediatric trauma center currently serve as the NCRTAC Co-Coordinating Facilities.

Fiscal Agent

The NCRTAC uses The Non-Profit Helping Hand Foundation, a division of O'Leary & Anick as a fiscal agent. The Non-Profit Helping Hand Foundation is a 501(c)(3) organization and contracts with the Wisconsin Department of Health Services to provide funding to the NCRTAC.

Budget

The NCRTAC is on a July 1 – June 30 fiscal year per the DHS contract. The annual budget is drafted by the RTAC Coordinator based on DHS supplied contract objectives and approved by the Executive Council.

At the end of the fiscal year the Executive Council approves the certificate of compliance documenting that the contract objectives were completed. The Executive Council Chair and the RTAC Coordinator sign the certificate before submitting it to DHS.

Attachment 3: NCRTAC Budget, Fiscal Year 2019

General Meetings

General membership meetings are held bi-monthly, generally on the third Thursday of odd months. Meeting locations rotate between Aspirus Wausau Hospital, Ascension Saint Clare's Hospital and Marshfield Medical Center. Teleconference attendance is generally available. Meetings run from 9:00 a.m. to Noon and consist of a general membership meeting and committee meetings. Executive Council meetings may be held during this time as needed. Educational presentations or guest presentations also may be held during this time.

Member Communication

Newsletter

A monthly electronic newsletter is produced by the RTAC Coordinator and contains:

- State trauma system news
- NCRTAC news
- Meeting announcements and agendas
- EMS and hospital trauma care news
- Upcoming educational opportunities

Website

The NCRTAC website (NCRTAC-WI.org) contains a variety items to inform RTAC members and the general public about the trauma care system. The website includes:

- Event calendar
- News stories
- File center with meeting minutes, agendas, handouts, educational fliers, resource items
- Committee pages
- Information about the Wisconsin Trauma Care System, trauma registry and hospital classification system

Document Maintenance

NCRTAC files and records are maintained by the NCRTAC coordinator. Electronic files are organized into directories and routinely backed-up to an online secure service. Many documents are archived to the file center at www.ncrtac-wi.org. Archived documents at www.ncrtac-wi.org include:

- NCRTAC bylaws
- NCRTAC general membership meeting minutes
- NCRTAC executive council meeting minutes
- NCRTAC committee meeting minutes and project-related documents
- Educational presentation hand-outs and supporting materials

NCRTAC members may always request NCRTAC files from the NCRTAC Coordinator by verbal, written, or electronic request.

State Meeting Participation

The NCRTAC is routinely represented at the State Trauma Advisory Council and sub-committee meetings by multiple members from NCRTAC trauma care facilities and EMS agencies and the NCRTAC Coordinator. A recap of each meeting is provided at the next NCRTAC general membership meeting.

Healthcare Coalition

The NCRTAC is member of the North Central Wisconsin Healthcare Emergency Readiness Coalition (NCW HERC). The mission of the NCW HERC is to ensure collaboration among healthcare organizations and public- and private-sector partners that is organized to prepare for, and respond to, an emergency, mass casualty or catastrophic health event. The NCRTAC nominates and approves two trauma designees and two EMS designees to serve on the NCW HERC Board of Directors.

Regional Needs Assessment

Over several meetings and through online survey tools, the members of the NCRTAC responded to an assessment questionnaire and action item survey for the NCRTAC. See attachment 4 for summarized results. This information helped determine future goals for each of the NCRTAC committees and will be used by the Executive Council to steer the NCRTAC in the near future.

Performance Improvement Committee

Recent accomplishments/ projects

- Requested and reviewed regional trauma data sourced both from the state trauma registry data manager and the RTAC Coordinator access to regional reports
- Compared activation criteria across multiple hospitals to analyze if they meet current standards
- Conducted regional case reviews at the General Committee meetings

Future goals

- Increase committee participation in PI
- Facilitate additional trauma registry or PI training
- Continue to review and analyze registry data
- Facilitate hospital staff training opportunities
- Create an action plan to decrease the ED LOS >3 hrs with ISS >15

Injury Prevention Committee

Recent accomplishments/ projects

- Development of ATV and farm safety displays for use by RTAC members
- Adoption of a fall prevention referral “app” for use by EMS providers
- Placement of eight Life-vest loaner stations around the region
- Distribution of personal first aid kits, distracted driver awareness items and ATV safety child activity booklets

Future goals

- Review of injury data to identify additional areas of need
- Develop partnerships with other agencies performing injury prevention in the region
- Update existing injury prevention kits (current statistics, recommendations, talking points)

Out of Hospital Committee

Recent accomplishments/ projects

- Support of the Stop the Bleed lay person training and hemorrhage control kit supply campaign
- Radio report and hand-off report template (MIST) distribution and education (Attachment 12)
- Tourniquet distribution and training
- SALT Triage product distribution and training
- Support of PHTLS program through the purchase of textbooks, payment of instructor update fees and offering PHTLS course host payments
- Trauma field triage protocol and PI tool (Attachment 5)
- Helicopter EMS position statement (Attachment 6)
- Attendance of the RTAC Coordinator at county EMS/Fire leadership meetings

Future goals

- Increase EMS participation
- Review MIST utilization
- Service-based education (hospital activation criteria, spinal immobilization)
- Provide a forum for ongoing discussion, education and quality improvement related to industry changes in the utilization of long backboards
- Improve EMS to hospital communication (early notification, use of activation criteria, multiple patients, etc.)

