North Central Regional Trauma Advisory Council
Regional Trauma Plan

May 25, 2017

Submitted by:
Terry Nichols
Chair

Linda Vollmar
Vice-Chair

Michael Fraley
RTAC Coordinator

Table of Contents

Introduction

The North Central Regional Trauma Advisory Council (NCRTAC) is part of the Wisconsin Trauma Care System. Members of the NCRTAC include hospitals, medical first responders, EMTs, paramedics, public health departments, public safety answering points, and emergency management. 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
- 471,257 citizens
- 62 medical first responder agencies (Attachment 1)
- 60 transporting ambulance services (Attachment 1)
- 15 designated trauma care facilities (Attachment 2)

According to Wisconsin Trauma Registry data, trauma care in our region for the calendar year 2016 included:

- 2,866 trauma patients entered into the Registry
- 1,422 hospital admissions
- 339 intensive care unit admissions

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 September 20, 2012. Bylaws are posted at www.NCRTAC-WI.org and available by verbal, written, or electronic request to the NCRTAC chairperson or coordinator. The bylaws are currently being reviewed by the Executive Council for revision.

Executive Council

The NCRTAC Bylaws – Article III, Section 1 states:
Membership will be composed of not less than nine (9) or more than seventeen (17) Directors distributed as below:

(a) Not less than 2 prehospital affiliated members.
(b) Not less than 2 hospital affiliated members.
(c) Not less than 2 miscellaneous members (e.g. public health, law enforcement, education, elected officials, emergency management, concerned citizens, etc.)
(d) NCRTAC Coordinator as non-voting member

Article III, Section 4 requires the Executive Council to meet at least four times per fiscal year.

Coordinating Facility/ Fiscal Agent

Aspirus Wausau Hospital, a Level II American College of Surgeons verified trauma center, currently serves as the NCRTAC Coordinating Facility. Until June 30, 2015, Ascension Saint Joseph's Hospital, a Level II American College of Surgeons verified trauma center, served as the NCRTAC Fiscal Agent.

The current NCRTAC Bylaws call for Aspirus Wausau Hospital and Ascension (formerly Ministry) Saint Joseph’s Hospital alternating as Coordinating Facility and Fiscal Agent duties biannually. Due to the move to the Healthcare Coalition model, the Executive Council voted to remain with Ascension Saint Joseph’s Hospital as the fiscal agent for FY 2016. The North Central Wisconsin Healthcare Coalition moved to the Non-Profit Helping Hand Foundation as a fiscal agent for FY 2017. As the expectation from DHS is that the RTAC have the same fiscal

agent as the HERC, the NCRTAC Executive Council approved moving to the Non-Profit Helping Hand Foundation as well as of July 1, 2016.

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/ Expense Report, Fiscal Year 2017

General Meetings

General membership meetings are held bi-monthly, generally on the fourth Thursday of odd months. Meeting locations have rotated for the last several years between Aspirus Wausau Hospital and Ascension Saint Clare's Hospital. Beginning in 2017, the NCRTAC will also hold some meetings at Ascension Saint Joseph's Hospital. 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 designates two members to serve on the NCW HERC Board of Directors.

Regional Needs Assessment

Over a number of meetings, and through online survey tools, the members of the NCRTAC provided information on opportunities, threats and needs for the NCRTAC. See attachment 4 for summarized results. This information helped determine future goals for each of the NCRTAC committees.

Top 3 Opportunities

- Education
- Partnerships for education
- Communication

Top 3 Threats

- Changing healthcare environment
- Hospital staffing and funding
- Divide between EMS and trauma

Performance Improvement Committee

Recent accomplishments/ projects

- Emergency department length of stay (ED LOS) PI study including review of PI case reviews submitted to the NCRTAC by member hospitals
- Backboard padding study and provision of Back Rafts to referring hospitals
- Registry data quality improvement and registrar training

- Review of Registry data reports
- Case reviews

Future goals
- Provide additional PI training
- Facilitate additional trauma registry training
- Continue to review and analyze registry data
- Assess implementation of position statement on the initial management of open fractures
- Support systems of outcome & performance improvement feedback to referring hospitals and EMS agencies
- Facilitate hospital staff training opportunities (TCAR, RTTDC, CALS)

Injury Prevention Committee

Recent accomplishments/ projects
- Placement of eight Life-vest loaner stations around the region
- Distribution of bike helmets to hospitals, EMS and other injury prevention partners
- Distribution of gun locks to hospitals, EMS and other injury prevention partners
- Alcohol abuse awareness kits
- Poison look-alike awareness kits
- Support of car seat technician training

