

MICHIGAN DEPARTMENT OF COMMUNITY HEALTH

Michigan Regional Trauma Resources

Region 2 North



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Region 2 North Trauma Coordinator
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Introduction to Region 2 North

Region 2 North (R2N) is the second most populous region in Michigan. Its three counties, Oakland, Macomb, and St. Clair, are home to 2,213,930 people, approximately 22.5% of the population of Michigan.

Within the region are several universities and colleges, a large business and technology sector and a very large industrial sector. All of the “Big Three” of the auto industry, General Motors, Ford and

Chrysler have operating facilities in the region, along with numerous other manufacturing entities.

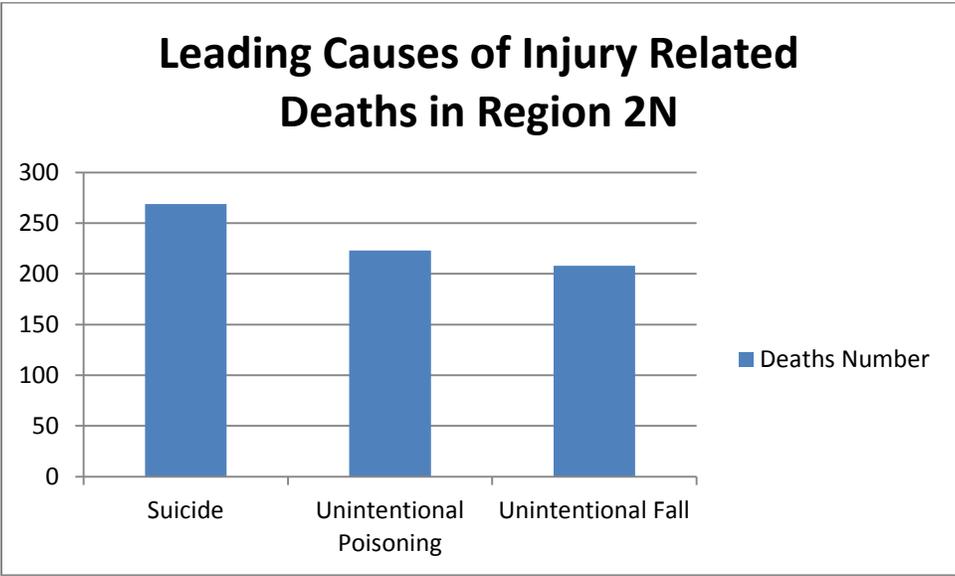
Also located in R2N are several entertainment venues including sports arenas and music complexes that see year round activities with large numbers in attendance.

R2N has several major highways that accommodate millions of automobiles annually and serve as a major transportation corridor for commercial vehicles moving goods from transportation centers across the Midwest. Interstates 75 and 96 are the major north-south and east-west routes.

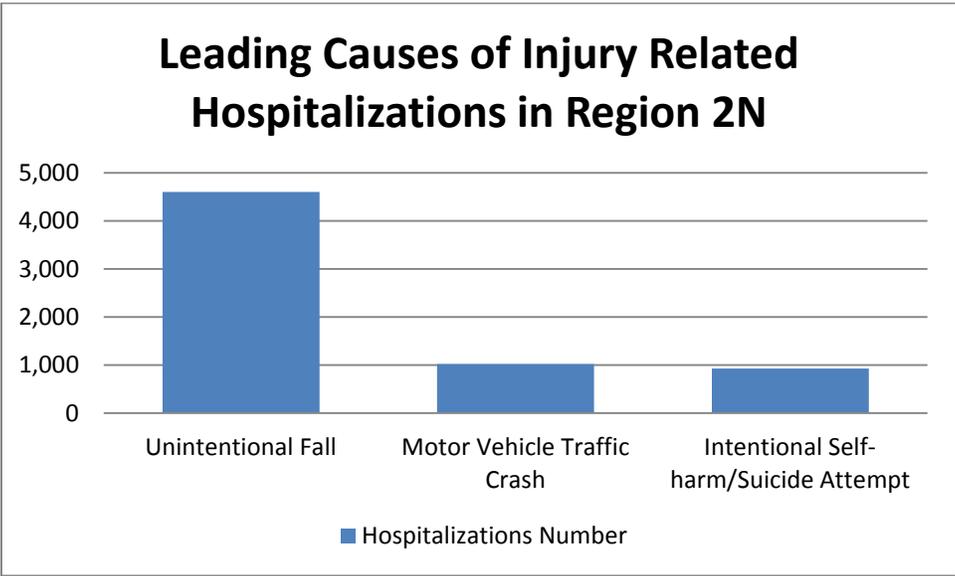
R2N also shares an international border crossing with Canada at Port Huron. The Blue Water Bridge has 15,000 to 20,000 vehicles crossing daily, 6,000 of those vehicles are heavy trucks transporting goods across the border. There is also a rail tunnel in the same area that moves millions of tons of goods from the Midwest region across the border each year. The rail lines that feed traffic to this rail tunnel crisscross R2N communities with numerous crossings on major roads.