Definitive Care Committee

Recent accomplishments/ projects

- Multiple injured family members position statement (Attachment 11)
- Tranexamic Acid position statement (Attachment 10)
- Initial management of open fractures position statement (Attachment 9)
- Radiological study position statement (Attachment 7)
- Guidelines for the management of suspected blunt spine injury during interfacility transfer (Attachment 8)

Future goals

- Evaluate additional evidence-based-medicine position statements
- Discuss opportunities to increase efficiencies in the referral process

NCRTAC Trauma Conference

Beginning in 2016, the NCRTAC has held a regional trauma continuing education conference targeting all levels of EMS providers and hospital trauma nursing staff. We have also had pharmacy, trauma registry, physician, and advanced level provider attendees.

The conference is a one-day event with general and break-out tracks and trauma product and service vendors. In 2019, there were 180 total registrations and 12 vendors. The fee for the conference was $35 which included the program, lunch, a give-away item, and continuing education credits.

The 2020 conference was canceled due to the COVID-19 pandemic.

Attachment 1: NCRTAC Licensed EMS Agencies

County	Service Name	Level
Clark County	Chili-Freemont Fire & Rescue	Emergency Medical Responder
	Central Fire & EMS District	EMT
	Granton Area First Responders	Emergency Medical Responder
	Greenwood Area Ambulance Service	EMT
	Loyal Ambulance Service	EMT
	Neillsville Municipal Ambulance Service	EMT
	Owen-Withee Community Ambulance Service	EMT
	Thorp Area Ambulance District	EMT
Forest County	Alvin (town of) Fire and Rescue	Emergency Medical Responder
	Argonne Fire Department	Emergency Medical Responder
	Crandon Area Rescue Squad	Advanced EMT
	Hiles FD First Responders – Station A	Emergency Medical Responder
	Laona Rescue Unit	Advanced EMT w/ flexible staffing
Iron County	Beacon Ambulance Service**	Paramedic
	Mercer Area Ambulance & Rescue	EMT
	Saxon-Gurney First Responders	Emergency Medical Responder
	Sherman (Town of) First Responders	Emergency Medical Responder
Langlade County	City of Antigo Fire Department	Paramedic**
	Antigo (Town of) Fire Department	Emergency Medical Responder
	Langlade County Rural Fire Control	Emergency Medical Responder
	Pickerel Volunteer Fire and Rescue Squad	Advanced EMT
	Troutland Rescue Squad	EMT (non-transport)
Lincoln County	Corning First Responders	Emergency Medical Responder
	Lincoln County EMS – Merrill	Paramedic**
	Lincoln County EMS – Tomahawk	Paramedic
	Pine River First Responders	Emergency Medical Responder
	Russell (Town of) First Responders	Emergency Medical Responder
Marathon County	Ascension WI Spirit Medical Transportation Service	Paramedic**
	Aspirus Med-Evac	Paramedic**
	Athens Area Ambulance Service	EMT
	Bevent First Responders	Emergency Medical Responder
	Easton First Responders	Emergency Medical Responder
	Edgar Volunteer Fire Department	EMT
	Emmet First Responders	Emergency Medical Responder
	Hamburg Fire Department First Responders	Emergency Medical Responder
	Hatley Area Ambulance Service	EMT
	Hewitt (Town of) Fire Department	Emergency Medical Responder
	Kolbe and Kolbe Millwork Company	Emergency Medical Responder
	Kronenwetter Fire Department First Responders	Emergency Medical Responder
	Maine (Town of) First Responders	Emergency Medical Responder
	Marathon City First Responders	Emergency Medical Responder
	Marathon County TEMS	Paramedic
	McMillan (Town of) Fire Department First Responders	EMT (Non-transport)
	Mosinee Fire District - Ambulance Service	Advanced EMT
	Ringle Fire Department	Emergency Medical Responder
	Riverside Fire District	Advanced EMT
	South Area Fire & Emergency Response District	Paramedic**
	Spencer Community Ambulance Service	Advanced EMT
	Stratford Area Fire Department and Ambulance	EMT