Future goals
- Continue distribution of gun locks and bike helmets
- 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
- Radio report and hand-off report template (MIST) distribution and education (Attachment 12)
- Tourniquet distribution and training
- Selective spinal immobilization education and PI tool
- Trauma field triage protocol and PI tool (Attachment 5)
- Helicopter EMS position statement (Attachment 6)
- Trauma basics training
- Backboard padding distribution and training

Future goals
- Increase EMS participation
- Review MIST utilization
- Service-based education (hospital activation criteria, spinal immobilization)
- Stop The Bleed campaign

- 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.)
- Integrate NCRTAC in county-based EMS associations

Definitive Care Committee

Recent accomplishments/ projects

- Multiple injured family members position statement (Attachment 11)
- Tranexamic Acid position statement (Attachement 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 improve bed availability information to increase efficiencies in the referral process
- Assist in the development of an EMS spinal immobilization position statement by representing definitive care providers.

Attachment 1: NCRTAC Licensed EMS Agencies

County	Service Name	Level
Adams County	Big Flats Fire & Rescue	First Responder
	Rome Fire Department First Responders	First Responder
Clark County	Chili-Freemont Fire & Rescue	First Responder
	Central Fire & EMS District	EMT-Basic
	Curtiss First Responders	First Responder
	Granton Area First Responders	First Responder
	Greenwood Area Ambulance Service	EMT-Basic
	Loyal Ambulance Service	EMT-Basic
	Neillsville Municipal Ambulance Service	EMT-Basic
	Owen-Withee Community Ambulance Service	EMT-Basic
	Thorp Area Ambulance District	EMT-Basic
Forest County	Argonne Fire Department	First Responder
	Crandon Area Rescue Squad	EMT-Intermediate Technician
	Hiles FD First Responders – Station A	First Responder
	Laona Rescue Unit	EMT-Intermediate Technician
	United Area Rescue Squad	EMT-Intermediate Technician
Iron County	Beacon Ambulance Service**	EMT-Paramedic
	Mercer Area Ambulance & Rescue	EMT-Basic
	Saxon-Gurney First Responders	First Responder
Langlade County	City of Antigo Fire Department**	EMT-Paramedic
	Antigo (Town of) Fire Department	First Responder
	Elcho Emergency Medical Service	EMT-Basic
	Langlade County Rural Fire Control	First Responder
	Langlade (Town of) Fire Department	First Responder
	Pickerel Volunteer Fire and Rescue Squad	EMT-Intermediate Technician
	Troutland Rescue Squad	EMT-Intermediate Technician
Lincoln County	Corning First Responders	First Responder
	Lincoln County EMS – Merrill**	EMT-Paramedic
	Lincoln County EMS – Tomahawk	EMT-Paramedic
	Pine River First Responders	First Responder
Marathon County	Aspirus Med-Evac**	EMT-Paramedic
	Athens Area Ambulance Service	EMT-Basic
	Bevent First Responders	First Responder
	Easton First Responders	First Responder
	Edgar Volunteer Fire Department	EMT-Basic
	Emmet First Responders	First Responder
	Guenther (Town of) EMR Service Group	First Responder
	Hamburg Fire Department First Responders	First Responder
	Hatley Area Ambulance Service	EMT-Basic
	Hewitt (Town of) Fire Department	First Responder
	Kolbe and Kolbe Millwork Company	First Responder
	Kronenwetter Fire Department First Responders	First Responder
	Town Of Maine First Responders	First Responder
	Marathon City First Responders	First Responder
	Marathon County TEMS	EMT-Paramedic
	McMillan (Town of) Fire Department First Responders	First Responder
	Mosinee Fire District - Ambulance Service	EMT-Intermediate Technician
	Ringle First Responders	First Responder
	Riverside Fire District	EMT-Intermediate Technician