Injury

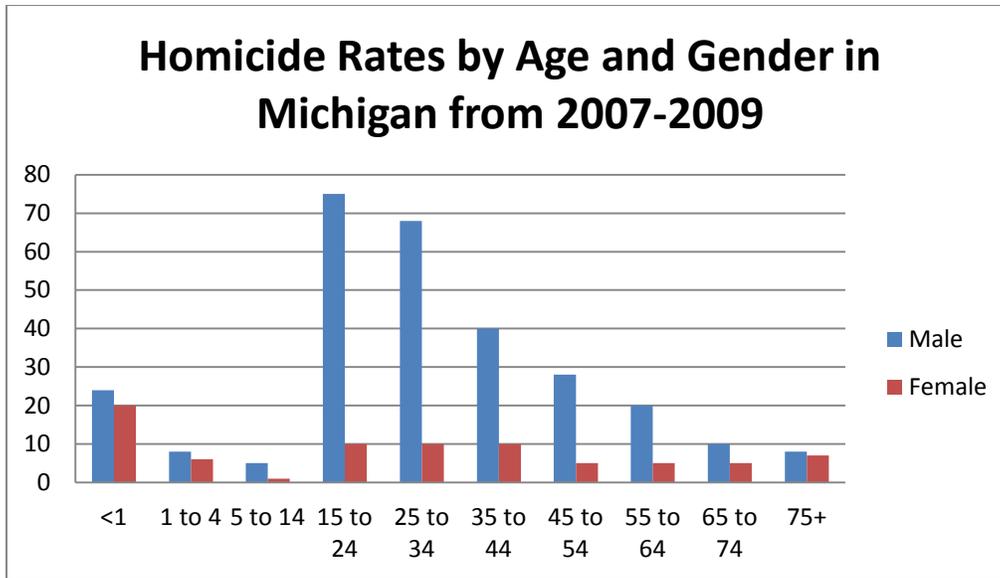
In order to address a systematic, regionalized approach to injury, it is necessary to assess regional data. Accurate assessment of data provides the means for policy development organized to address the goals of injury prevention, incident response and post injury rehabilitation. The graphs below describe the three leading causes of both injury related deaths and injury related hospitalizations for Region 2 North in 2010.



Source: Thomas W. Largo, MPH, Division of Environmental Health, Bureau of Disease Control, Prevention, and Epidemiology, Michigan Department of Community Health, 2010 data.



Source: Thomas W. Largo, MPH, Division of Environmental Health, Bureau of Disease Control, Prevention, and Epidemiology, Michigan Department of Community Health, 2010 data.



Source: Michigan Department of Community Health – Injury & Violence Prevention Section, 2007-2009

The following is a listing of state wide injuries and death by age group. Trauma is a leading cause of injury and death in all age groups.

Age Group (Years)	Cause	Average Annual Deaths	Average Annual Population	Average Annual Rate
<1	1. Unintentional Suffocation	62.0	117,443	52.8
	2. Homicide	10.0	117,443	8.5
	3. Suffocation - Undetermined Intent	3.5	117,443	3.0
1-4	1. Homicide	12.3	492,184	2.5
	2. Unintentional Drowning	8.8	492,184	1.8
	3. Unintentional Exposure to Fire/Flames/Smoke	7.5	492,184	1.5
5-9	1. Motor Vehicle Traffic Crash*	10.0	647,691	1.5
	2. Homicide	4.8	647,691	0.7
	3. Unintentional Exposure to Fire/Flames/Smoke	4.3	647,691	0.7
10-14	1. Motor Vehicle Traffic Crash	17.8	691,722	2.6
	2. Suicide	8.5	691,722	1.2
	3. Homicide	7.0	691,722	1.0
15-19	1. Motor Vehicle Traffic Crash	106.0	753,455	14.1
	2. Homicide	86.5	753,455	11.5
	3. Suicide	59.8	753,455	7.9

*Those killed in motor vehicle traffic crashes include: motor vehicle occupants, motorcyclists, bicyclists, pedestrians, and others. Rates are the number of deaths per 100,000 of population.
Data Source: Vital Records and Health Data Development Section, MDCH

Fatal Injuries Trends by Four Major Categories, 2005-2010
Macomb County Health Department, Michigan Both Sexes, All Ages

[View Rates per 100,000 Population for 2005-2009 and 2010](#)

FATAL INJURIES View ICD Codes	2005	2006	2007	2008	2009	2010
	Number of Fatal Injuries					
ALL FATAL INJURIES	379	425	485	487	535	526
UNINTENTIONAL INJURIES	233	277	298	314	318	330
TRANSPORT FATAL INJURIES	63	78	73	58	66	60
OTHER UNINTENTIONAL INJURIES	170	199	225	256	252	270
SELF-INFLICTED/SUICIDE	84	88	112	109	126	115
ASSAULT/HOMICIDE	24	30	42	24	35	37
ALL OTHER FATAL INJURIES	38	30	33	40	56	44
	Percent of Distribution					
ALL FATAL INJURIES	100.0	100.0	100.0	100.0	100.0	100.0
UNINTENTIONAL INJURIES	61.5	65.2	61.4	64.5	59.4	62.7
TRANSPORT FATAL INJURIES	16.6	18.4	15.1	11.9	12.3	11.4
OTHER UNINTENTIONAL INJURIES	44.9	46.8	46.4	52.6	47.1	51.3
SELF-INFLICTED/SUICIDE	22.2	20.7	23.1	22.4	23.6	21.9
ASSAULT/HOMICIDE	6.3	7.1	8.7	4.9	6.5	7.0
ALL OTHER FATAL INJURIES	10.0	7.1	6.8	8.2	10.5	8.4

A transport fatal injury is any fatal injury involving a device designed primarily for, or being used at the time primarily for, conveying persons or goods from one place to another. This unintentional category includes accidents involving: aircraft, spacecraft, watercraft, motor vehicle, railway, and other road vehicles (excludes intentional or undetermined deaths).

Other Fatal Injuries include complications in medical/surgical care, legal intervention/war, late effect and undetermined intent. Percent; of all deaths that were categorized as fatal injuries for the specified year.

Source: Michigan Resident Death Files, Data Development Section, MDCH.

