



Resources and Tools

Tom Wood, RN BSN

Trauma Program Manager

MidMichigan Medical Center-Midland

**Michigan
Trauma
Coalition**



mitrauma.org

Objectives

- User will be able to identify resources available for trauma program development.
- User will gain an understanding of tools useful for basic trauma program administration.



RESOURCES

State of Michigan

- RTN information
- Designation Criteria
- State Registry
- State Trauma FAQ

MDCH Home Contact MDCH Site Map MI.gov

Search

MDCH Michigan
Department of Community Health

MDCH > PROVIDERS > MICHIGAN STATEWIDE TRAUMA SYSTEM

Michigan Statewide Trauma System

Trauma is the leading cause of death in people ages 1-44 in the nation and it accounts for 47% of all deaths in this age group. In Michigan, crash related deaths alone cost \$1.04 billion per year. The overall goal of a trauma system is to reduce the incidence and severity of injury as well as to improve health outcomes for those who are injured.

Michigan has been engaged in formal trauma system development since 2000. The vision for Michigan is a regionalized, coordinated and accountable system of emergency care that ensures the right patient gets to the right place at the right time. The 2004 Trauma System Agenda for the Future states, "The concept of inclusive trauma care systems promotes regionalization of trauma care, so that all areas of the country receive the best possible care. Equally important, an inclusive trauma care system must identify high-risk behaviors in each community and the population groups at risk for injury so that the system can provide an integrated approach to care that is responsive and appropriate to local needs".

The EMS and Trauma Services Section Statewide Trauma System Administrative Rules describes the components of the trauma system. This includes eight regional trauma networks comprised of the local Medical Control Authorities within the region which integrates into existing regional preparedness. They are responsible for the oversight of the trauma care provided in each region of the state. Further information about the components of the Michigan trauma system including data collection, the process of verification and designation of trauma facilities, and more information about the trauma networks including the trauma network work plans cited in the Trauma Facility Request for Designation Applications can be found in the following sections. Click on the links below for details.

Trauma Quick Links

- Designation
- Registry
- Michigan Criteria

MDCH SCORECARD
OPEN MICHIGAN

Providers

High Utilizers

HIPAA

Health Professional Shortage Area

State Innovation Model

M Health Link

Institutional Review Board

International Medical Graduate Programs

M-SEARCH

State Loan Repayment Program

Michigan Statewide Trauma System

History

Regional Trauma Networks

Committees

Designation

Trauma Registry

Frequently Asked Questions

Contacts

History

Background information on Michigan's trauma system

Regional Trauma Networks

Information regarding the regional trauma system and Regional Trauma Advisory Committee

Committees

Details regarding the Trauma and EMS advisory committees

Designation

Information on the process to become designated as a trauma center

Trauma Registry

Information on the state's registry of designated trauma facilities

Frequently Asked Questions

Answers to frequently asked questions

Contacts

Contact information for the State Trauma Manager and staff

State of Michigan - Designation

Birth, Death, Marriage and Divorce Records | MDOH > PROVIDERS > MICHIGAN STATEWIDE TRAUMA SYSTEM > DESIGNATION

Physical Health & Prevention | **Facilities Seeking In-State Verification**

Pregnant Women, Children & Families | The State of Michigan verification process provides an objective, external review of institutional capabilities and performance. It is designed to assist hospitals in the evaluation and improvement of trauma care. The on-site review is conducted by healthcare professionals with expertise in trauma care and trauma program development. The review team assesses commitment, readiness, resources, policies, patient care, performance improvement, and other relevant criteria as outlined by the State of Michigan and American College of Surgeons.

Behavioral Health & Developmental Disability | **Open for Registration! - [Trauma Program Development Course: April 14, 2015](#)**

Health Care Coverage | **Get Started!**

Statistics and Reports |

1. Begin to collect and analyze data to begin program development and identify the level of designation that matches resources.
2. Review the Michigan Criteria.
3. Review the American College of Surgeons [Resources for the Optimal Care of the Injured Patient 2014](#).
4. Review the work plan pertaining to the appropriate level of designation for step by step guidance of the critical deficiencies.
5. Function as a trauma facility for at least 12 months. This includes the collection and submission of data, performance improvement, and injury prevention.
6. Submit a Request for In-State Verification Site Review. *Please note, submission of this document signals that the facility has developed their trauma program and will be ready for a site review within 90 days.*
7. Submit the Pre-Review Questionnaire (PRQ) no later than 45 days prior to the scheduled site visit.
8. Submit the Application for Designation no later than 45 days prior to the scheduled site visit.
9. Prepare for the scheduled site visit by having all documents and medical records carefully organized and accessible to the reviewers. The PRQ will serve as a guide for the site review. However, the site reviewers may look beyond the requested documents and medical records if additional validation of compliance is needed. Before the site review is completed, the site reviewers will discuss their findings with the facility.
10. The site reviewer reports will go to the Designation Subcommittee who will make a recommendation on designation determination to the Michigan Department of Community Health.
11. The Michigan Department of Community Health makes the final designation determination. The facility will be notified by the Designation Coordinator of the final designation determination no later than 90 days after the scheduled site visit.

Providers | **Relevant Documents and Resources:**

- [Michigan Criteria](#)
- [Regional Work Plans](#)
- [Example of a Trauma Flow Sheet - Courtesy of Minnesota's Trauma System](#)
- [NTDS Inclusion Criteria](#)
- [Alternate Pathway Criteria Table](#)

High Utilizers | **Level III**

- [Request for Verification In-State Level III](#)
- [Level III Work Plan](#)
- [Pre-Review Questionnaire \(PRQ\) for Michigan Level III Trauma Facility](#)
- [Criteria Quick Reference Guide, Level III](#)
- [Application for Designation, In-State Verified Level III Trauma Facility](#)

HIPAA | **Level IV**

- [Request for Verification In-State Level IV](#)
- [Level IV Work Plan](#)
- [Pre-Review Questionnaire \(PRQ\) for Michigan Level IV Trauma Facility](#)
- [Criteria Quick Reference Guide, Level IV](#)
- [Application for Designation, In-State Verified Level IV Trauma Facility](#)

Health Professional Shortage Area | [MITrauma.org](#)

State Innovation Model | [MITrauma.org](#)

MI Health Link | [MITrauma.org](#)

Institutional Review Board | [MITrauma.org](#)

International Medical Graduate Programs | [MITrauma.org](#)

M-SEARCH | [MITrauma.org](#)

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Designation | [MITrauma.org](#)

Trauma Registry | [MITrauma.org](#)

Frequently Asked Questions | [MITrauma.org](#)

Contacts | [MITrauma.org](#)

Lab Services | [MITrauma.org](#)

Communicable & Chronic Diseases | [MITrauma.org](#)

Departmental Forms | [MITrauma.org](#)

Community Mental | [MITrauma.org](#)

Everything you need to know about designation!

Michigan Trauma Coalition



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State of Michigan – Trauma Regions

Birth, Death, Marriage and Divorce Records

MDCH > PROVIDERS > MICHIGAN STATEWIDE TRAUMA SYSTEM > REGIONAL TRAUMA NETWORKS



Physical Health & Prevention

Pregnant Women, Children & Families

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Michigan Statewide Trauma System

History

Regional Trauma Systems

The regional trauma system structure is described in the amended Administrative Rules by authority conferred on the Department of Community Health by Michigan Compiled Laws (MCL) 333.9227 and 333.20910 of 1978 Public Act 368; 2004 Public Act 580, 581, and 582.

A Regional Trauma Network (RTN) is an organized group of local Medical Control Authorities (MCA). MCA's are hospitals who operate 24/7 per statute, which integrate into existing preparedness regions. RTN's are responsible for appointing a Regional Trauma Advisory Council (RTAC), a Regional Professional Standards Review Organization (RPSRO), and creating a regional trauma plan.

The Regional Trauma Advisory Committee is a committee established by the RTN and is comprised of MCA personnel, EMS personnel, life support agency representatives, healthcare facilities representatives, physicians, nurses, and consumers. The functions of the RTAC are to provide leadership and direction on matters related to trauma system development in their region, including, but not limited to, the review of trauma deaths and preventable complications.

The RPSRO is a committee established by the RTN for the purpose of improving the quality of trauma care within a recognized trauma region.

Regions

[Region 1](#)

[Region 2 North](#)

[Region 2 South](#)

[Region 3](#)

[Region 5](#)

[Region 6](#)

[Region 7](#)

[Region 8](#)



Birth, Death, Marriage and Divorce Records

MDCH > PROVIDERS > MICHIGAN STATEWIDE TRAUMA SYSTEM > REGIONAL TRAUMA NETWORKS



Physical Health & Prevention

Pregnant Women, Children & Families

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Michigan Statewide Trauma System

History

Region 3

Region 3 is a highly diverse area, ranging from medium sized cities and agricultural areas to very sparsely populated areas. The fourteen counties that make up Region 3 are: Alcona, Arenac, Bay, Genesee, Gladwin, Huron, Iosco, Lapeer, Midland, Ogemaw, Oscoda, Saginaw, Sanilac, and Tuscola. There are four significant urban areas: Flint, Saginaw, Bay City, and Midland. The region has 24 hospitals, 11 Medical Control Authorities, 126 EMS agencies, and 10 Health Departments.