County	Service Name	Level
	Texas (Town of) Fire Department	Emergency Medical Responder
	Wausau Fire Department	Paramedic**
	Wausau (Town Of) First Responders	Emergency Medical Responder
Oneida County	Crescent First Responders	Emergency Medical Responder
	Hiles FD First Responders – Station B	Emergency Medical Responder
	Oneida County Ambulance – HYMC	Paramedic
	Little Rice First Responders	Emergency Medical Responder
	Newbold Fire Department	Emergency Medical Responder
	Nokomis Fire Department First Responders	Emergency Medical Responder
	Oneida County Ambulance - Rhinelander	Paramedic
	Oneida County Ambulance - Three Lakes Unit	Advanced EMT
	Pelican Lake Fire Rescue First Responders	Emergency Medical Responder
	Pine Lake First Responders	Emergency Medical Responder
	Rhinelander Fire Department	Paramedic
	Stella Volunteer Fire Department & Rescue	Emergency Medical Responder
	Three Lakes Fire Department	Emergency Medical Responder
	Woodboro First Responders	Emergency Medical Responder
Portage County	Portage County EMS	Emergency Medical Responder
	Portage County Ambulance/ Amherst Fire District	Paramedic
	Portage County Ambulance/ Stevens Point Fire Department	Paramedic
	Village of Plover Fire Department	Paramedic
Price County	Central Price County Ambulance Service	Advanced EMT
	Fifield EMS First Responders	Emergency Medical Responder
	Flambeau Hospital Ambulance	Advanced EMT
	Pike Lake EMS	Emergency Medical Responder
	Prentice Volunteer Fire Department Ambulance Service	EMT
Shawano County	Birnamwood Area Ambulance*	Advanced EMT
	Wittenberg Area Ambulance*	Advanced EMT
Taylor County	Jump River First Responders	Emergency Medical Responder
	Lublin Fire Department First Responders	Emergency Medical Responder
	North East Taylor County First Responders	Emergency Medical Responder
	Stetsonville Fire Department First Responders	Emergency Medical Responder
	Taylor County Ambulance Service - Gilman	EMT
	Taylor County Ambulance Service - Medford	Advanced EMT
	Taylor County Ambulance Service - Rib Lake	Advanced EMT
Vilas County	Arbor Vitae First Responders	Emergency Medical Responder
	Boulder Junction Fire Department	EMT
	Conover Ambulance Service	Advanced EMT
	Eagle River Fire Department First Responders	Emergency Medical Responder
	Eagle River Memorial Hospital Ambulance Service	Paramedic
	Lac Du Flambeau Ambulance Service	EMT
	Land O' Lakes Ambulance Service	EMT
	Manitowish Waters Fire Company	EMT
	Phelps Area Emergency Medical Service	Advanced EMT
	Plum Lake Ambulance Service	EMT
	Presque Isle Volunteer Fire Department	EMT
	St. Germain Fire Department	EMT w/ flexible staffing
	Winchester Volunteer Ambulance Service	EMT
Wood County	Armenia First Responders	Emergency Medical Responder
	Arpin Fire Department First Responders	Emergency Medical Responder
	Auburndale Fire Department First Responders	Emergency Medical Responder
	Biron Volunteer Fire Department First Responders	Emergency Medical Responder

County	Service Name	Level
	Grand Rapids Volunteer Fire Department	Emergency Medical Responder
	Hewitt Area Fire Department	Emergency Medical Responder
	Life Link III	Paramedic**
	Lincoln (Town of) Fire Department	Emergency Medical Responder
	Marshfield Fire and Rescue Department	Paramedic**
	Nekoosa Ambulance Service	Paramedic**
	Nekoosa Volunteer Fire Department First Responders	Emergency Medical Responder
	Pittsville Fire Department	Advanced EMT
	Port Edwards (Town of) Emergency Medical Responders	Emergency Medical Responder
	Port Edwards Fire Department First Responders	Emergency Medical Responder
	Richfield Rural Fire Department	Emergency Medical Responder
	Rock (Town of) Fire & Rescue	Emergency Medical Responder
	Rome Fire Department First Responders	Emergency Medical Responder
	Rudolph Fire Department	Emergency Medical Responder
	Saratoga (Town of) EMS First Responders	Emergency Medical Responder
	Sherry Volunteer Fire Department	Emergency Medical Responder
	United Emergency Medical Response	Paramedic**
	Vesper Volunteer Fire Department First Responders	Emergency Medical Responder
	Wisconsin Rapids Fire Department	Paramedic**

* Transport primarily to NCRTAC hospitals
** Critical care interfacility transport provider

Attachment 2: NCRTAC Trauma Care Facilities

Hospital	City	Designation Level
Aspirus Langlade Hospital	Antigo	Level IV
Ascension Eagle River Hospital	Eagle River	Level IV
Ascension Good Samaritan Hospital	Merrill	Level IV
Flambeau Hospital	Park Falls	Level IV
Ascension Our Lady of Victory Hospital	Stanley	Level IV
Ascension Sacred Heart Hospital	Tomahawk	Level IV
Aspirus Medford Hospital	Medford	Level IV
Marshfield Medical Center - Neillsville	Neillsville	Level III
Howard Young Medical Center - Ascension	Woodruff	Level III
Ascension Saint Mary's Hospital	Rhinelander	Level III
Ascension Saint Michael's Hospital	Stevens Point	Level III
Ascension Saint Clare's Hospital	Weston	Level III
Aspirus Riverview Hospital	Wisconsin Rapids	Level III
Aspirus Wausau Hospital	Wausau	ACS Level II (Adult)
Marshfield Medical Center	Marshfield	ACS Level II (Adult & Pediatric)
Aspirus Stevens Point Hospital	Stevens Point	Undesignated
Marshfield Medical Center – Minocqua	Minocqua	Undesignated