Fatal Injuries Trends by Four Major Categories, 2005-2010
Oakland County Health Department, Michigan
Both Sexes, All Ages

[View Rates per 100,000 Population for 2005-2009 and 2010](#)

FATAL INJURIES View ICD Codes	2005	2006	2007	2008	2009	2010
Number of Fatal Injuries						
ALL FATAL INJURIES	481	506	522	520	551	546
UNINTENTIONAL INJURIES	265	265	283	271	268	316
TRANSPORT FATAL INJURIES	98	101	97	94	64	94
OTHER UNINTENTIONAL INJURIES	167	164	186	177	204	222
SELF-INFLICTED/SUICIDE	100	136	124	119	137	126
ASSAULT/HOMICIDE	53	41	41	63	50	49
ALL OTHER FATAL INJURIES	63	64	74	67	96	55
Percent of Distribution						
ALL FATAL INJURIES	100.0	100.0	100.0	100.0	100.0	100.0
UNINTENTIONAL INJURIES	55.1	52.4	54.2	52.1	48.6	57.9
TRANSPORT FATAL INJURIES	20.4	20.0	18.6	18.1	11.6	17.2
OTHER UNINTENTIONAL INJURIES	34.7	32.4	35.6	34.0	37.0	40.7
SELF-INFLICTED/SUICIDE	20.8	26.9	23.8	22.9	24.9	23.1
ASSAULT/HOMICIDE	11.0	8.1	7.9	12.1	9.1	9.0
ALL OTHER FATAL INJURIES	13.1	12.6	14.2	12.9	17.4	10.1

A transport fatal injury is any fatal injury involving a device designed primarily for, or being used at the time primarily for, conveying persons or goods from one place to another. This unintentional category includes accidents involving: aircraft, spacecraft, watercraft, motor vehicle, railway, and other road vehicles (excludes intentional or undetermined deaths).
 Other Fatal Injuries include complications in medical/surgical care legal intervention/war, late effect, and undetermined intent.

Source: Michigan Resident Death Files, Data development Section, MDCH.

Fatal Injuries Trends by Four Major Categories, 2005-2010
St. Clair County Health Department, Michigan
Both Sexes, All Ages

[View Rates per 100,000 Population for 2005-2009 and 2010](#)

FATAL INJURIES <u>View ICD Codes</u>	2005	2006	2007	2008	2009	2010
	Number of Fatal Injuries					
ALL FATAL INJURIES	90	78	96	113	133	122
UNINTENTIONAL INJURIES	48	50	63	68	93	78
TRANSPORT FATAL INJURIES	24	14	25	27	18	19
OTHER UNINTENTIONAL INJURIES	24	36	38	41	75	59
SELF-INFLICTED/SUICIDE	16	22	24	32	25	28
ASSAULT/HOMICIDE	3	2	1	5	4	7
ALL OTHER FATAL INJURIES	23	4	8	8	11	9
	Percent of Distribution					
ALL FATAL INJURIES	100.0	100.0	100.0	100.0	100.0	100.0
UNINTENTIONAL INJURIES	53.3	64.1	65.6	60.2	69.9	63.9
TRANSPORT FATAL INJURIES	26.7	17.9	26.0	23.9	13.5	15.6
OTHER UNINTENTIONAL INJURIES	26.7	46.2	39.6	36.3	56.4	48.4
SELF-INFLICTED/SUICIDE	17.8	28.2	25.0	28.3	18.8	23.0
ASSAULT/HOMICIDE	3.3	2.6	1.0	4.4	3.0	5.7
ALL OTHER FATAL INJURIES	25.6	5.1	8.3	7.1	8.3	7.4

A transport fatal injury is any fatal injury involving a device designed primarily for, or being used at the time primarily for, conveying persons or goods from one place to another. This unintentional category includes accidents involving: aircraft, spacecraft, watercraft, motor vehicle, railway, and other road vehicles (excludes intentional or undetermined deaths).

Other Fatal Injuries include complications in medical/surgical care, legal intervention/war, late effect, and undetermined intent.

Percent: all deaths that were categorized as fatal injuries for the specified year.

Source: Michigan Resident Death Files, Data Development Section, Michigan Department of Community Health.

Regional Trauma System Infrastructure

Emergency Medical Services and Medical Control Authorities

Region 2 North is served by 90 Emergency Medical Services (EMS) agencies. Many of the communities in the region are served by full time fire department based EMS, others by fire departments that are volunteer or part time on-call services that provide limited services. Other communities are served by private agencies that contract with the local municipality to provide services that range from transport to emergency response for the community. There are also hospital based EMS agencies that serve the region under contract to the community.

There are 43 agencies that provide Advance Life Support (ALS), 23 agencies that provide Limited Advanced Life Support or Basic Life Support (BLS) and 24 agencies that provide Medical First Responders (MFR) to the region. The areas served by MFR are also under contract with one of the local ALS agencies to provide additional care and transport capabilities.

Each Medical Control Authority (MCA) is designated by the Michigan Department of Community Health EMS and Trauma Division and is tasked with the coordination and supervision of an EMS System. An MCA is defined as a hospital or group of hospitals that operates a service that treats patients 24 hours a day 7 days a week. Each MCA is administered by the participating hospitals of the designated MCA region. Each MCA is responsible for medical oversight of the EMS agencies and ensuring quality care is given in the pre-hospital setting, including establishing written protocols. The Medical Director of each MCA is responsible to ensure the provision of medical control.

In Region 2 North the three Medical Control Authorities, their Executive Directors and their Physician Medical Directors are:

MCA	Executive Director	Medical Director
Oakland County Medical Control Authority (OCMCA)	Bonnie Kincaid PhD	Steve McGraw, DO – Medical Director
Macomb County Medical Control Authority (MCMCA)	Gary Canfield MPH	Antonio Bonfiglio, MD FACEP – Medical Director
St. Clair County Medical Control Authority (SCCMCA)	Ken Cummings EMT/P	Ronald Thies MD – Medical Director

The Regional Trauma Coordinator

The Regional Trauma Coordinator (RTC) responsible for this report is one of the supporting resources provided to the region by MDCH. The duties of the RTC include: acting as a liaison between the Regional Trauma Network and MDCH, coordinating and attending RTN meetings, facilitating activities related to the RTN work plan, writing reports, and addressing educational needs.

Regional Trauma Network

All MCAs in a region are required to participate in the Regional Trauma Network, to appoint an advisory committee, and to develop a regional trauma plan. The trauma plan will encompass the comprehensive and integrated arrangement of emergency medical services, hospitals, equipment, personnel, communications, medical control authorities, and stakeholder organizations needed to provide trauma care to all patients within the region. The Region 2 North Trauma Network membership is comprised of the 3 MCA Executive Directors noted in the previous chart.