The Region 3 Resource Guide contains information about demographics, facilities, Medical Control Authorities, Regional Trauma Network membership, and more. Click on the link below to access the resource guide.

[Region 3 Resource Guide](#)

The Region 3 application and work plan contains information about regional injury prevention and regional performance improvement. Trauma facilities interested in applying for designation can access this information and use it to develop their plans to participate in regional performance improvement and injury prevention SMART objectives. Click on the link below to access the application and work plan.

[Region 3 Network Application Work Plan](#)

[2015 Trauma Network Meeting Schedule](#)



State of Michigan - Registry

Birth, Death, Marriage and Divorce Records

Physical Health & Prevention

Pregnant Women, Children & Families

Behavioral Health & Developmental Disability

Health Care Coverage

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State Loan Repayment Program

MDCH > PROVIDERS > MICHIGAN STATEWIDE TRAUMA SYSTEM > TRAUMA REGISTRY



State Trauma Registry - ImageTrend®

Participation in the statewide trauma registry is an essential component of a regionalized, accountable and coordinated trauma system. Designation as a trauma facility in Michigan requires that hospitals participate in the state trauma registry. ImageTrend®, Inc. provides the data collection software for the Michigan Trauma Registry and the Michigan EMS Information System (Mi-EMSIS).

Data Collection Responsibilities:

The following documents outline the roles and responsibilities related to data collection:

- [MDCH Authorities and Obligations](#) (Updated 11/19/13)
- [Data Use and Non-Disclosure Agreement](#) (Updated 11/19/13)
- [User Agreement](#) (Updated 11/19/13)

Using the State Trauma Registry:

The National Trauma Data Bank (NTDB) elements are the minimum data set required to be entered into the registry. The Michigan Criteria considers non-participation in the registry a Type 1 critical deficiency for designation.

- [Required Data Bank Elements - National Trauma Data Bank](#)

A username and password is required in order to access the registry in ImageTrend®. See the following document on how to obtain a username and password:

- [Obtaining a password for ImageTrend](#)

Trauma facilities may directly enter trauma data into ImageTrend® at no cost or download NTDB data into ImageTrend®.

- [ImageTrend website](#)

Access the document below which details data download or entry into ImageTrend® and directs users to ImageTrend University for tutorials on data entry.

- [Adding data to ImageTrend](#)

Michigan Trauma Coalition



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Michigan Trauma Coalition



Dedicated to reducing traumatic injuries while developing better care and treatment of trauma patients in Michigan.



[Home](#) [About](#) [Membership/Committees](#) [Education/Events](#) [Legislative](#) [MI Trauma System](#) [Resources](#) [Sitemap](#)

Who We Are

Formed by concerned health care providers in 1991, the Michigan Trauma Coalition is a non-profit, membership organization comprised of trauma centers, health care professionals, and organizations dedicated to reducing traumatic injuries while developing better care and treatment for trauma patients in Michigan.

Our Mission

The mission of the Michigan Trauma Coalition is to promote the optimal care of the injured patient through the development of a cost-effective, statewide trauma system.



Member Login

Some information on this web site is proprietary to members only. [Click here](#) to join the MTC.

Welcome to the MTC

- [Contact Us](#)
- [FAQ](#)
- [MTC brochure](#)
- [Join](#)

We're In the News!

Current Events Bulletin

February 19, 2015 –

MTC General Membership Meeting

Lansing Community College – West Campus; 10 am – 5 pm

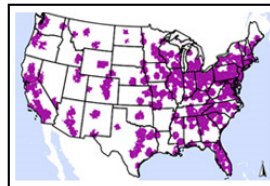
March 10, 2015 – MTC Registrar's Meeting

Lansing Community College – West Campus; 10 am – 2 pm



Search

To search, type and hit enter



There are currently over 860 trauma centers in the U.S.

According to the CDC, there are over 177,000 trauma-related deaths in the U.S. each year.

Trauma patients treated at trauma centers have a 25% overall lower risk of death.

• www.mitrauma.org

• Non-profit, membership organization

• 50+ member hospitals

Michigan Trauma Coalition



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MTC

- Resources available through MTC:
 - Networking with other trauma managers throughout the State.
 - Reduced rates for education courses
 - Leadership and Program Development
 - Advocacy



MTC



Dedicated to reducing traumatic injuries while developing better care and treatment of trauma patients in Michigan.



Home About Membership/Committees Education/Events Legislative MI Trauma System Resources Sitemap

Toolbox

The total one-year treatment cost of adult major trauma cases in the US is approximately \$27 billion annually

Source: Weir, Salkever, Rivara, Jurkovich, Nathens, and Mackenzie, "Expert Review of Pharmacoeconomics and Outcomes Research," 2010



The following links are to PDFs of documents you may find useful in your committees, or for background information on the MTC.

Financial and Service Line

Finding resources on trauma finance and managing a trauma service line can be challenging for new trauma program managers. Here is one example: It's a presentation on [Trauma-Service-Line-MCOT-2013](#)

ICD-10 Update

ICD-10 PowerPoint presentation – [ICD-10 Intro MTB 102013 1.3](#)
[ICD-10-CM Index 2014](#)
[ICD-10-CM External Cause-Index 2014](#)
[ICD-10-PCS Index and Tabular 2014](#)
[ICD-10-CM Tabular 2014](#)

Injury Prevention

Here are some links with useful injury prevention for Michigan Trauma Programs:

- [Michigan SAFE KIDS](#)
- [Booster Seat Law in Michigan](#) – Michigan State Police information
- [Snowmobile Safety in Michigan](#)

Orange Book

Pediatric Trauma Guidelines

[Pediatric Massive Transfusion Guidelines](#)

[Trauma Activation](#)

SBIRT

- 1) [Challenges in Delivering SBIRT](#)
- 2) [SBIRT at a Level II Adult Trauma Center](#)
- 3) [SBIRT Guideline](#)
- 4) [SBIRT Log \(Template\)](#)
- 5) [SBIRT Dashboard \(Template\)](#)
- 6) [SBIRT Dashboard \(Example\)](#)
- 7) [NIAAA Guidebook](#)
- 8) [SBIRT at a Level III Trauma Center](#)
- 9) [HDVCH Substance Abuse Pediatric Trauma Guideline](#)
- 10) [HDVCH Pediatric SBIRT Reference List](#)
- 11) [MTC SBIRT 2014 HDVCH Pediatric SBIRT](#)
- 12) [MTC MTQIP Trauma Topics March 27](#)

Taxonomy Review Form

[Taxonomy Review Form](#)

TOPIC

[Conceptual Framework algorithm](#)

[Full report link](#) for those who want to see the entire document with the how's and why's of its development.

Michigan Trauma Coalition



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Society of Trauma Nurses

- Journal of Trauma Nursing
- STN Open Forum
- Resource Library
- Courses
 - TOPIC
 - ATCN

The screenshot shows the homepage of the Society of Trauma Nurses (STN). The header features the STN logo and the tagline "SPANNING THE CONTINUUM OF CARE". Navigation links include Home, About, Education, Committees, Resources, and Members Only. A search bar is located in the top right. The main content area is divided into several sections: "Member Login" with fields for email and password; "Latest News" featuring an "Advocacy Alert - Urgent Call to Action Requested" dated March 4, 2015; "Quick Links" for Career Center, Online Member Community, Journal of Trauma Nursing, Online Store, and Advocacy; "MEMBERSHIP" information; "ATCN COURSES" for "Advance Trauma Care for Nursing"; "TOPIC" for "Trauma Outcomes and Performance Improvement Course"; "STN Journal" (Six Issues Annually); "About Us" (Welcome!); "DAISY Foundation" (Nurse Recognition Program); and a "Career Center" with "FEATURED JOBS" including Trauma Nurse Registrar, Trauma Nurse Careers, Nurse Manager Trauma Services, and Registered Nurse - Emergency Room. A "Leadership Institute" banner is also present, along with a "Select Language" dropdown.