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

County	Service Name	Level
County	Auburndale Fire Department First Responders	First Responder
	Biron Volunteer Fire Department First Responders	First Responder
	Grand Rapids Volunteer Fire Department	First Responder
	Hewitt Area Fire Department	First Responder
	Lincoln (Town of) Fire Department	First Responder
	Marshfield Fire and Rescue Department	EMT-Paramedic
	Nekoosa Ambulance Service**	EMT-Paramedic
	Nekoosa Volunteer Fire Department First Responders	First Responder
	Pittsville Fire Department	EMT-Intermediate Technician
	Port Edwards (Town of) Emergency Medical Responders	First Responder
	Port Edwards Fire Department First Responders	First Responder
	Richfield Rural Fire Department	First Responder
	Rock (Town of) Fire & Rescue	First Responder
	Rudolph Fire Department	First Responder
	Saratoga (Town of) EMS First Responders	First Responder
	Sherry Volunteer Fire Department	First Responder
	Spirit Medical Transportation Service**	EMT-Paramedic
	United Emergency Medical Response**	EMT-Paramedic
	Vesper Volunteer Fire Department First Responders	First Responder
	Wisconsin Rapids Fire Department**	EMT-Paramedic
UP-MI	Valley Med Flight**	

** Interfacility transport provider

Attachment 2: NCRTAC Trauma Care Facilities

Hospital	City	Designation Level
Aspirus Langlade Hospital	Antigo	Level IV
Ascension Eagle River Memorial Hospital	Eagle River	Level IV
Ascension Good Samaritan Medical Center	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 III
Memorial Medical Center	Neillsville	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
Howard Young Medical Center	Woodruff	Level III
Aspirus Wausau Hospital	Wausau	Level II (Adult)
Ascension Saint Joseph's Hospital	Marshfield	Level II (Adult & Pediatric)

Attachment 3: NCRTAC Budget FY2017

Approved by NCRTAC Exec Council 7/26/16		
Income		**2016-2017 Budget**
Wisconsin Trauma Care System		$ 27,964.46
Total Income		**$ 27,964.46**
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	$ 2,000.46
Education/ Conferences	8801	$ 700.00
Consult/ Contract		
Ad hoc consult/ contract support	8015	$ 350.00
Agency Operations		
Office & mailing supplies	8106	$ 50.00
Conference Booth Supplies	8107	$ 500.00
Photocopies	8108	$ 50.00
Postage	8301	$ 50.00
Meeting notice publication	8110	$ 130.00
Website Hosting and Domain	8110	$ 590.00
Email Newsletter	8110	$ 200.00
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	$ 3,000.00
Hospital/ EMS Project Grants	8061	$ 5,344.00
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	$ 4,000.00
Conferences	8063	$ 3,000.00
Pre-hospital courses	8064	$ 4,000.00
Obj 6: RTAC maintains/supports injury prevention related education and training in the region (may include hospitals and other organizations).		
IP project support	8066	$ 4,000.00
Total Expenses		**$ 27,964.46**
Income less expenses		

Attachment 4: Regional Needs Assessment

NCRTAC 2016 Needs Assessment

"System access" encompasses many of the components of how patients enter the trauma system including the 911 system, and EMS response. EMS response includes service reliability and mutual aid opportunities. Are there any regional system access weaknesses that you feel the NCRTAC should work on?
(comments taking directly from survey – SIC)

- Automatic ALS dispatching for high MOI/NOI calls in areas served by BLS services. If dispatch centers used an EMD systems such as Priority Dispatch, they could determine which calls need ALS in and industry accepted method. Departments would need to provide a sequence of preferred ALS providers (hospital based or M/A). But once set up, the system would provide early ALS to both trauma and non-trauma emergencies.
- More direct training for EMS on activation
- Identify areas of NCRTAC that do not have access to ALS EMS – even for intercepts and identify level IVs that need ALS updates
- On scene times
- Services know where to go and when to call ALS/HEMS
- Appreciation/ follow up
- BLA/ALS interaction

"Communications" includes dispatch capabilities and protocols, radio and other communication systems and communication interoperability among responders. Are there any regional communication access weaknesses that you feel the NCRTAC should work on?

- Paging out calls by closest department not by township lines
- Training of dispatchers. At least here in Marathon County, our dispatchers are well trained in police dispatching, but often lack the same level of understanding in EMS. Better trained dispatchers could not only implement an EMD system which would improve dispatch operations and dispatch information quality, they would have a better understanding of our needs, and what info is important and what is less so.
- I know they are working on EMS standard report off to the hospital but do not know where they are at in that process?
- Communication between agencies from the counties is hit or miss. Also our dispatch tends to wait for air medical requests. Can we involve them in this committee?
- Better scene to hospital communication
- WISCOM training/ integration
- Uniform activation of trauma protocols by dispatch
- Use of MIST for uniform report to EDs
- Early contact of hospitals (multi-patient, serious patients)

"Medical oversight" includes physician involvement in all levels of trauma care including EMS protocols, hospital policies and protocols and system leadership. Are there any regional medical oversight weaknesses that you feel the NCRTAC should work on?