Attachment 3: NCRTAC Budget FY2019

Approved 25 July 2019		
Income		**2019-2020 Budget**
Wisconsin Trauma Care System		$29,237.90
Budget adjustment from State		
Total Income		**$29,237.90**
Expense Items		**Annual Budget**
	Account	
Obj 1: Maintain RTAC infra-structure in a manner that supports participation by all representative members and is consistent with HFS 118.06.		
Personnel/ Services		
NCRTAC Coordinator Contractor		
RTAC Coord Reimbursable Travel, and Lodging	8707	$ 3,000.00
Education/ Conferences	8801	$ 1,600.00
Consult/ Contract		
Ad hoc consult/ contract support	8015	$ 250.00
Agency Operations		
Office & mailing supplies	8106	$ 50.00
Conference Booth Supplies	8107	$ 500.00
Photocopies	8108	$ 100.00
Postage	8301	$ 25.00
Website Hosting and Domain	8110	$ 290.00
Coordinator email and productivity software	8106	$ 100.00
Email Newsletter	8110	$ 200.00
Storage space rent	8106	$ 600.00
Fiscal agent fee	8008	$ 2,923.79
Obj 2: RTAC reviews regional trauma registry data collected under HFS 118.09 when/if provided reports from the department.		
Data review support (meeting expenses)		$ -
Obj 3: RTAC has a functional Performance Improvement Program.		
PI project support	8060	$ 2,000.00
Hospital/ EMS Project Grants	8061	$ 4,000.00
Obj 4: Develop and Revise Regional Trauma Plan.		
Trauma Plan Revision		$ -
Obj 5: RTAC maintains/supports trauma related education and training in the region (may include EMS and other organizations).		
Hospital-based courses	8062	$ 2,500.00
Conferences	8063	$ 2,000.00
Pre-hospital courses	8064	$ 4,099.11
Out-of-Hospital Committee Projects	8067	$ 2,000.00
Obj 6: RTAC maintains/supports injury prevention related education and training in the region (may include hospitals and other organizations).		
IP project support	8066	$ 3,000.00
Total Expenses		**$ 29,237.90**
Income less expenses		$ -

Attachment 4: Regional Needs Assessment

The NCRTAC completed the RTAC Assessment tool through in person and online surveys.

Regional Trauma Advisory Council Assessment Tool

NCRTAC Self-Assessment May 2019

Score = Tally of 7 surveys returned from Executive Council members

Priority = Tally of votes received from general members at Sept RTAC meeting (6 responses) plus SurveyMonkey tool Oct 2019 (22 responses).

Priority (total votes)	**Assessment Tool Item #**	**DHS Rule Reference**	**Indicator**	**Score** (Range 0 – 5 with 5 being best)
22	4b.		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 that the patients are expeditiously transferred to the appropriate, system-defined trauma facility.	3.57
16	1d.		There is a clearly defined, cooperative, and ongoing relationship between regional trauma physician leaders and the EMS system medical directors in the region.	2.60
12	1a.		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.	3.5
12	7.		There are established procedures and mechanisms for communications among trauma system members during all levels of healthcare emergencies including multiple jurisdiction incidents. The procedures and systems are effectively coordinated	3.60

			within the overall regional response plans.	
12	4a.	118.06 (3)(o)	The region has adopted the State of Wisconsin Trauma Field Triage Guidelines to ensure that trauma patients are transported to an appropriate trauma care facility. Regional over-triage and under-triage data is reviewed.	3.71
12	1e.	118.06 (3)(L)	The regional trauma plan should ensure that the number, levels, and distribution of trauma facilities are communicated to all partakers and stakeholders. The RTAC should develop procedures to ensure that trauma patients are transported to an appropriate facility that is prepared to provide care.	3.86
10	4d.	118.10	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.	3.60
10	2b.		The region has a system in place to support member hospitals in the classification review process.	3.67
6	9.	118.06 (3)(k)	The RTAC has a process in place to resolve conflicts concerning trauma care and injury prevention.	2.83
6	5b.	118.06 (3)(k)	The RTAC 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.	3.67
5	4c.		There is a regional trauma bypass protocol that provides EMS guidance for bypassing a trauma care facility for another more appropriate trauma care facility.	3.80
3	8.		The regional trauma plan addresses the integration and participation of rehabilitation services within the continuum of care for trauma patients.	3.00

Action Item Survey – December 2019

The following document contains the responses to the questions posted in a SurveyMonkey tool in December 2019. 12 responses were received. The responses to each question are copied and pasted without editing into each question below.

Q1: 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 that the patients are expeditiously transferred to the appropriate, system-defined trauma facility.