Michigan Trauma Coalition



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Discussion Posts

50 per page

[Post New Message](#)

Thread Subject	Replies	Last Post	Community Name
Practice Questions for ACS Survey	1	2 hours ago by Angela Basham-Salf	Open Forum
???? Professional Development of Trauma Nurses ???	7	23 hours ago by Philip Angelo	Open Forum
Trauma Process in the ED	4	yesterday by Philip Angelo	Open Forum
Registry Inclusion	4	4 days ago by Nathan Christopherson	Open Forum
Communication checklist	2	6 days ago by Dawn-Mala Simmons	Open Forum
Yearly Performance ScoreCard	0	7 days ago by Kathy Mocek	Open Forum
ICU RN ratios	0	7 days ago by Robert Spivey	Open Forum
OR Availability Level I & II Centers (Orange Book Guidelines)	2	7 days ago by Tabitha Uitenbroek	Open Forum
Propofol	1	7 days ago by Dusty Lynn	Open Forum
r-TEG in Trauma Order Set	2	8 days ago by Sharon Perry	Open Forum
Code and Critical Care coverage of ED docs with new orange book	2	8 days ago by Lori Bauman	Open Forum
Community handouts	2	8 days ago by Donna Lee	Injury Prevention
Community handouts	1	8 days ago by Naomi Benjamin	Open Forum
ITLS	2	8 days ago by Dawn-Mala Simmons	Open Forum
Propofol	0	8 days ago by Shakeva Swan	Pediatric Trauma
SBIRT charges	0	9 days ago by Kim Muramoto	Open Forum
It's not too late- pediatric focused TOPIC course	2	9 days ago by Christine McKenna	Open Forum
Formal ICU plan for Emergency coverage	0	9 days ago by Dolores LaDuke	Open Forum
Pediatric - specific PI filters	0	9 days ago by Lynn Eastes	Open Forum
Definition for Failed Non-Op Management	0	10 days ago by Anjenette Juracek	Open Forum
Trauma Diversion Policy	1	10 days ago by Renee Jacobson	Open Forum
Level III Facility Peer Review/Morbidity + Mortality	1	10 days ago by Matthew Gulick	Open Forum
What are the educational requirements for you adult trauma ICUs? Do you require ongoing tncs? And/or tear? Is this a requirement prior to start or do you pay for this within the first year? Any other requirements?	8	10 days ago by Matthew Gulick	Open Forum
24/7 OR staffing	0	12 days ago by Tabitha Uitenbroek	Open Forum
Trauma Course	12	13 days ago by Marty Collins	Open Forum
IV warmers in ED	5	14 days ago by Beverly Gottula	Open Forum
SBIRT	2	14 days ago by Leeann Johnson	Open Forum

Michigan Trauma Coalition



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American Trauma Society

The screenshot shows the American Trauma Society (ATS) website. At the top left is the ATS logo with the tagline "American Trauma Society". To the right is a navigation bar with links for "CONTACT US", "SIGN IN", "JOIN ATS", and a search box. Below this is a main banner with the slogan "Improving Care. Saving Lives." and a menu with categories: HOME, ABOUT, JOIN US, MY-ATS, PREVENTION, PROF. DEVELOPMENT, TRAUMA RESOURCES, ADVOCACY, and CATALOG. A large video player shows medical staff in a trauma center. Below the video are several promotional boxes: "EMERGENCY TRAUMA CENTER?", "JOIN US Become A Member Today!", "Find Upcoming ATS Courses", and "Connect With Us" with social media icons. The main content area features three paragraphs of text about the society's mission, the importance of trauma care, and the role of its members. On the right side of the main content is a "SIGN IN" form with fields for "Username" and "Password", a "Remember Me" checkbox, a "SIGN IN" button, and links for "Forgot your password?" and "Haven't registered yet?". At the bottom, there are three columns of featured content: "trauma survivors network" (with a "click here to see how you can help support survivors" link), "amazon smile" (with a "Support the ATS through your purchases on Amazon.com" link), and "See the benefits of ATS Membership JOIN US TODAY!". Below these are "LATEST NEWS" and "CALENDAR" sections. The "LATEST NEWS" section lists several articles from 2015, including "CDC Highlights Importance of Trucker Safety in March Issue of Vital Signs", "March is Brain Injury Awareness Month", "ATS Legislative Update: House Energy and Commerce Committee Approves Important Trauma Legislation", and "'Instagram for doctors' lets medics share photos to solve mystery cases". The "CALENDAR" section lists upcoming events: "3/7/2015 - 3/8/2015 ATS Trauma Registry Course - New York, NY", "3/12/2015 - 3/13/2015 ATS Trauma Program Manager Course - Phoenix, AZ", "3/28/2015 - 3/29/2015 ATS Inaugural Injury Prevention Coordinator Course - STN Annual Conference, Jacksonville, Florida", and "4/29/2015 - 4/30/2015 ATS Trauma Registry Course - Columbia, SC". At the bottom left, there is a "Find Trauma Centers In Your Area" link with a map of the United States.

- Training courses
 - TPM course
 - Registrar course
 - Certification
 - Injury Prevention course

Michigan Trauma Coalition



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American College of Surgeons

The screenshot shows the American College of Surgeons (ACS) website. At the top left is the ACS logo with the tagline "Inspiring Quality: Highest Standards, Better Outcomes" and "100 years". A search bar is located at the top right. The main navigation menu includes "Member Services", "Quality Programs", "Education", "Advocacy", "Publications", and "About ACS". The "Quality Programs" menu is expanded, showing "Trauma". The "Trauma" page features a large orange banner with the text "Resources for Optimal Care of the Injured Patient – Sixth Edition" and a "Download or order today" button. Below the banner, there is a section titled "Trauma" with a "Trauma Programs" sub-section. The "Trauma Programs" section lists various programs, including "National Trauma Data Bank", "Trauma Quality Improvement Program", "Mentoring for Excellence in Trauma Surgery", "Advanced Trauma Life Support", "Verification, Review, and Consultation Program for Hospitals", "Trauma Systems Consultation Program", "Trauma Education", "Publications and Posters", "Injury Prevention and Control", "Joining Forces", and "Contact Us". At the bottom of the page, there are three columns of news items: "Course Search", "New ACS Statement", "Exhibit at the ACS COT Annual Meeting", "Residents Trauma Paper Competition", "Trauma News", and "Research News".

- The Orange Book
- ATLS
 - ATLS Course search
- National Trauma Data Bank

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NTDB / NTDS

- NTDS website: www.ntdsdictionary.org
- NTDB website: www.ntdbdatacenter.com
- Level 3s
 - Must collect to NTDS Standard
 - Must submit to NTDB and State Registry
- Level 4s
 - Must collect to NTDS Standard
 - Must submit to State Registry



NTDS

The NTDS defines all the standard elements that need to be collected on trauma patients.

NATIONAL TRAUMA DATA STANDARD
of the **NTDB**[®]
NATIONAL TRAUMA DATA BANK
Helping Unify Trauma Registry Data

Home The NTDS NTDB Participants Software Vendors Data Elements Reference Materials The Partners Contact Us

Technical Assistance Center for NTDB's new National Trauma Data Standard
Technical assistance on the implementation and tracking of the new National Trauma Data Standard (NTDS).

Hospital Trauma Registry Database
Using the National Trauma Data Standard

State Trauma Registry Database
Using the National Trauma Data Standard

National Trauma Data Bank

Download Data Dictionary

Latest News

NTDS Data Dictionary Revision Site
The NTDS Revision site is now open for your suggestions! Please click [here](#) to make your revision to the Data Dictionary.

NTDS 2015 Admissions Data Dictionary
The National Trauma Data Standard Data Dictionary (2015 Admissions) is now available for download. Click [here](#) to access the 2015 Data Dictionary.

2015 NTDS Change Log

NTDS 2014 Admissions Data Dictionary
The revised National Trauma Data Standard 2012 Admissions Data Dictionary is available for personal download. Click [here](#) to access the 2014 Data Dictionary.

Check out the NTDS Archival! Here you will find past releases of dataset XSDs, dictionaries, change documents and SDK documents.

Quick Link to the NTDS Google Group!
Click on the header above to directly link to the NTDS Google Group. If you have not joined the Google Group yet, what are you waiting for!

Published Google Group Survey!
Click on the header above to view the survey conducted among NTDS Google Group members characterizing the job of a Trauma Registrar.

Software Vendors

Download the NTDS Variables, Definitions, and Label Codes

New Programmer's Guide

Join the Online User Group.



EAST

- www.east.org

- Great resource for practice management guidelines.