Each RTN is tasked with developing bylaws, submitting a Regional Trauma Network application and developing a work plan to address 10 components relating to trauma activities outlined in the Administrative Rules. These components include: injury prevention, access to the trauma system, communications, medical oversight, pre-hospital triage criteria, trauma diversion policies, trauma bypass protocols, regional trauma treatment guidelines, regional quality improvement plans and trauma education.

The goal of each region’s trauma network and advisory committee is to implement an “all-inclusive” trauma system in their region. This system will provide for the care of all injured patients in a regional and statewide integrated system of health care for both the pre-hospital and healthcare facility environments, and will include personnel that are well trained and equipped to care for injured patients of any severity. Each healthcare facility can participate in the trauma system to the extent or level that it is willing to commit the resources necessary for the appropriate management of the trauma patients. This ensures that all trauma patients are served by a system of coordinated care, based on the degree of injury and extent of care required. The RTN Membership includes:

Representative	Medical Control
Bonnie Kincaid PhD	Oakland County Medical Control Authority
Gary Canfield MPH	Macomb County Medical Control Authority
Ken Cummings EMT/P	St. Clair County Medical Control Authority

The Regional Trauma Advisory Council

The responsibilities of the Regional Trauma Advisory Council (RTAC) include providing leadership and direction for the development of the regional trauma system and to monitor the performance of the system once it is implemented. This will eventually include the review of the regional data used to enhance system performance and drive change. The RTAC has 49 designated positions. These positions include: administrators of the MCA’s and Emergency Department Physicians (6), EMS agencies that are ALS verified (6), representatives of the regional hospitals (22), trauma surgeons from the regional verified trauma centers (7), trauma program nurse managers from the verified Trauma Centers (7) and one position for the consumer.

The following is a list of the current members of the RTAC, the position that they represent and the facility or agency that they are affiliated with. Some positions are pending.

Representative	Agency	Representative	Agency
Ken Cummings	St. Clair County MCA	Rich Siem	Secory Oil Company
Gary Canfield	Macomb County MCA	Michael Cervenak	Henry Ford Macomb
Bonnie Kincaid	Oakland County MCA	Susan Durst	McLaren Macomb
Antonio Bonfiglio MD	Macomb County MCA Medical Director	Debbie Condino	St. John Moross
Dr. Ronald Thies	St Clair County MCA Physician Director	Donna Emch	St. John Macomb
Dr. Steve McGraw	Oakland County MCA Physician	Terry Hamilton	St. John Oakland
Dr. Michael Tawny	St. Clair County MCA	Cynthia Taueg	St. John Macomb Township
Dr. Michael Feld	Henry Ford West Bloomfield	Jack Poma	Wm. Beaumont Troy
Katy McCullough	St John River District Hospital	Mark Goldstein	Wm. Beaumont Grosse Point
Dr. David Kraus	St Joseph Mercy Port Huron	David Forrester DO	McLaren Oakland
Kathy Napolitan	Port Huron Hospital	Tressa Gardner DO	McLaren Oakland
Lisa Hill	Tri-Hospital EMS	Randy Janczyk MD	WM. Beaumont Royal Oak
Jeff White	Richmond-Lenox EMS	Mandip Atwal DO	McLaren Macomb
Scott Hicks	Medstar Ambulance	Peter Lopez MD	Henry Ford Macomb
Bob Stankiewicz	Bruce-Romeo Fire Department	Joseph Buck MD	St. John Moross
John Theut	Ferndale Fire/EMS	Larry Lloyd MD	Wm. Beaumont Grosse Point
Sue Schafer	McLaren Macomb	Chris McEachin	Henry Ford Macomb
Mary Clair Rawlings	St John Moross	Kayela Voss	Wm. Beaumont Grosse Point
Courtney Berry	McLaren Oakland	Holly Bair	Wm. Beaumont Royal Oak
Michael Farrow MD	Wm. Beaumont Royal Oak	Jack Poma	Wm. Beaumont Troy
Debbie Spencer	Henry Ford West Bloomfield	Barb Smith	Botsford Hospital
Michael Rebeck DO	Botsford Hospital	Connie Fleming	Botsford Hospital
Julia Gorczyca	Genesys Medical Center	Carol Spinweber	St. Josephs Oakland
Dr. David Bauer	Crittenton Hospital	Marisel Estrada	Doctor's Hospital Of Michigan
Amy Randall	Henry Ford West Bloomfield	Janet Tucker	Huron Valley Sinai
Joann Burrington	Providence Hospital	Janice Richmond	Providence Park
Sandra Simon	St. John Oakland	Nancy Hunt	DMC Hospital

The Regional Professional Standards Review Organization

The responsibilities of the Regional Professional Standards Review Organization (RPSRO) are ...*to improve trauma care through the appointment of regional professional standards review organizations, reduce death and disability, and correct local and regional injury problems*” R 325.135 Rule 11 (1). The RPSRO has 15 positions that will be filled by representation from each of the MCA’s in the region. They include: EMS Physicians (3), trauma physicians(3), trauma nurses(3) and ALS agency representatives (6). Each of the three MCA’s has a Professional Standard Review Organization (PSRO) for the purpose of monitoring EMS activities. Members of these organizations will be asked to expand their role and to participate in the RPSRO. At the time of this writing the R2N RPSRO has not been established.

Governance

Part 209 of Michigan's Public Health Code (Act 368 of 1978) stipulates that the Michigan Department of Community Health "develop, implement, and promulgate rules for the implementation and operation of a statewide trauma care system within the emergency medical services system" [20910(1)(l)] in consultation with the statewide trauma care advisory (STAC) subcommittee of the state emergency medical services coordination committee (EMSCC). The statutorily promulgated administrative rules task the department with establishing regional trauma networks (RTN) comprised of collaborating local medical control authorities within a region, and provide for supporting resources to the region consistent with criteria found in the Michigan Trauma Systems Plan (2004).