- Encouraging MD's to become more active in their agencies. Anything from simple training to high quality QA/QI positive feedback to crews.
- No contact nor liaison with medical director. Inaccessibility and non-communication , except by rumor
- Make certain trauma activation both prehospital and hospital are being used

"Data/ process improvement" includes the systems of trauma care and response information collection and analysis and the use of the data for process improvement (quality improvement) initiatives. Are there any regional data or process improvement weaknesses that you feel the NCRTAC should work on?

- Better feedback to crews on the outcome of trauma calls for QA/QI purposes. Tell us what the Dx's were, and how our treatments affected the outcome. This helps both from a training and a morale standpoint.
- Having hospital access our reports online, in wards, insteas of having us fax them , to be read by whoever walks by
- Training/ education for those new to trauma coordinator role. How to run registry reports, etc.
- Identify increase use of anticoags in trauma patients. Reversal agents
- Registrar support/ education

"Education" includes trauma system and trauma care education for healthcare providers. Are there any regional education weaknesses that you feel the NCRTAC should work on?

- PHTLS was the most eye opening post certification class I've ever taken. Find ways to bring this class to providers, and encourage providers of ALL levels to take the class. Even FR's, who are often obscene for a while before the ambulance shows up, can benefit from this class.
- Only one insructor for emt refresher for Nicolet. One opinion, limited. We have had him x4 now, with no other choice. No options besides group travel to Wausau which is cost prohibitive.
- Make certain outreach education is taken to our EMS providers and Level III and IV EDs
- Go to responders
- In-patient education (TCAR)

"Injury prevention" includes initiatives to educate the public and healthcare providers on methods to redue the incidence and severity of traumatic injuries. Are there any regional injury prevention weaknesses that you feel the NCRTAC should work on?

- Really like the Fox Valley Injury Prevention Strategic Plan and wondered if as a state that could be done with regional data submitted??

- encourage/support Aspirus Hospital in filling the position of SafeKids Coordinator , that has been vacant since Michelle Armstrong transferred within Aspirus. The person taking the job, should have AT LEAST the same passion for the mission she did!
- Work on new abuse areas like opioids – vaping solutions
- Fall prevention literature to ED patients on anticoags

The NCRTAC Definitive Care Committee works to standardize trauma care across the region. Their work has included regional position statements on spinal immobilization and radiologic studies. Are there other position statements that the Definitive Care Committee should be working on?

- Open to ideas from Level III & IVs hospitals.
- Use of TXA in trauma Pt's. Selective use of hard backboards in trauma Pt's.
- Back boarding, Nicolet college teaches that it is bad, regional northwoods still wants it.
- Bed capacities (open beds)

The NCRTAC Injury Prevention Committee has provided two tool kits for use by members. Have we provided enough guidance and direction on how to use the injury prevention tool kits that we have created?

- Instructions would be nice to ensure everyone is providing accurate information when using the tool kits

Can you identify injury prevention topics that affect our region that we have not addressed?

- ATV
- Falls

Review of May 2014 SWOT was done during the NCRTAC general meeting December 1, 2016

Strengths

- NCRTAC members are leaders at local & state level
- System collaboration
    - Cooperation and support
- Patient-centric
- Identification of issues
- Injury prevention
- Registry education and resources
- Broad range of participants
    - Efforts to include more ongoing
- Website
- Coordinator
- Position statements

Weaknesses

- Education
- Trauma surgeon involvement
- EMS participation – all levels
- Quality and complexity of data
- High staff turn-over

- Perceived value of participation

Opportunities
- HCC
- Best practices
    - Position statements
    - Education
- Targeted audience agendas (EMS, Surgeons)
    - Regular education sessions
    - Conference
    - Case reviews
- Technology – meetings, education
- Publicity, social media
- New ACS book
- State & regional data
- Partnerships for education
- Communication

Threats
- Funding
- Changes due to HCC
- Changing healthcare environment
- Hospital staffing & funding
- ~~State support – Coordinator~~
- Poorly funded and weak State EMS Unit
- ~~Delayed ACS book~~
- Divide between EMS and Trauma

Members present submitted ballots voting on top opportunities and threats. Write-ins were accepted.
** Top 3 results in each category