The screenshot shows the EAST website homepage. At the top left is the EAST logo with the tagline "Eastern Association for the Surgery of Trauma" and "Advancing Science, Fostering Relationships, and Building Careers". Navigation links include News, Events, Jobs, Shop, Contact, Join EAST, and Sign in. A search bar is located below the navigation. A main navigation bar includes Home, Education, Membership, Career Management, Research, EAST Foundation, and About EAST. The main content area features a featured podcast "Careercast" with an iTunes download button and a "View in iTunes" button. Below this is a section titled "Minutes with the Masters: Practical Points for Advancing Your Professional Career". To the right of the main content are three blue boxes: "Annual Scientific Assembly" (The 29th EAST Annual Scientific Assembly will be held January 12-16, 2016), "Practice Management Guidelines" (Evidence-based knowledge to enhance patient and clinical decision-making), and "Get Involved" (Now that you are a member of EAST, get involved!). Below these is a "Join EAST" section stating that EAST is a nationwide association that provides education, leadership and career development. At the bottom of the page are three columns: "News" (A Refreshed Website for EAST 03/05/2015, EAST PMGs published in January and February 2015 Issues of the Journal of Trauma and Acute Care Surgery 02/06/2015, 2015 EAST Community Outreach on Distracted Driving - See The Video 02/06/2015, Obtaining CME and Self-Assessment Credit for the 28th EAST Annual Scientific Assembly 02/03/2015, More news >), "Events" (Mar 6: 15th Annual John M. Templeton Jr. Pediatric Trauma Symposium PITTSBURGH, PA; Mar 18: Rao Ivatury Trauma Symposium RICHMOND, VIRGINIA; Mar 25-28: 18th Annual Conference - Society of Trauma Nurses JACKSONVILLE, FL; Jun 7-10: 34th Annual Point/Counterpoint Acute Care Surgery Conference BALTIMORE, MD; More events and deadlines >), and "President's Message" (Stanley J. Kurek Jr., DO, FACS EAST President; Congratulations to Dr. Stanley J. Kurek EAST President 2015; Dr. Kurek's President's message will be posted soon; Read the President's message >). A small portrait of Dr. Stanley J. Kurek Jr. is shown next to the "Congratulations to Dr. Stanley J. Kurek EAST President 2015" text.

Brain Trauma Foundation

BTF
BRAIN TRAUMA
FOUNDATION

Translating neuroscience
into effective solutions

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Concussion
Guidelines
Published

Journal of Neurosurgery:
October 2013
"Marked reduction in New
York State TBI deaths"

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The Brain Trauma Foundation

Improving the outcome of Traumatic Brain Injury patients

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[For The Healthcare Professional >>](#)



PROTECTING ATHLETES FROM BRAIN INJURIES



Concussion Information



The most underreported, under diagnosed and underestimated head injury by far is concussion, or mild TBI. Concussion accounts for 90% of TBIs and the number of cases range in the millions every year. Almost 4 million athletes of all ages suffer concussions every year. Even a mild concussion is a TBI and 25% of patients diagnosed with one do not recover.

- [View the Concussion Checklist >>](#)
- [View Videos About Concussion >>](#)
- [More About Concussion >>](#)
- [Participate In Research >>](#)

Coma Information



The brain—like other organs—bruises and swells from impact injuries. Such injury can also severely limit blood-flow and deprive tissue of vital oxygen, which may cause cell death and brain damage that can be irreversible. But this does not have to happen in most cases. By adhering to the BTF's Guidelines, professionals can accurately diagnose and administer TBI treatments that are proven to decrease deaths by half and double patient outcomes while reducing the nation's long-term TBI-related healthcare costs by billions.

- [View the Coma Checklist >>](#)
- [View Videos About Coma >>](#)
- [BTF Coma Guidelines >>](#)

News

BTF NEWS

- [Old LeSean McCoy Have A Concussion? Eagles Star Takes Hit To Head, Fans Erupt >>](#)
- [PTSD symptoms light up specific parts of brain >>](#)
- [NFL says a quarter of players will end up with brain problems >>](#)

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STAY CONNECTED



Michigan Trauma Coalition



mitrauma.org

- www.braintrauma.org
- Guidelines for pre-hospital, ED, OR, and post-op management of TBI.

Other Websites

- Trauma Center Association of America
 - www.traumacenters.org
- Society of Critical Care Medicine
 - www.sccm.org
- Emergency Nurses Association (TNCC & ENPC)
 - www.ena.org
- The Trauma Professional's Blog
 - www.regionstraumapro.com



Tools

Michigan Trauma Coalition



mitrauma.org

Trauma Flow Sheets

- Can be on paper or built into EMR
- Provide consistent charting during trauma resuscitation that captures critical PI elements.
- Helps ensure ATLS / TNCC is followed during resuscitation.

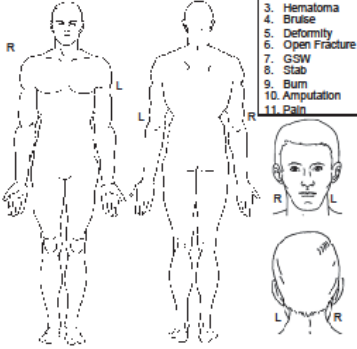


Trauma Flow Sheets

Trauma Resuscitation

Emergency Department

Page 1 of 4

<input type="checkbox"/> MidMichigan Medical Center-Clare <input type="checkbox"/> MidMichigan Medical Center-Gladwin <input type="checkbox"/> MidMichigan Medical Center-Gratiot <input type="checkbox"/> MidMichigan Medical Center-Midland		<input type="checkbox"/> MidMichigan Medical Center-Clare <input type="checkbox"/> MidMichigan Medical Center-Gladwin <input type="checkbox"/> MidMichigan Medical Center-Gratiot <input type="checkbox"/> MidMichigan Medical Center-Midland					
Time:	Pulse:	BIP:	RR:	SpO2:	Temp:	Height:	Weight:
Age: _____ Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female		Pre-Hospital					
Allergies: _____		Mode Arrival: <input type="checkbox"/> EMS <input type="checkbox"/> Air <input type="checkbox"/> Private Auto					
Trauma Code <input type="checkbox"/> I <input type="checkbox"/> II Paged: _____		Transfer: <input type="checkbox"/> Yes <input type="checkbox"/> No From: _____					
Patient Arrival Time: _____		O2 <input type="checkbox"/> NC <input type="checkbox"/> NRB <input type="checkbox"/> Airway <input type="checkbox"/> Bagged <input type="checkbox"/> CPR					
Trauma Sign-in		<input type="checkbox"/> ET # _____					
Name (Please Print)		<input type="checkbox"/> Cervical Collar <input type="checkbox"/> Backboard					
Time of Arrival		<input type="checkbox"/> Splint <input type="checkbox"/> IV site/gauge					
*Trauma Surgeon		Tetanus: <input type="checkbox"/> Unknown <input type="checkbox"/> Up to date					
*ED Attending		<input type="checkbox"/> ETOH use <input type="checkbox"/> Drug use					
*Anesthesia / CRNA		Medications <input type="checkbox"/> None		Past Medical Hx			
*Primary Nurse		_____		<input type="checkbox"/> No significant Hx			
*Scribe Nurse 1		_____		_____			
ED Tech		_____		_____			
Secondary Nurse		_____		_____			
Trauma PA		_____		_____			
Laboratory		_____		_____			
Respiratory		_____		_____			
Radiology		_____		_____			
Security		_____		_____			
Other:		_____		_____			
Other:		_____		_____			
*Mandatory for Code 1		Identify by Number		1. Laceration 2. Abrasion 3. Hematoma 4. Bruise 5. Deformity 6. Open Fracture 7. GSW 8. Slab 9. Burn 10. Amputation 11. Pain			
Mechanism of Injury							
Time of Injury: _____							
<input type="checkbox"/> Auto Accident <input type="checkbox"/> Auto vs. <input type="checkbox"/> Bicycle <input type="checkbox"/> Pedestrian <input type="checkbox"/> Other _____ Speed _____ <input type="checkbox"/> Driver <input type="checkbox"/> Passenger Seatbelt: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Airbag <input type="checkbox"/> Frontseat <input type="checkbox"/> Backseat <input type="checkbox"/> Ejected <input type="checkbox"/> Rollover <input type="checkbox"/> Motorcycle vs. _____ Helmet: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Bicycle vs. _____ Helmet: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Assault <input type="checkbox"/> Blunt <input type="checkbox"/> Penetrating <input type="checkbox"/> Stabbing <input type="checkbox"/> Gunshot Weapon _____ <input type="checkbox"/> Fall (Distance) _____ <input type="checkbox"/> Other (Narrative) _____							

Distribution: Original - Medical Record, (Duplex and stapled)