- Yes, we have now an activation policy and our PI process includes an in depth look at all trauma transfers that are delayed, over 3 hour LOS, or requested by staff to look at delays.
- Set benchmarks for time from referring hospital initiates call to trauma center until Speaks to a physician or designee able to accept the patient and until Pt accepted at trauma center. Track number of imaging studies requested prior to accepting. Track time until appropriate EMS transport is able initiate transport
- including time to transfer goals
- Time to speak with Trauma Surgeon/ED Doc should be monitored. We are taking care of a crashing trauma patient and then running back, perhaps, multiple times to attempt to get a hold of an accepting physician.
- Even though the Leaders for Trauma state that we shouldn't delay transport for CT's etc there are still Physicians that request that certain tests be done at the sending facility.
- This could be better addressed in my local hospital. There have been delays in the past due to ownership of the hospital vs the transfer agency
- Unknown by EMS providers
- Conduct an audit of those trauma patients that are in a transferring facility greater than 3 hours
- Is there a reason that field initiation of air medical services cannot be done when we know the receiving hospital cannot manage the patient - saves time and patients.

Q2: There is a clearly defined, cooperative, and ongoing relationship between regional trauma physician leaders and the EMS system medical directors in the region.

- I am not as informed on this one.
- Develop forum in which Trauma Physicians and EMS Medical Directors can interact (ideally as part of RTAC meetings). Develop feedback process between Trauma Centers and EMS Medical Directors
- I have not been privilege to this if there is
- EMS Leaders at all facilities should be required to be involved in RTAC to some degree from all areas. I feel like our service operates on it's own with little involvement.
- Not sure if our medical director is working with regional physicians or not
- You would need to ask them...As an EMS provider that information isn't directly known.
- Communication about this team should be shared with those at the bedside
- Having STRONG - INVOVLED EMS coordination personnel at all hospitals that work with EMS on a daily basis and actually provide help - guidance and training when asked rather than none at all.

Q3: 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.

- Case/Death Review Committee of EMS transports & opportunities for improvement with trauma programs in the area. For example, at Aspirus we are looking into Out of Hospital Traumatic Death Review with the ME office, which would include EMS provision of care; as many as 30% prehospital deaths had opportunities for improvement.
- I believe this is true but better answered by EMS.
- Develop forum in which Trauma Physicians and EMS Medical Directors can interact (ideally as part of RTAC meetings). Develop feedback process between Trauma Centers and EMS Medical Directors
- not as far as I know
- I don't believe that there is a good plan in place in my local hospital
- No fully appreciated due to the competing Hospital systems.
- Encourage more local Medical Directors to be involved in RTAC
- Utilizing ER personnel that also work in the field on a daily basis helps relay that information and can relay back that info. Now we only receive info from Trauma services - not always timely - we receive nothing form the EMS coordinator at tour primary facility.

Q4: There are established procedures and mechanisms for communications among trauma system members during all levels of healthcare emergencies including multiple jurisdiction incidents. The procedures and systems are effectively coordinated within the overall regional response plans.

- Feels to me like this could be better coordinated.
- Further integrate the use of EMResource and WISCOM into daily or regular use processes
- (This could be met as discussed at our 12/5 meeting) When EMS radio in, will begin with "Trauma Alert" and then provide MIST information.
- Seems like WisCOM would accomplish this.
- this is a work in progress
- We do drill on MCI in our area but lack good coordination
- Perhaps
- Those who are to participate on this team are sometimes spread too thin to be able to attend
- Include dispatch centers in this discussion.

Q5: The region has adopted the State of Wisconsin Trauma Field Triage Guidelines to ensure that trauma patients are transported to an appropriate trauma care facility. Regional over-triage and under-triage data is reviewed.