Opportunities

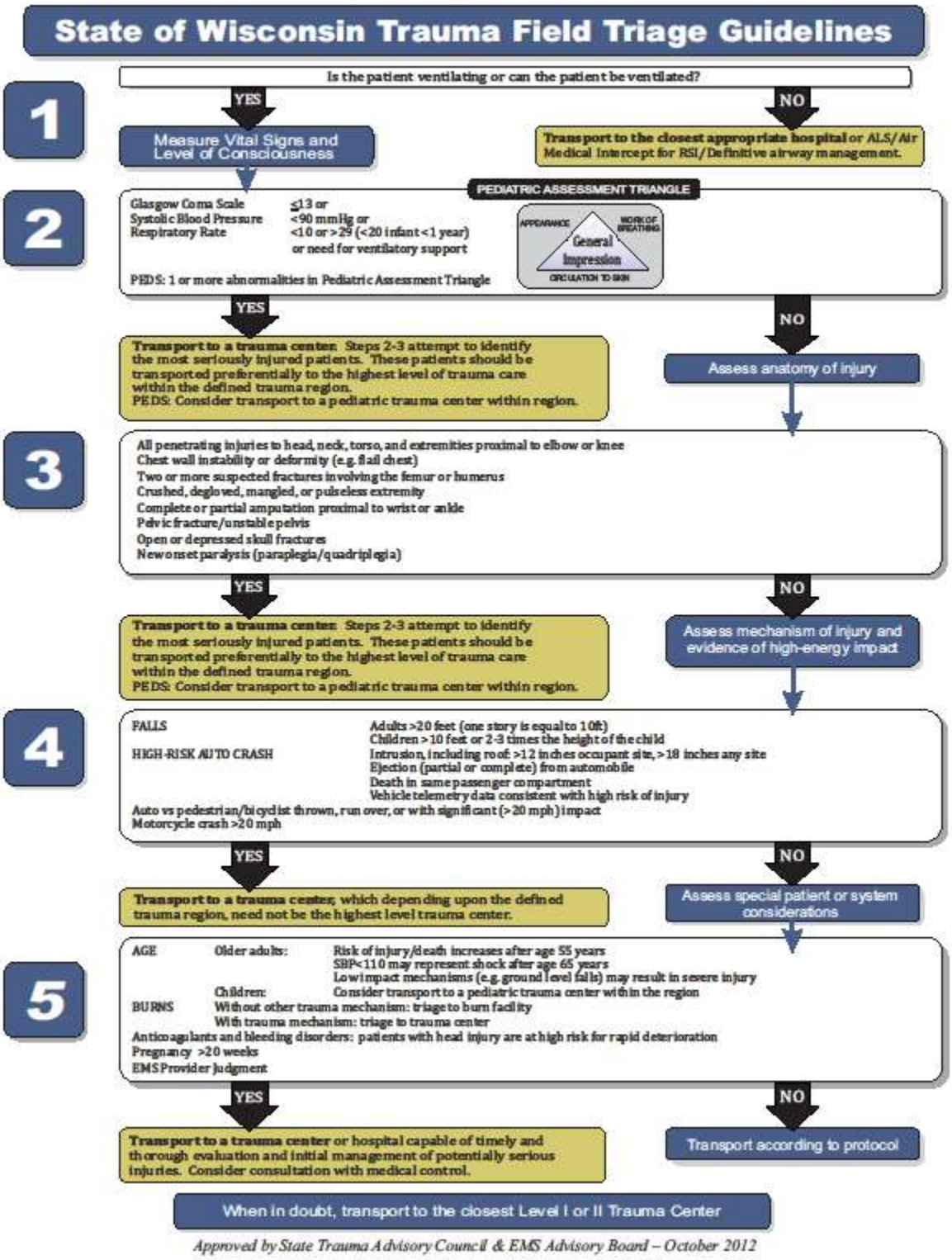
0	HCC
1	Position statements
8 **	Education
3	Targeted audience agendas - Regular education sessions
2	Targeted audience agendas - Case reviews
1	Technology – meetings, education
4	Publicity, social media
2	New ACS book
1	State & regional data
8 **	Partnerships for education
6 **	Communication (including common nomenclature)
2	Injury prevention collaboration with outside agencies

1	Collaboration with partners for policies/ procedures, classification preparation and sharing best practices
1	Process improvement
1	Definitive care committee

Threats

5	Funding
	~~Changes due to HCC~~
6 **	Changing healthcare environment
7 **	Hospital staffing & funding
	~~State support – Coordinator~~
5	Poorly funded and weak State EMS Unit
	~~Delayed ACS book~~
7 **	Divide between EMS and Trauma
1	Improved PI for regional coordinator

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

NCRTAC-WI.org