Rev. 12/12/2014



ED Nursing Notes

Trauma Resuscitation - Emergency Department, Continued

Page 2 of 4

A = Airway <input type="checkbox"/> Patent <input type="checkbox"/> ETT <input type="checkbox"/> NC <input type="checkbox"/> NRB <input type="checkbox"/> Simple Mask <input type="checkbox"/> O2 _____ L/Min O2 SAT % _____		H = Head to toe assessment, Cont. <input type="checkbox"/> JVD <input type="checkbox"/> Distracting Injury: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Other _____ <input type="checkbox"/> C. Collar Applied Time: _____																																									
B = Breathing <input type="checkbox"/> Normal <input type="checkbox"/> Labored <input type="checkbox"/> Abnormal		Chest <input type="checkbox"/> Normal <input type="checkbox"/> Labored <input type="checkbox"/> Symmetrical <input type="checkbox"/> Asymmetrical <input type="checkbox"/> SubQ Emphysema <input type="checkbox"/> Flail <input type="checkbox"/> Other _____ (wounds)																																									
C = Circulation Pulse <input type="checkbox"/> Normal <input type="checkbox"/> Absent Location _____ <input type="checkbox"/> CPR Cap Refill <input type="checkbox"/> Normal <input type="checkbox"/> Delayed <input type="checkbox"/> None <input type="checkbox"/> External Hemorrhage, Location _____		Lung Sounds <input type="checkbox"/> Clear to Auscultation <input type="checkbox"/> Equal Bilaterally <input type="checkbox"/> Diminished: <input type="checkbox"/> R <input type="checkbox"/> L <input type="checkbox"/> Absent: <input type="checkbox"/> R <input type="checkbox"/> L <input type="checkbox"/> Other _____																																									
Additional Notes _____ _____		Heart Tones <input type="checkbox"/> Normal <input type="checkbox"/> Distant/Muffled Abdomen <input type="checkbox"/> Normal <input type="checkbox"/> Rigid <input type="checkbox"/> Distended <input type="checkbox"/> Tender <input type="checkbox"/> Flank Pain: <input type="checkbox"/> R <input type="checkbox"/> L <input type="checkbox"/> Bowel Sounds: <input type="checkbox"/> Present <input type="checkbox"/> Absent																																									
D = Disability Loss of Consciousness + / - PERRLA Pupil Status Key - mm Scale R _____ L _____ 		Skin <input type="checkbox"/> Warm <input type="checkbox"/> Cool <input type="checkbox"/> Pink <input type="checkbox"/> Pale <input type="checkbox"/> Dry <input type="checkbox"/> Dusky <input type="checkbox"/> Diaphoretic <input type="checkbox"/> Cyanotic <input type="checkbox"/> Clammy																																									
Best Eye Opening: Eyes open spontaneously 4 Eyes open in response to voice 3 Eyes open in response to pain 2 No eye opening response 1		Extremities <input type="checkbox"/> Moves all Extremities <input type="checkbox"/> Deformities: _____ <input type="checkbox"/> Unable to assess deformities																																									
Best Verbal Response: Orientated (e.g., to person, place, time) 5 Confused, speaks but is disoriented 4 Inappropriate, but comprehensible words 3 Incomprehensible sounds but no words are spoken 2 None 1		Pulses: (✓ at least one central & one peripheral) <table border="1"> <thead> <tr> <th></th> <th>Present</th> <th>Absent</th> <th>Strength</th> <th>Side</th> </tr> </thead> <tbody> <tr> <td>Central</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Carotid</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> <td><input type="checkbox"/> R <input type="checkbox"/> L</td> </tr> <tr> <td>Femoral</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> <td><input type="checkbox"/> R <input type="checkbox"/> L</td> </tr> <tr> <td>Peripheral</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Radial</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> <td><input type="checkbox"/> R <input type="checkbox"/> L</td> </tr> <tr> <td>Posterior Tibial</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> <td><input type="checkbox"/> R <input type="checkbox"/> L</td> </tr> <tr> <td>Pedal</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> <td><input type="checkbox"/> R <input type="checkbox"/> L</td> </tr> </tbody> </table>			Present	Absent	Strength	Side	Central					Carotid	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> R <input type="checkbox"/> L	Femoral	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> R <input type="checkbox"/> L	Peripheral					Radial	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> R <input type="checkbox"/> L	Posterior Tibial	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> R <input type="checkbox"/> L	Pedal	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> R <input type="checkbox"/> L
	Present	Absent	Strength	Side																																							
Central																																											
Carotid	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> R <input type="checkbox"/> L																																							
Femoral	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> R <input type="checkbox"/> L																																							
Peripheral																																											
Radial	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> R <input type="checkbox"/> L																																							
Posterior Tibial	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> R <input type="checkbox"/> L																																							
Pedal	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> R <input type="checkbox"/> L																																							
Best Motor Response: Obeys command to move 6 Localizes painful stimulus 5 Withdraws from painful stimulus 4 Flexion, abnormal posturing of extremities 3 Extension, abnormal posturing of extremities 2 No movement or posturing 1		Total _____																																									
E = Expose and Warm <input type="checkbox"/> Clothes Removed Time: _____ Warming: <input type="checkbox"/> Blankets <input type="checkbox"/> Bair Hugger <input type="checkbox"/> Radiant Heat Time Started: _____ <input type="checkbox"/> Warm Fluid		I = Inspect Posterior - Log roll time: <input type="checkbox"/> Normal <input type="checkbox"/> Deformities _____ <input type="checkbox"/> Rectal Tone: <input type="checkbox"/> Deferred <input type="checkbox"/> Normal <input type="checkbox"/> Decreased <input type="checkbox"/> Absent																																									
G = Give comfort, notify / bring in family Family Notified: <input type="checkbox"/> Yes <input type="checkbox"/> No Contact Name/Relation _____ Time: _____ Family Present: <input type="checkbox"/> Yes <input type="checkbox"/> No Who? _____		<input type="checkbox"/> Step Offs: _____ <input type="checkbox"/> Backboard Removed by _____ Time _____																																									
H = Head to toe assessment Head / Neck <input type="checkbox"/> Normal <input type="checkbox"/> Ear / Nose Drainage <input type="checkbox"/> Deviated Trachea: <input type="checkbox"/> R <input type="checkbox"/> L		<input type="checkbox"/> C-Collar Removed by _____ Time _____																																									

Trauma Activation Criteria

Trauma Code I Criteria:

Trauma Code I **MUST** be called for a patient with **ANY** of the following criteria:

1. **Confirmed** systolic blood pressure <90 at any time in adults, and age-specific hypotension in children, with mechanism attributable to trauma.
2. Gunshot wounds to the neck, chest, abdomen, or extremities proximal to elbow or knee.
3. GCS < 8 with mechanism attributable to trauma.
4. Trauma patients transferred from other hospitals who are receiving blood to maintain vital signs.
5. Any trauma patient intubated on scene whether arriving from scene of injury or transferring facility.
6. Trauma patients with respiratory compromise or obstruction:
 - a. **Includes:** intubated patients who are transferred from another facility with ongoing respiratory compromise.
 - b. **Excludes:** patients intubated at another facility that are currently stable from a respiratory stand point.
7. Hanging victims that meet any of the other 6 criteria listed above.
8. Trauma patients who have had cardiac arrest at any point prior to their arrival at MidMichigan Medical Center-Midland.

A Trauma Code I may be activated for additional reasons not listed above by the Emergency Department Physician and/or the Trauma/General Surgeon.

Trauma Code II Criteria:

A Trauma Code II Activation **MUST** be called for a patient who meets **ANY** of the following criteria:

1. Patients who met trauma code 1 criteria upon arrival to a referring facility that no longer meet code 1 criteria upon transfer to Midland.
2. Ejection from any motorized vehicle or animal.
3. Severe burns TBSA >9% with or without additional trauma.
4. Amputation, degloving, or crush injury proximal to wrist or ankle.
5. New onset paralysis s/p traumatic injury.
6. Mechanism suspicious for severe injury (examples: MVC > 35mph, MVC with extensive vehicle damage)
7. Auto vs Motorcycle
8. Auto vs Pedestrian
9. Auto vs. Bicycle
10. Fall from >15 feet
11. Fall down flight of stairs with high suspicion of injury
12. Death of passenger in same compartment of vehicle.
13. 2 or more proximal extremity fractures, open fractures, and/or pelvic fractures
14. Electrical burns (including lightning injuries)
15. Suspicion of inhalation injury
16. Geriatric patients with multi-system injuries (\geq 65 years old)
17. Anticoagulant patient falls with altered mentation from baseline
 - a. At physician discretion if baseline mentation is unknown.
18. Positive seatbelt sign.

A Trauma Code II may be activated for additional reasons not listed above by the Emergency Department Physician and/or the Trauma/General Surgeon.