*Rule 325.129 Powers and duties of the department Rule 5
(k) Establish regional trauma networks, consistent with current emergency preparedness regions, to provide system oversight of the trauma care provided in each region of the state. Regional trauma networks shall be comprised of collaborating local Medical Control Authorities (MCA's) in a region.*

The Regional Advisory Council: Regional Trauma Advisory Council (RTAC): (h) "Regional trauma advisory council (RTAC)" means a committee established by a regional trauma network and comprised of MCA personnel, EMS personnel, life support agency representatives, healthcare facility representatives, physicians, nurses, and consumers. The functions of the RTAC are to provide leadership and direction in matters related to trauma systems development in their region, and to monitor the performance of the trauma agencies and healthcare facilities within the region, including, but not limited to, the review of trauma deaths and preventable complications.

The Regional Trauma Network structure and membership is considered provisional until the network application is reviewed by STAC and the EMSCC and approved by the department.

Region 2 North Hospitals and Trauma Centers

Region 2 North has one Level I ACS (American College of Surgeons) verified Trauma Center, which is William Beaumont Hospital Royal Oak. This facility is located in the center of Oakland County.

There are currently five Level II ACS verified facilities in the region. In Oakland County those facilities are; Botsford Hospital in Farmington, McLaren Oakland in Pontiac, St. Joseph Mercy Oakland, also in Pontiac. In Macomb County, McLaren Macomb Medical Center in Mt. Clemens and Henry Ford Macomb in Sterling Heights are also Level Two ACS verified Trauma Centers.

At the time of this report two hospitals in the region are currently in the ACS Level II verification process; William Beaumont Hospital in Troy and Providence Hospital in Southfield, both in Oakland County. Also in Oakland County, Henry Ford West Bloomfield is in the process of Level III verification as is Port Huron Hospital in St. Clair County. All are in various stages of the process.

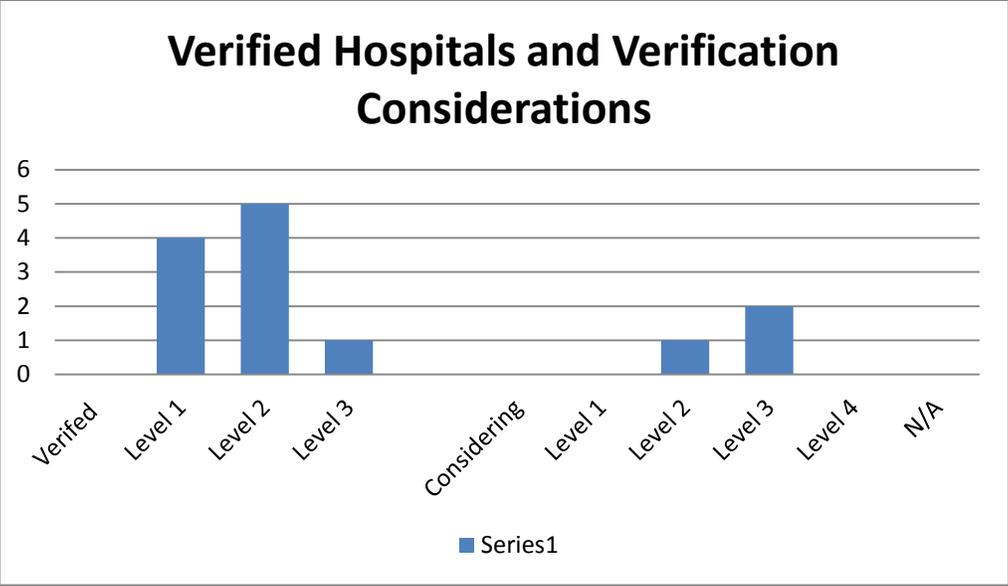
The following is an alphabetical listing of facilities. Genesys Hospital in Grand Blanc and Beaumont Grosse Pointe participate in Region 2 North activities but are geographically located in separate regions; Region 3 and Region 2 South respectively.

Hospital	County	ACS	MCA
Botsford Hospital	Oakland	Level 2 Trauma	Oakland County MCA
Crittenton Hospital Medical Center	Oakland		Oakland County MCA
DMC Surgery Hospital	Oakland		Oakland County MCA
Doctor's Hospital of Michigan	Oakland		Oakland County MCA
Henry Ford Macomb Hospital	Macomb	Level 2 Trauma	Macomb County MCA
Henry Ford West Bloomfield Hospital	Oakland		Oakland County MCA
Huron Valley-Sinai Hospital	Oakland		Oakland County MCA
McLaren Macomb Medical Center	Macomb	Level 2 Trauma	Macomb County MCA
McLaren Oakland Medical Center	Oakland	Level 2 Trauma	Oakland County MCA
Port Huron Hospital	St. Clair		St Clair County MCA
Providence Hospital & Medical Centers	Oakland		Oakland County MCA
Providence Medical Center - Providence Park	Oakland		Oakland County MCA
St. John Macomb - Oakland Hospital - Macomb Center	Macomb		Macomb County MCA
St. John Macomb - Oakland Hospital - Oakland Center	Oakland		Oakland County MCA
St. John River District Hospital	St. Clair		St Clair County MCA
St. Joseph Mercy Oakland	Oakland	Level 2 Trauma	Oakland County MCA
St. Joseph Mercy Port Huron	St. Clair		St Clair County MCA
William Beaumont Hospital	Oakland	Level 1 Trauma Center	Oakland County MCA
William Beaumont Hospital - Troy	Oakland		Oakland County MCA
Oakland Physicians Medical Center, LLC	Oakland		Oakland County MCA
Henry Ford Med Center Sterling Heights	Macomb		Macomb County MCA