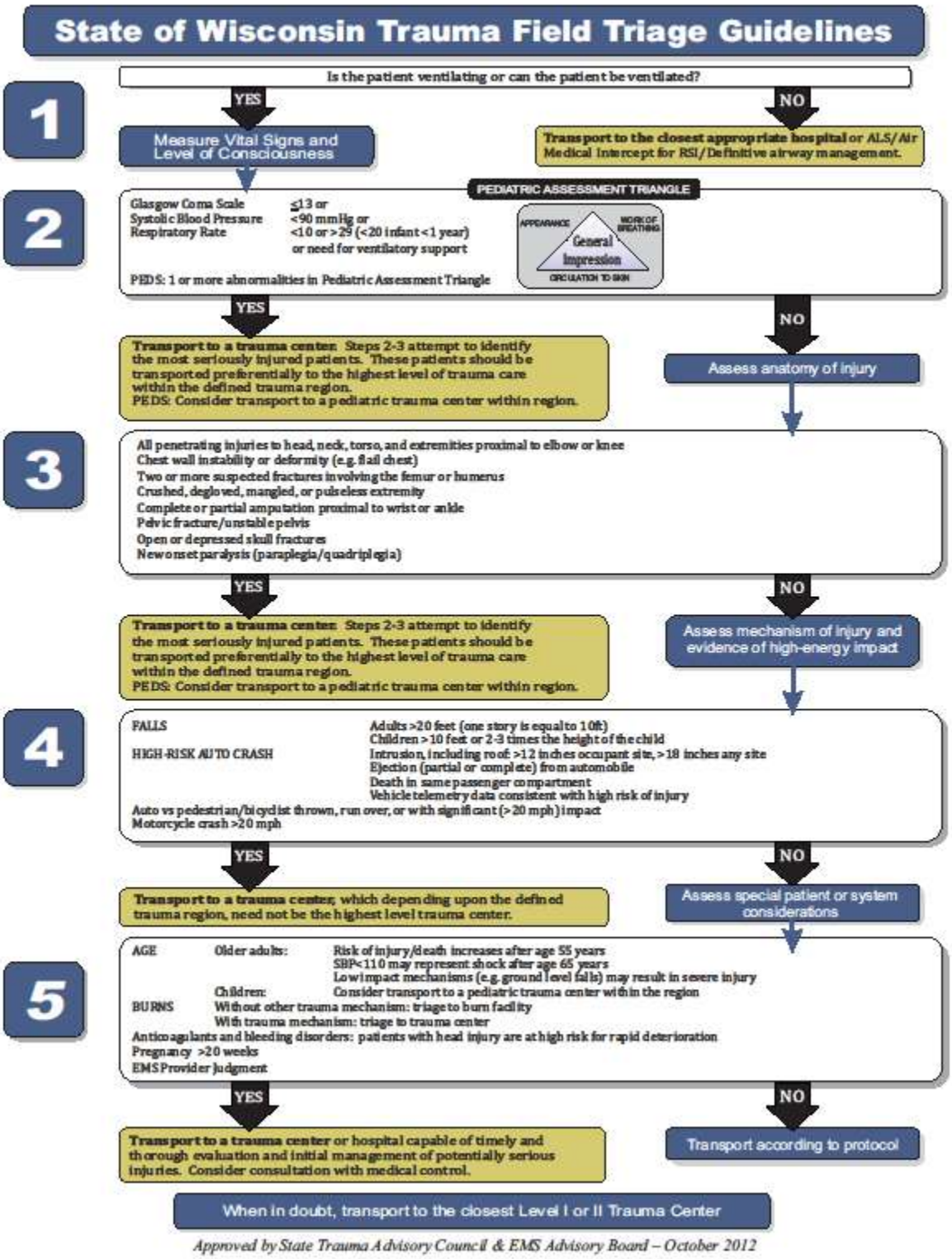
- Consider having hospital systems submit numbers to RTAC for quarterly review; ex. under/over triage, transfers out, #cases transferred out with LOS > 3hrs, multiple transfers, missing data, etc. Deidentify & present quarterly at RTAC meetings.
- I believe our EMS is looking at this currently; we do review all trauma activations and look at some EMS data as well. Currently we encourage our EMS staff to activate traumas in the field and it has been good but a work in progress.

- Present data on number of patients needing secondary transfer after EMS transport to lower level hospital, number of patient transported directly to trauma center and discharged in less than 24hrs, and specifically for HEMS transports
- We use the WI Trauma Field Guidelines here but not sure on how many pats are over vs under triaged
- Haven't been at a meeting where this information was reviewed, though I haven't been present at all meetings.

Q6: The regional trauma plan should ensure that the number, levels, and distribution of trauma facilities are communicated to all partakers and stakeholders. The RTAC should develop procedures to ensure that trauma patients are transported to an appropriate facility that is prepared to provide care.

- Working document on CW RTAC website that specifies the Trauma Certification Level of our region's hospitals, as well as Care Level (ALS/BLS) & contact information for EMS Services. This information is very difficult to find online!
- This sounds good, not sure how it should look. Because of our location, we transfer primarily to 2 of the closest facilities.
- Updates on trauma verification/certifications and hospital capabilities
- How can you coordinate in the northern areas when there is for example no hospitals in Forest County and three transporting agencies. Langlade county has two transporting agencies with one hospital.
- Great plan
- That is already delineated by the WI Trauma Field Triage Guidelines.....?

Attachment 5: Trauma Field Triage Guidelines



Attachment 6: Positon statement on the use of helicopter EMS

North Central Regional Trauma Advisory Council

Position Statement: Guidelines for the Prehospital use of Helicopter Emergency Medical Services

It is the position of the North Central Regional Trauma Advisory Council that helicopter EMS (HEMS) is an important piece of the trauma care system and should be used when appropriate to transport major trauma patients to the most appropriate trauma center.

Use of HEMS is not without risk, expense and controversy about its impact on patient outcome. Subsequently the NCRTAC recommends that HEMS be used with the following considerations addressed by the local EMS and medical control authorities:

I. Major trauma patients (as defined by the Wisconsin Trauma Field Triage Guidelines) should be transported to closest most appropriate Level I or II Trauma Center. If the Trauma Center is more than a 30 minute transport by ground ambulance (at safe driving speeds), the patient should be transported to the Trauma Center by HEMS. If HEMS is not available, the patient should be transported to the closest Level III or IV hospital. Basic Life Support providers should consider Advanced Life Support intercept when HEMS is not available.