Activation Log

Trauma Activation Log 2015.xlsx - Microsoft Excel

A	B	C	D	E	F	G	H	I	J	K	L	M
Date	Time	FIN	Pt Name	Level	Pre-Hospital Notification	Age/Gender	MOI	Main Injuries	Dispo	Billing Date	Billed by	Comments
1/2/2015				2	Yes		MVC	None	d/c-home	1/5/2015	Tom	
1/2/2015				2	Yes			Upgrade to code 1				
1/2/2015				1	Yes		Burn	Facial burns	admit-trauma	1/5/2015	Tom	
1/2/2015				1	Yes		MVC	facial fxs, ptx, rib fxs, SAH	admit-trauma	1/5/2015	Tom	
1/2/2015				2	Yes		MVC	pulm contusions,	admit-trauma	1/5/2015	Tom	
1/2/2015				2	Yes		Ped vs Auto	tibial plateau fx, clavicle fx	admit-trauma	1/5/2015	Tom	
1/3/2015				2	Yes		Fall	SDH	admit-trauma	1/5/2015	Tom	
1/3/2015				2	Yes		MVC	Femur, fibula fx	admit-trauma	1/5/2015	Tom	
1/4/2015				2	Yes		Snowblower accident	hand inj	admit-trauma	1/5/2015	Tom	
1/4/2015				2	Yes		MVC	c-spine fx, rib fxs	admit-trauma	1/5/2015	Tom	
1/5/2015				2	Yes		MVC	None	d/c-home	1/6/2015	Tom	
1/6/2015				1	Yes		MVC	None	Died in route			
1/6/2015				2	Yes		MVC	head lac	d/c-home	1/7/2015	Tom	
1/7/2015				2	Yes		Fall	SDH chronic	admit-trauma	Not Billed	Not Billed	Documentation not support
1/9/2015				1	Yes		Ped vs Auto	SDH, SAH, EDH, Skull/facial fx	admit-trauma	1/12/2015	Tom	
1/9/2015				2	Yes		MVC	None	d/c-home	1/12/2015	Tom	
1/9/2015				2	Yes		MVC	None	medical admit	1/12/2015	Tom	admitted for pr
1/10/2015				2	Yes		MVC	odontoid fx	admit-trauma	1/12/2015	Tom	
1/19/2015				1	Yes		Fall	sdh	admit-trauma	1/20/2015	Tom	
1/21/2015				2	Yes		MVC	None	d/c-home	1/22/2015	Tom	
1/21/2014				2	Yes		Fall	skull fx, sdh, sah	admit-trauma	1/22/2015	Tom	
1/22/2015				2	Yes		MVC	None	d/c-home	1/23/2015	Tom	
1/23/2015				2	Yes		Fall down stairs	None	d/c-home	1/26/2015	Tom	
1/26/2015				2	Yes		Fall	Concussion	admit-trauma	1/27/2015	Tom	
1/26/2015				1	Yes		MVC	PTX, ribs, sternum, calc, CPR	admit-trauma	1/27/2015	Tom	
1/29/2015				2	No		MVC	None	d/c-home	N/A	N/A	
1/31/2015				2	Yes		Fall	Sz	admit-medicine	2/2/2015	Tom	medical adr



Protecting Information

Information about Trauma Activation Log 2014
J:\NS\Trauma Prep\Trauma Registry\Trauma Activation Log 2014.xlsx

Protect Workbook

- Permissions**
Anyone can open, copy, and change any part of this workbook.
- Mark as Final**
Let readers know the workbook is final and make it read-only.
- Encrypt with Password**
Require a password to open this workbook.
- Protect Current Sheet**
Control what types of changes people can make to the current sheet.
- Protect Workbook Structure**
Prevent unwanted changes to the structure of the workbook, such as adding sheets.
- Add a Digital Signature**
Ensure the integrity of the workbook by adding an invisible digital signature.

Properties

Size 115KB
Title Add a title
Tags Add a tag
Categories Add a category

Related Dates

Last Modified 2/5/2015 3:25 PM
Created 1/6/2014 9:27 AM
Last Printed Never

Related People

Author Wood, Tom C.
Add an author
Last Modified By Coppola, Lori J.

Related Documents

Open File Location
[Show All Properties](#)



Registry Log

Registry Log 2015.xlsx - Microsoft Excel

	A	B	C	D	E	F	G
1	Name	FIN	Date	Admit/Transfer/Death	Referring Hospital	Admission Service	Diagnosis
2	Doe, John	1234567	3/2/2015	Admit	N/A	Trauma	SDH
3	Doe, Jane	2234567	3/3/2015	Admit	N/A	N/A	Base Skull Fracture w/extension to occipital condyles, Ant.,Inf.,and Lat. Right occipital condyle displacement and cervical cord relative to base of brain, multiple Contusions, Temporomandibular Joint Fracture,Rib Fractures Left x7
4	Smith, Joe	3234567	3/4/2015	Admit	Clare	Ortho	
5							
6							
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22							



Performance Improvement Tracking

- Two main methods of PI tracking:
 - Home grown method (example: excel)
 - Registry method
- Goal is accurate and thorough tracking of all PI issues.

PI Tracking: Registry

Trauma Data Editor

Demographic | Injury | Prehospital | Referring Facility | ED/Resus | Patient Tracking | Providers | Procedures | Diagnoses | Outcome | QA Tracking | Memo | Custom

QA Items | QA Tracking | Notes Screen Complete

ACS/Questions | User Defined Questions | Filters | NTDB Complications

Category	QA Item	Response	Occurrence Date	QA Tracking
ACS	Initiation of Debridement of Open Tibial Fx > 8 hrs after Arrival	Yes	03/08/2015	
NTDB	Pneumonia	Yes	03/08/2015	

Custom

✓ Check | IQIP | Save | Save and Exit | Print | Close | Prev | Next | A x

Edit
Delete
Set PI Track



PI Tracking : Excel

PI Legal.xlsx - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View Developer Acrobat

Normal Page Layout Page Break Preview Custom Views Full Screen

Workbook Views Show

Ruler Formula Bar

Gridlines Headings

Zoom 100% Zoom to Selection

New Window Arrange All Freeze Panes Unhide

View Side by Side Synchronous Scrolling Reset Window Position Window

Save Workspace Switch Windows Macros

A26

	A	B	C	D	E	F	G	H	I
1	DOS	Name	FIN	PI Issue / Complication	Issue Explanation	Issue Triage Determination	Date Presented at Peer Review	Date Presented at PIPS	Judgment
2	2/16/2015	[REDACTED]		TC1 activation	Pt receiving blood to maintain vitals, arrived at 89/71, activated as Code 2 and not Code 1	Level 1	N/a	3/11/2015	Unacceptable - Provider related
4	2/1/2015	doe, John	5710101	Trauma Death	Pt expired in ICU after family withdrew care	Peer Review	3/10/2015	n/a	Mortality without opportunity for improvement
6	2/15/2015	doe, jane	5002000	UTI	Pt developed UTI on day 4	Peer Review	3/10/2015	n/a	Potentially Preventable
8	2/26/2015	[REDACTED]		N/A	Pt s/p MVC with tib/fib, patella, sternal, and l-spine fx admitted to medicine. EDP documents convo w/ trauma	Level 1	n/a	n/a	Unacceptable - Provider related
9									
10									
11									
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13									
14									
15									
16									



PI Tracking: Excel

PI Log.xlsx - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View Developer Acrobat

Normal Page Layout Page Break Preview Custom Views Full Screen

Workbook Views

Ruler Formula Bar Gridlines Headings Show

Zoom 100% Zoom to Selection

New Window Arrange All Freeze Panes Hide Unhide

Split View Side by Side Synchronous Scrolling Reset Window Position Window

Save Workspace Switch Windows Macros

K32

	I	J	K	L	M	N
1	Judgment	Action Plan / Comments	Loop closure	Issue Status: Resolved/Tracking	Additional Documents	Additional Documents
2	Unacceptable - Provider related	TMD and ED liaison met with Dr. xxxxx and discussed proper activation levels. Dr. xxxxx acknowledged mistake. Continue under-triage monitoring per ACS standards.	Closed	Continue under-triage monitor		
3						
4	Mortality without opportunity for improvement	See peer review minutes. SDH determined to be non-survivable.	Closed	Continue death monitors	Peer Review\ACS PIPS Tracking Forms.doc	
5						
6	Potentially Preventable	See peer review minutes. Re-educate intensivists and NTICU staff re: Foley d/c policy	Open	Staff education scheduled 3/27/15		
7						
8	Unacceptable - Provider related	TMD discussed case with Dr. xxxxxx. Admission to trauma service policy reviewed and educated.	Closed	Proceed to discipline if reoccurrence		
9						
10						
11						
12						
13						
14						
15						
16						
17						



PI Tracking : Excel

	A	B	C	D	E	F	G	H	I
1	System PI Tracking								
2									
3	PI Issue	Date introduced	Where Introduced	Classifications	Discussion and Mitigation	Follow-up Date	Notes / Date instituted / Outcome	Re-evaluation/ Loop Closure	
4	Questions regarding weaning protocol after patient still on sedation when weaning expected to occur.	6/1/14	NP brought to TPM, meeting established with respiratory dept	Impact: No harm Type: communication incompl info; airway management, delegation of tasks Domain: ICU care; therapeutic; phys/resid/MLP System: communication of guidelines Human: practitioner knowledge base	6/25 Meeting held with respiratory care director and supervisor to review guideline and establish alterations for trauma patients. Also discussed types of services available, those desired as program grows. Includes start of use of EndoClear product to clear ETT of secretions, availability of using volume targeted therapy, use of ETCO2 monitoring, BALs and Vigeleo.	Oct-14	Revised weaning protocol approved by critical care committee and training of respiratory care staff began.	Nov 14, new protocol fully implemented for trauma patients.	
5									
6	Peer Review Tracking								
7									
8	Pt ID	PI Issue	Date introduced	Where Introduced	Classifications	Discussion and Mitigation	Follow-up Date	Notes / Date instituted / Outcome	Re-evaluation/ Loop Closure
9	XXXXXXX	ETOH referrals	6/12/2014	Wkly PI	Type: communication	1. Order required for SW to see patients. Need to include this info in resident trauma orientation packet. 2. Hospital policy on nursing documentation requires dependent habits questions. If positive they initiate CIWA but consult is not automatic order	7/14	Automatic order for SW triggers with elevated CIWA score. Re-education of nursing staff by unit managers.	Ongoing