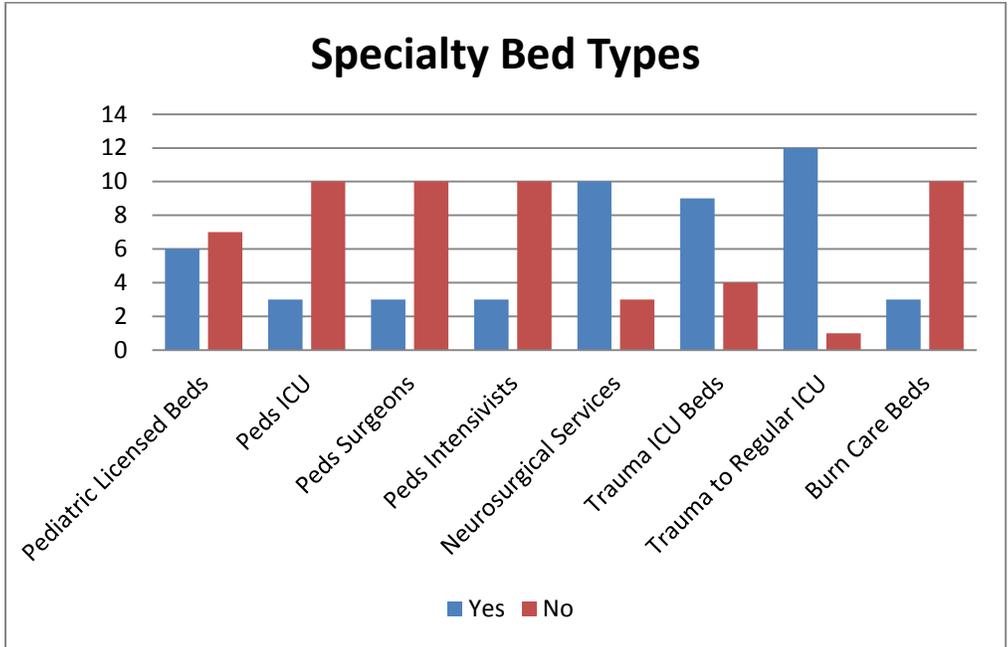
MDCH 2013 Trauma Needs Assessment

In August 2013 a survey was conducted by the MDCH Trauma Section of the hospitals in the 8 regions of the state. The purpose of the survey was to gather information to provide to the regional stakeholders information regarding the assets, resources and the demographics of the individual regions to assist in the development of the regional trauma plans.

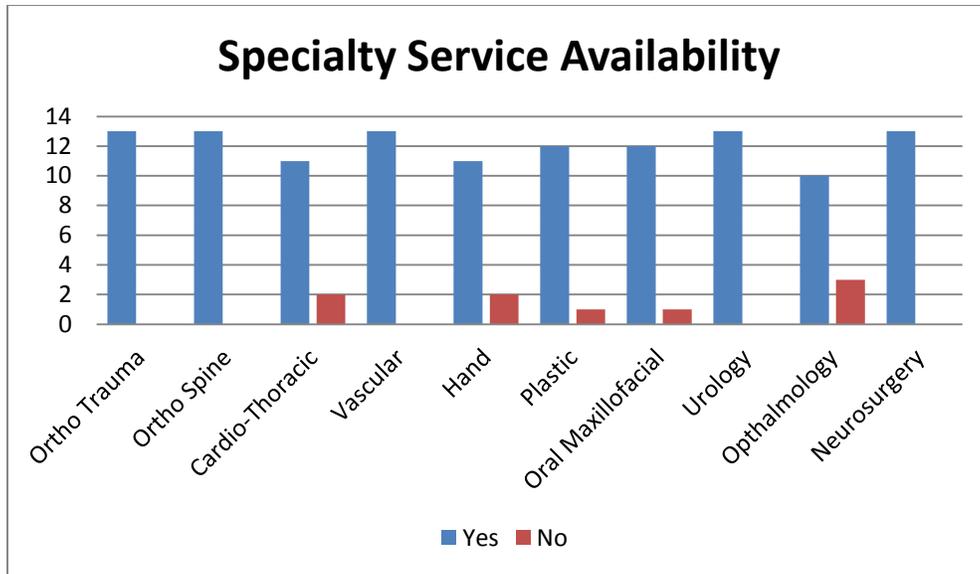
Fifteen hospitals from Region 2 North responded to the survey and those responses are displayed in the following graphs:



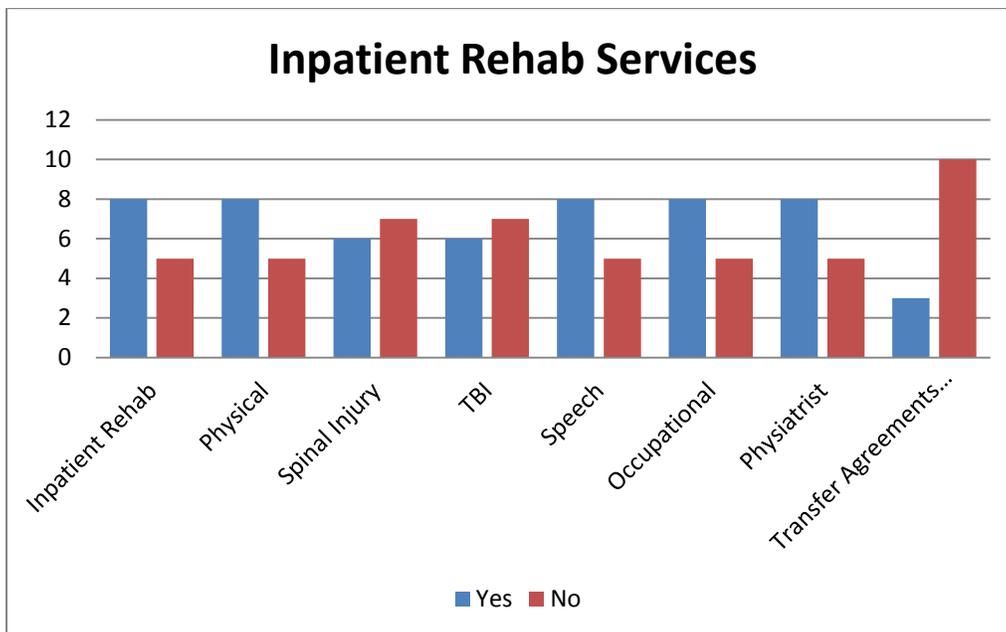
Region 2 North ACS verification level and considered Level. Source: 2013 Trauma Needs Assessment