II. All public safety responders including dispatch should be authorized to request the dispatch of the closest HEMS based on preliminary incident information prior to EMS arrival at the scene. The NCRTAC supports the following criteria as appropriate reasons to dispatch HEMS:
    a. Any incident where signs indicate that a person may be seriously injured, and the reporting party/ caller is not able to clearly relay the necessary information.
    b. Ejection from automobile during crash
    c. Altered mental status or unconsciousness
    d. Death of another occupant in the same vehicle
    e. Fall from 20 feet or higher (10 feet for a child)
    f. Any event with three or more critically injured patients
    g. Seriously ill or injured patient in an inaccessible area
    h. Pedestrian/ bicycle accidents where victim is thrown or run over
    i. Serious burns or injuries from an explosion
    j. Any penetrating injury to abdomen, pelvis, chest, neck or head (gunshot, knife wound, industrial accident)
    k. Crushing injuries to abdomen, chest or head

l. Drowning patients
m. Vehicle rollover
n. Any high speed motorcycle, snowmobile, or ATV crash
o. Large animal (rodeo, horse, bull, etc.) related injuries

III. Agencies should work with their dispatch centers and HEMS to use "auto-launch" protocols if such protocols would reduce the amount of time needed to activate HEMS

IV. HEMS may be canceled once ground EMS responders arrive on scene and assess the patient(s) or receive additional credible information that HEMS is not required.

V. Landing zone (LZ) safety is critical and a priority of the agency designated to establish the LZ
   a. Pre-designated landing zones should be established and used when possible
   b. LZ guidelines established by the HEMS are to be practiced and followed
   c. A dedicated LZ coordinator with reliable communication on MARC II will be appointed. (EMS-C is the alternative frequency)

VI. EMS agencies using HEMS should have a process improvement plan in place to review all major trauma patients for appropriate triage, mode of transport, destination and outcome. Rates of overtriage and undertriage should be monitored with goals of keeping overtriage to 25-50% and undertriage less than 5% (ACS-COT, 2006). HEMS should work with the EMS agencies to review transports and patient outcomes.

Approved by NCRTAC General Membership 17 January 2013.

Attachment 7: Positon statement on radiology studies

North Central Regional Trauma Advisory Council

NCRTAC's Position Statement on Radiology Studies

Both Level II Trauma Centers in the NCRTAC region agree that patient transport of critically injured patients should be expedited as soon as possible. Transport should not be delayed by performing radiological studies if this will not change the immediate plan of transferring the patient.

If radiological studies have been performed, both Level II Trauma Centers request that a copy of the imaging either accompanies the patient or is electronically sent as soon as possible.

Supported by the following:

Ministry St. Joseph's Hospital Level II Trauma Center and Level II Pediatric Trauma Center

MD

Dr. Ivan Maldonado, Trauma Medical Director — 5/7/2012 Date

Aspirus Wausau Hospital Level II Trauma Center

MD

Dr. Jennifine Larson, Trauma Medical Director — 5/4/12 Date

Attachment 8: Guidelines for the management of suspected blunt spine injury during interfacility transfer

North Central Regional Trauma Advisory Council

Position Statement:
Guidelines for the Management of
Suspected Blunt Spine Injury during Interfacility Transfer

1. Patients at high risk for spinal injury can often not be safely cleared just with a negative X-ray or CT scan. Because of this, high risk trauma patients should NOT be cleared from spinal precautions until they reach the hospital where they will receive definitive care.

2. The following conditions should be considered high-risk for spinal injury and managed with full spinal immobilization until arrival at the receiving trauma center:
   - Any clinical suspicion of spinal injury
   - Multi-system trauma or distracting injuries
   - Posterior midline spinal tenderness
   - Paresthesias
   - Intoxication or mental status changes

3. All patients transported with spinal immobilization should have padding with a commercial padding product or blankets on the backboard.

4. The following mechanisms of injury may place a patient at high risk of spinal injury:
   - Significant mechanism of injury and age > 65 years
   - Fall > 3 feet or 5 stair steps
   - Axial load injury
   - Motor vehicle crash $\geq$ 55 mph
   - Unrestrained occupant of a vehicle rollover
   - Motor vehicle crash with intrusion $\geq$ 12 inches
   - Ejection from vehicle
   - All-terrain vehicle, motorcycle or bicycle collision

5. This is intended to be used as a guideline. Individual clinical situations should be taken into account and discussed with the receiving physician.

Supported by Ministry Saint Joseph's Hospital Level II Trauma Center and Level II Pediatric Trauma Center and Aspirus Wausau Hospital Level II Trauma Center

Approved by NCRTAC General Membership 17 Jan 2013.