Adding materials to Excel

The screenshot shows the Microsoft Excel interface with the following data in the table:

	I	J	K	L	M
	Judgment	Action Plan / Comments	Loop closure	Issue Status: Resolved/Tracking	Additional D
1					
2	Unacceptable - Provider related	TMD and ED liaison met with Dr. xxxxx and discussed proper activation levels. Dr. xxxxx acknowledged mistake. Continue under-triage monitoring per ACS standards.	Closed	Continue under-triage monitor	
3					
4	Mortality without opportunity for improvement	See peer review minutes. SDH determined to be non-survivable.	Closed	Continue death monitors	Peer Review ACS PIF
5					
6	Potentially Preventable	See peer review minutes. Re-educate intensivists and NTICU staff re: Foley d/c policy	Open	Staff education scheduled 3/27/15	
7					
8	Unacceptable - Provider related	TMD discussed case with Dr. xxxxxx. Admission to trauma service policy reviewed and educated.	Closed	Proceed to discipline if reoccurrence	
9					
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19					

The context menu is open over cell M2, showing options: Cut, Copy, Paste Options, Paste Special..., Insert..., Delete..., Clear Contents, Filter, Sort, Insert Comment, Format Cells..., Pick From Drop-down List..., Define Name..., and Hyperlink... (circled in blue).



Adding materials to Excel

PI Log.xlsx - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View Developer Acrobat

Normal Page Layout Page Break Preview Custom Views Full Screen

Workbook Views Show Ruler Formula Bar Gridlines Headings Zoom 100% Zoom to Selection New Window Arrange All Freeze Panes Hide Split View Side by Side Synchronous Scrolling Reset Window Position Save Workspace Switch Windows Macros

	I	J	K	L	M	N	O
	Judgment	Action Plan / Comments	Loop closure	Issue Status: Resolved/Tracking	Additional Documents	Additional Documents	
1							
2	Unacceptable - Provider related	TMD and ED liaison met with Dr. xxxxx and discussed proper activation levels. Dr. xxxxx acknowledged mistake. Continue under-triage monitoring per ACS standards.	Closed	Continue under-triage monitor			
3							
4	Mortality without opportunity for improvement	See peer review minutes. SDH determined to be non-survivable.	Closed	Continue death monitors	Peer Review\ACS PIPS Tracking Forms.doc		
5							
6	Potentially Preventable	See peer review minutes. Re-educate intensivists and NTICU staff re: Foley d/c policy	Open	Staff education scheduled 3/27/15			
7							
8	Unacceptable - Provider related	TMD discussed case with Dr. xxxxxx. Admission to trauma service policy reviewed and educated.	Closed	Pro			
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Systems Committee Agenda

**Trauma PIPS
February 11th, 2015**

1. Call to Order
2. Trauma Dashboard Review
3. Prevention and Outreach Update: Kelli Jankens
4. Old Business
 - a. Trauma Doe Registration Process
5. Discussion Topics
 - a. PI Project: Door to HCT in anticoagulated head trauma
 - i. Door to INR reversal for positive HCT findings
 - b. MTQIP PI project: Unplanned intubation reduction
 - c. MTQIP quarterly meeting updates
 - d. Review of Activation criteria
 - e. Trauma Skills Days
 - i. ED June 8 2015
 - ii. OR June 9 2015
 - iii. ICU June 10 2015
 - iv. Floors June 11 2015
6. Questions and Open Discussion
7. Next meeting April 8th, 8am, H1224
8. Adjournment



Peer Review Documents

2. Patient: ___-___-___ year-old male MR # _____ / Trauma # _____
 Date of admit: _____ Date of death: _____
 ISS: TRISS: Autopsy: _____
 Donor: MOI: _____

Motor vehicle accident on (date) resulting in multiple fractures including comminuted, spiral left femoral, sternum with retrosternal hematoma, left scapula, sacrum, and left 4-7 ribs. Pt was initially seen in Big City, USA. Due to lack of resources at their hospital, he was transfer to hospital X. This patient has an extensive medical history including: HTN, atrial fibrillation, hypothyroidism & dyslipidemia. Home meds: aspirin 81 mg p.o. daily, B12 injection monthly, levothyroxine 50 mcg 1 daily, simvastatin 40 mg 1 daily, and diclofenac 75 mg p.c.n. Pt was admitted to the SICU. Cardiology was consulted d/t orthopedic surgery required for this femur fracture. They did clear him for OR; however, the anesthesia attending did not think he would survive the case and it was canceled. Anesthesiology did relay/discuss this information with the Orthopedic Attending and the patient's family. The Trauma Attending was not made aware of this decision. Pt was taken to the OR 3 days later for repair of the femur fracture. During the OR case his renal status declined and his base deficit went from 0.9 to 6.1. He ended up required CRRT and his renal failure was resolved on (date).

PI Issues	Discussion	Determination	*Recommendations / Action & Loop Closure Status
1. Lack of pre-hospital immobilization (9901)	Rural community hospital did not have the resources needed for a patient of this body habitus. The transferring provider did have the proper equipment for immobilization.	Unacceptable provider related.	Loop Closure: *Spoke to ED staff post peer review, ED staff provider did use towel rolls, for neck just forgot to document. Closed.
2. Pneumonia (3008)	Patient has significant pulmonary history, including recurrently pneumonia. The patient was being treated for this prior to admission.	Non-preventable, disease related	Loop Closure: *No action required Closed.
3. Respiratory failure (3015)	Poor mobility due to body habitus. Pt admitted with preexisting pneumonia. Patient was given "On-Q pump" to management rib fracture pain thereby increasing ease of breathing.	Potentially preventable, provider related.	Loop Closure: * Create Bariatric PMG to include each body system. Pending.

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9. Decubitus Ulcer (stage 2) (6503)	Right heel. Wound Team was consulted and recommendation carried out. He was placed in a off-lifting boot. This pressure wound did not advance.	Preventable, provider related	Loop Closure: * Create Bariatric PMG and include proper bed, skin assessment and early intervention. Pending.
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This information is peer review pursuant to the Hospital Risk Management and Performance Improvement Plans and is protected by State 12-345 and State 12-789. This information should not be disclosed to any person or entity for any reason other than for purposes directed under the Hospital Policies and Procedures, including the Risk Management and Performance Improvement Plans.