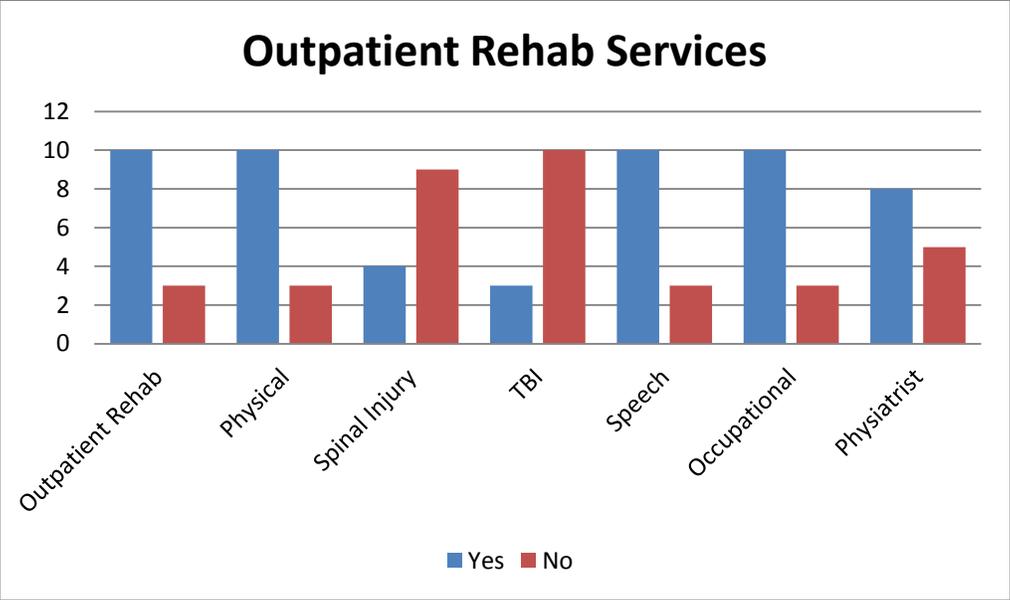
Region 2 North Specialty Bed Resources. Source: MDCH 2013 Trauma Needs Assessment



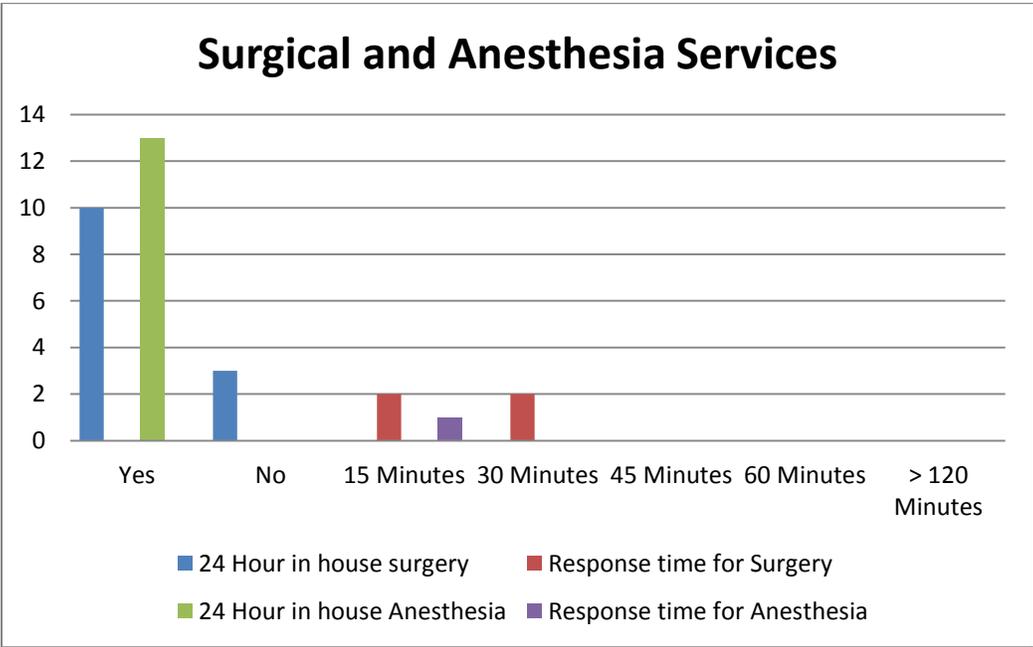
Region 2 North: Specialty Services Resources. Source: MDCH 2013 Trauma Needs Assessment