Attachment 9: Position statement for ED providers on initial open fractures guidance

North Central Regional Trauma Advisory Council

NCRTAC's Position Statement for ED Providers on Initial Open Fractures Guidance.

Both Level II Trauma Centers in the NCRTAC region agree that any open or suspected open fractures should receive early antibiotic administration (when possible) prior to transfer to a referring hospital to improve patient outcomes. Do not delay transfer to administer antibiotics prior to transfer to the referring hospital.

- Antibiotic selection
  - 1st generation cephalosporin unless heavily contaminated, then PCN-G.
  - If cephalosporin or PCN allergies, then Vancomycin can be substituted.
- Tetanus needed if more than 5 years or history is unknown.
- Apply a saline soaked gauze without an additive (i.e. no betadine).

Supported by the following:

Ministry St. Joseph's Hospital Level II Trauma Center and
Level II Pediatric Trauma Center

- Dr. Ivan Maldonado, Trauma Medical Director
- Dr. Jennifer Roberts, Pediatric Trauma Medical Director

Aspirus Wausau Hospital Level II Trauma Center

- Dr. Jennine Larson, Trauma Medical Director

Approved by the NCRTAC General Membership July 28, 2016

Attachment 10: Position statement on the administration of tranexamic acid (TXA)

North Central Regional Trauma Advisory Council

Position Statement: Administration of Tranexamic Acid (TXA)

Tranexamic Acid (TXA) acts as an antifibrinolytic by inhibiting plasminogen activation and plasmin activity thus stabilizing a clot. Both Level II Trauma Centers in the NCRTAC region support the administration of TXA for injured patients meeting the following indications.

Indication requirements:

- Must appear to be 18 years of age or older
- Ongoing significant hemorrhage, or strong clinical suspicion of hemorrhage (systolic BP < 90 mmHg and/or heart rate > 110 beats/minute)

Administration:

- TXA is ideally given within the first hour of active bleeding and should not be administered more than three hours after injury
- TXA 1 gram intravenous over 10 minutes followed by TXA 1 gram over eight hours

Prehospital Administration:

- The benefit of prehospital administration of TXA has yet to be determined. Services choosing to administer TXA in the field should do so in coordination with their receiving trauma care facilities and follow the aforementioned guidelines.
- Administration of TXA by EMS services in Wisconsin is limited to the paramedic level and must be approved by the State after additional training and medical director approval.

Supported by the following:

Ministry St. Joseph's Hospital Level II Trauma Center and
Level II Pediatric Trauma Center

- Dr. Ivan Maldonado, Trauma Medical Director
- Dr. Jennifer Roberts, Pediatric Trauma Medical Director

Aspirus Wausau Hospital Level II Trauma Center
Dr. Jennine Larson, Trauma Medical Director

References:
The CRASH-2 Collaborators. Effecects of TXA on death, vascular occlusive events, and blood transfusion in trauma patients with significant hemorrhage: a randomized, placebo controlled trial. *Lancet* 2010; **376**: 23-32.

The American College of Surgeons – Committee on Trauma (ACS-COT; 2015).

Approved by the General Membership of the NCRTAC Sept 22, 2016

Attachment 11: Position statement for multiple injured family members

North Central Regional Trauma Advisory Council

Position Statement for Multiple Injured Family Members

Both Level II Trauma Centers in the NCRTAC region support whenever possible if there are 2 or more injured from the same family, every effort needs to be made to send them to the same trauma center for definitive care in order to best meet the family's physical and emotional needs. Both EMS and hospitals (i.e. Level III & IV) need to be aware of this.

Early communication from the EMS providers on scene to the initial receiving hospital (base hospital) is critical.

The trauma center can be contacted for any questions.

Supported by the following:

Ministry St. Joseph's Hospital Level II Trauma Center and
Level II Pediatric Trauma Center

- Dr. Ivan Maldonado, Trauma Medical Director
- Dr. Jennifer Roberts, Pediatric Trauma Medical Director

Aspirus Wausau Hospital Level II Trauma Center

- Dr. Jennine Larson, Trauma Medical Director

Approved by the NCRTAC General Membership on January 26, 2017

Attachment 12: MIST Patient Report Format

North Central Regional Trauma Advisory Council

Radio & Hand-Off Report Format (30 – 60 seconds)

Mechanism of Injury

- History of event
- Vehicle crash, motorcycle crash, gunshot, fall, assault
- Type of crash (head-on, T-bone, roll-over, ejection, etc.)
- Pertinent use of (or lack of) safety equipment (seat belts, air bags, helmet, etc.)
- Vehicle speed, height of fall

Injuries Identified

- Major physical exam findings
- Is patient on anticoagulant therapy?
- Consider ABCDE format
- Does not need to include all minor findings

Signs/ symptoms (Vital Signs)

- Chief complaint
- Glasgow Coma Score
- Blood pressure, if known
- Pulse – quality & location
- Respiratory rate - quality
- Lung sounds
- ECG rhythm
- Pulse oximetry/ $ETCO_2$

Treatment(s)

- Care of life-threats/ major injuries
- Response to treatments

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