Transfer Logs

	A	B	C	D	E	F	G	H	I	J	K	L
1	Date	Name	Account	Category	Diagnosis	ER Physician	Accepting Hospital	Accepting Physician	Transportation Mode(pv, ems service)	Reason for Transfer	Problems associated with the transfer arrangements	Clerk
897	12/1/14			medical	urinary retention		Bay McLaren		ems	continuity of care		Scoles
898	12/1/14			medical	insulin OD, hypothermia		Covenant		ems	peds ICU		Pratt
899	12/3/14			medical	seizure s/p fall, scalp lac		Covenant		mrm	peds trauma/neuro		Scoles
900	12/3/14			mental health	psychosis		gratiot		mmc	geriatric psych		Scoles
901	12/3/14			mental health	depression, suicidal ideation		white pines		mems	in patient psych care		Wonsey
902	12/3/14			Medical	R hand GSW #3 digit #4 digit suspect nerve/blood vessel damage		U of M		MMC	Hand/ortho doctor		Ostrander
903	12/3/14			medical	LLL pneumonia, HIV		U of M Peds ER		MMC	peds HIV specialists		Ostrander
904	12/3/14			mental health	Acute Psychosis		pine crest		private car	psychiatric services		Ostrander
905	12/5/14			medical	axillary occlusion		Covenant		MEMS	vascular surgeon		Glazier
906	12/5/14			medical	intrastominal infection, wound infection, coagulopathy		u of m		helicopter			Pratt
907	12/7/14			medical	Vtach		Covenant		MEMS	Pt's electrophysiologist		Glazier
908	12/9/14			medical			covenant		ems	Peds cardio/neuro		Wonsey
909	12/10/14			medical	Liver failure, renal failure, dehydration, electrolyte imbalance, pancreatitis		U of M		EMS	Hepatologist		Ostrander
910	12/10/14			medical	SBO		Providence Hosp		EMS	continuity of care		Ostrander
911	12/10/14			medical	Bronchiditis, failure to thrive		Covenant		MMC	Full spectrum pediatric services		Scoles
912	12/11/14			medical	overdose, seizure		Covenant		ems	Peds ICU		Scoles
913	12/11/14			medical	mandible fx, abd hematoma		U of M Motts		ems	pediatric oral surgery, pediatric trauma surgery		Pratt
914	12/11/14			medical	C1 fracture		U of M Motts		EMS	Peds neurotrauma		Pratt
915	12/12/14			medical	DKA		Covenant		EMS	pediatric ICU		Pratt
916	12/12/14			medical	Pneumonia pericardial effusion		Motts		EMS	Higher level of care		DuFort
917	12/13/14			surgical	Septic left knee-previous surgery		McLaren Greenlawn-Lansing		EMS	previous surgeon there		Ostrander
918	12/17/14			surgical	Tenosynovitis left thumb		Hurley-Flint		ems	Hand Surgeon		Glazier
919	12/20/14			Medical	dyspnea hx cystic fibrosis		Covenant		EMS	Pediatric ICU		Ostrander
920	12/20/14			M	pneumonia		Covenant		EMS	Pediatric ICU		Ostrander
921	12/21/14			MH	bipolar, manic, suicidal ideation		White Pine Health		EMS	Mental Health		Wonsey
922	12/22/14			Medical	Thrombocytopenia		Source		ems	Oncology Services		Pratt
923	12/24/14			surgical	Amputation of Lt Thumb/ splenic laceration		UOM-ER		EMS	Vascular Surgery/hand		Scoles
924	12/25/14			medical	suspected Staph/Rash		Hurley ED		EMS	Burn Center		Wonsey
925	12/25/14			medical	Overdose		Covenant		ems	Pediatric monitoring		Wonsey
926	12/25/14			medical	Fever Severe Throcytopenia		U of M		EMS	peds hematology pediatric ICU		Glazier
927	12/26/15			medical	DKA		U of M		EMS	pediatric IM		Glazier
928	12/29/14			medical	chest pain		U of M		EMS	pediatric cardiology		Kroening
929	12/31/14			medical	pneumonia hx cystic fibrosis		U of M		ems	specialty care, continuity of care		Scoles



OR and Anesthesia Log

OPERATING ROOM & ANESTHESIA SERVICES CALL LOG FOR URGENT AND EMERGENT SURGERIES

Time called and arrived need to be noted for all procedures done during on-call hours (nights & weekends) including non-elective add-ons.

DATE	REASON L1 – Level 1 Activ L2 – Level 2 Activ Add-on	NAME (printed)	Signature	Time called or pager went off	TIME ARRIVED	Response Time	Surg? Yes No	If Surgery OR Start Time
		Nurse						
		Anesthesiologist						
		Anesth Resid						
		Nurse						
		Anesthesiologist						
		Anesth Resid						
		Nurse						
		Anesthesiologist						
		Anesth Resid						
		Nurse						
		Anesthesiologist						
		Anesth Resid						
		Nurse						
		Anesthesiologist						
		Anesth Resid						



Trauma Newsletter



Trauma Program Newsletter

MidMichigan Medical Center-Midland

Issue 3

Spring 2014

The Initial Management of Severe Traumatic Brain Injury

Thomas J. Veverka, MD, FACS
Trauma Medical Director

In This Issue:

Initial Management of Severe TBI (1)

Restraint Usage and Ejection in the MVC Victim (3)

Prevention Update (5)

As we progress in our development into a more mature trauma center, we all need to become more knowledgeable and comfortable with our initial management of patients with severe traumatic brain injury. As we all know, these injuries frequently involve the young, and aggressive and thorough management can help to optimize the neurologic function of the patient for years to come.

There are approximately 1.7 million TBI per year in the U.S., 75% of which are considered mild. Fifty-two thousand die each year from TBI and 275,000 are hospitalized. TBI is a contributing factor in 30.5% of all injury-related deaths and total costs (direct medical and indirect societal) was estimated at \$76.5 billion

for the year 2000 in the U.S.

As with all injured patients arriving in our emergency department, ATLS provides an excellent framework for initial evaluation and management. For a patient with a GCS of 3-8, immediate intubation is required. In this scenario, obvious severe primary structural damage to the brain has already occurred, and the entire focus moving forward is to avoid secondary injury. These secondary insults, hypotension, hypoxemia, hypocarbia, fever, and hyperglycemia have all been shown to worsen long-term outcomes. In addition, data suggests that ongoing agitation will trigger subsequent programmed neuronal cell death, so adequate sedation (without inducing hypotension) is a key element of care.

After establishing a stable airway and initiating resuscitation, a thorough patient evaluation searching for concomitant injuries, especially those involving ongoing blood loss thus threatening hemodynamic stability, must be carried out. Obviously, physical examination will have its limitations and full radiologic assessment is almost always necessary, but a patient with hypotension unresponsive to resuscitative efforts is assumed to be hemorrhaging and belongs in the OR for hemorrhage control. The patient with hemoperitoneum and a ruptured spleen can get a head CT post-operatively. As referenced in last

quarter's newsletter, reversal of anticoagulation can't be emphasized strongly enough. And early and consistent communication with the neurosurgeon on call is vital as well as with whomever is running the trauma service/critical care.

For the patient who has been stabilized and thoroughly evaluated and is now being admitted to the neurotrauma intensive care unit, close attention to a few details can prove critical. First of all, do not over-resuscitate with isotonic crystalloid solutions. Consider 3% NaCl where appropriate. Hyponatremia will only worsen brain swelling. If intracranial pressure (ICP) monitoring has been established, discuss a target cerebral perfusion pressure (CPP = MAP - ICP) with the neurosurgeon as well as measures to minimize cerebral edema (elevating the head of the bed, osmotic diuretics, etc.) On the other hand, if ICP monitoring has not been initiated, I will initially assume an ICP of 20 (normal < 10), and to maintain a CPP of 60 the mean arterial pressure will need to be maintained at 80. If you have determined that fluid resuscitation has been adequate, the addition of a vasopressor may be appropriate to reach the target MAP. I prefer norepinephrine. An arterial line is extremely helpful.

Ventilator management requires close scrutiny over the first 24 hours due to a large flux in physiologic demands in the patient. Neurosurgical guidelines recommend keeping the PaO₂ > 100 over the first 24-48 hours, and I usually target the PaCO₂ at 35. The amount of minute ventilation needed (tidal volume times rate) to maintain a PaCO₂ of 35 will change considerably over the first 12 hours as the patient's physiologic demands settle down after the acute trauma. This will require frequent ABG's or end-tidal CO₂ monitoring to avoid hyperventilation as a low PaCO₂ results in cerebral vasoconstriction and poor perfusion to already-injured brain.

If the patient develops a fever, be aggressive with providing acetaminophen, ibuprofen, and cooling blankets to bring the temperature down to 98.6 F. And sedate, sedate, sedate. I find that Fentanyl has much less hemodynamic effect (hypotension) than Propofol, although both may be needed. Remember, neuromuscular blockade is rarely indicated and should never be initiated without adequate sedation. Monitor and control blood sugars but do not overtreat and cause hypoglycemia. Keeping the blood sugar less than 180 is fine.

This article is only a bare outline of the issues we need to watch closely and address in our patients. I again stress the importance of coordinating care with the neurosurgeon, and I definitely expect a call if I am running the service regardless of the hour.

Click to view:

[Midland Daily News article announcing our trauma verification](#)

[Midland Daily News article about seat belt usage](#)

[Clip of WMCU interview with Tom Wood about trauma verification](#)

Trauma Dashboard

U26 fx =S26+R26+Q26+O26+N26+M26+J26+I26+H26+E26+D26+C26

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	
1	Trauma Program Dashboard																						
2	FY 2014	Goals	July	August	September	Q1 Total	Change vs FY14	October	November	December	Q2 Total	YTD Change vs FY14	January	February	March	Q3 Total	April	May	June	Q4 Total	FY15 Total	FY 14	
3	Stats																						
4	# of patients into registry																						
5	Total # of activations																						
6	Code 2 Activations																						
7	Code 1 Activations																						
8	Code 1 Response < 15 min																						
9	Timely Response to Code 1 % (month)																						
10	Timely Response to Code 1 % (Year)																						
11	ADMISSIONS:																						
12	Trauma Service																						
13	Orthopedic Services																						
14	Medicine																						
15	Other Surgical Specialties Specialty																						
16	Raw NSA rate																						
17	Adjusted NSA Rate																						
18	Total transferred																						
19	% transferred out																						
20	Transfers in																						
21	% of admissions transferred in																						
22	Inpatient admissions																						





Questions