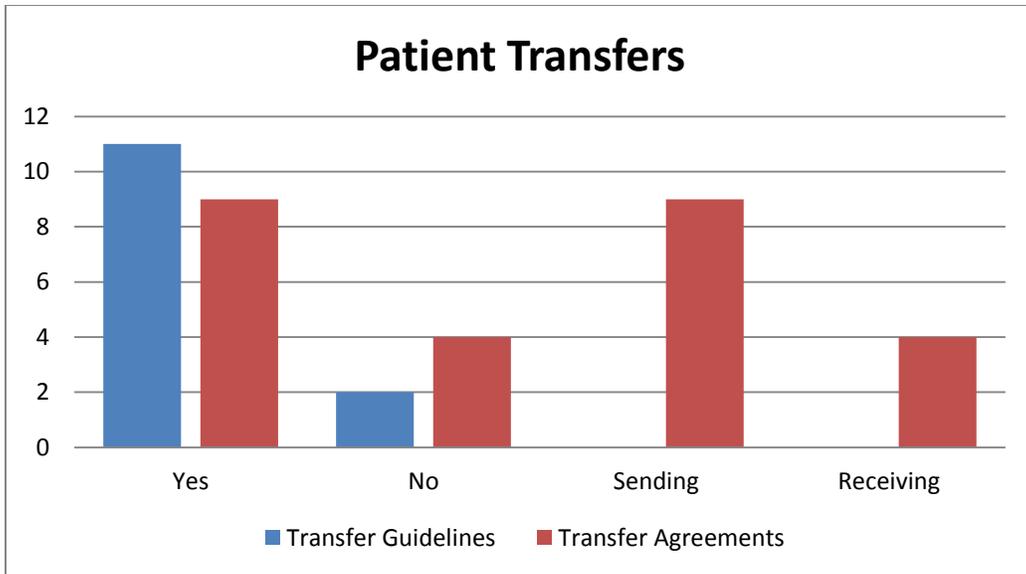
Region 2 North Inpatient Rehabilitation Resources. Source: MDCH 2013 Trauma Needs Assessment



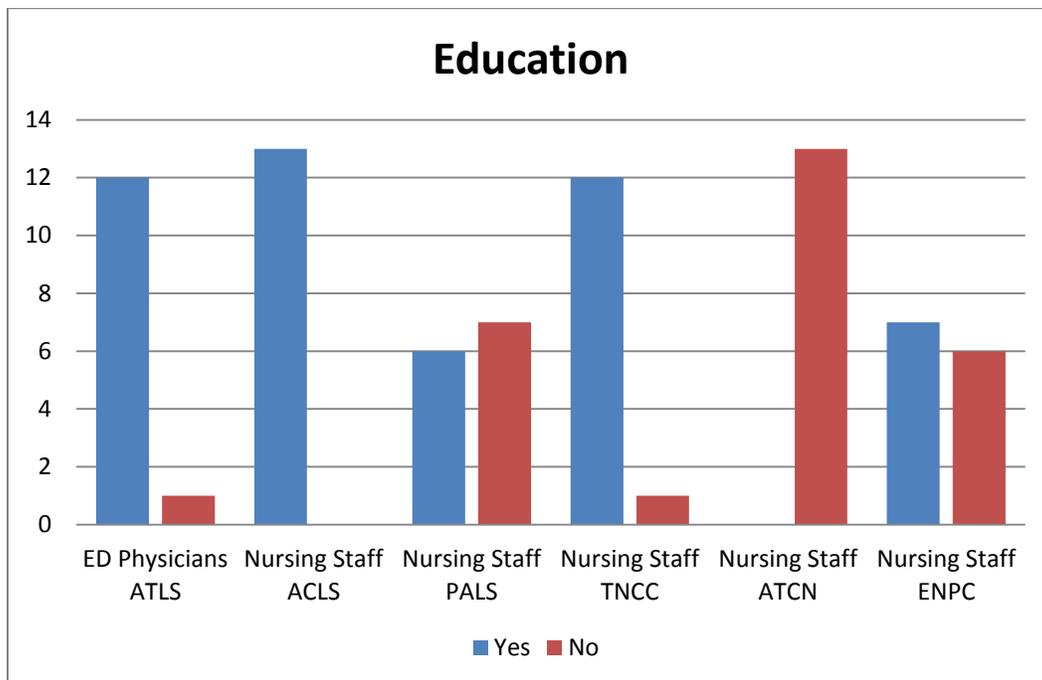
Region 2 North Outpatient Rehabilitation resources. Source: MDCH 2013 Trauma Needs Assessment



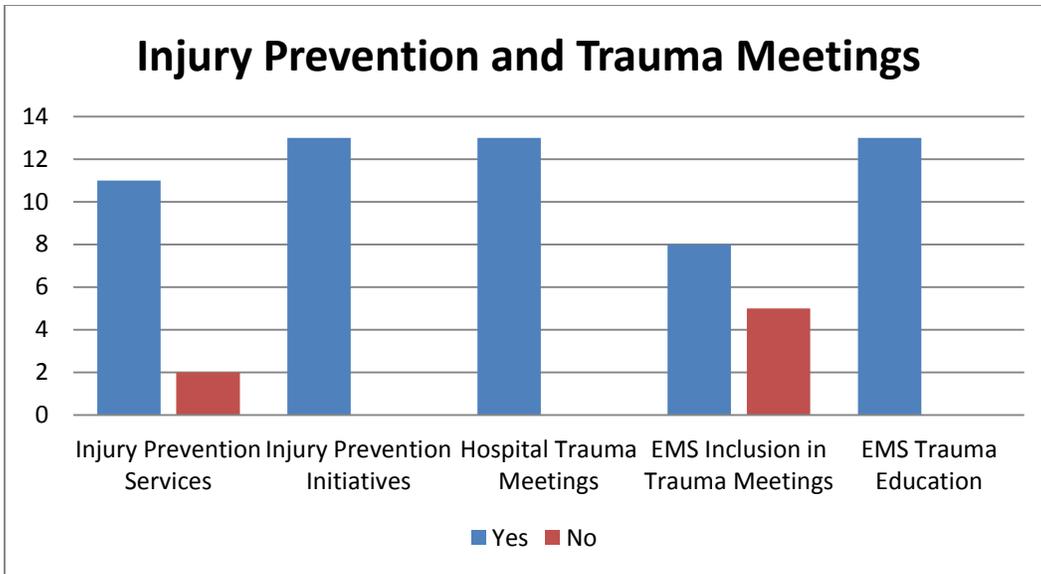
Region 2 North Surgical and Anesthesia Services. Source: MDCH 2013 Trauma Needs Assessment



Region 2 North Hospitals with Adult Patient Written Transfer Agreements and Guidelines. Source: MDCH 2013 Trauma Needs Assessment



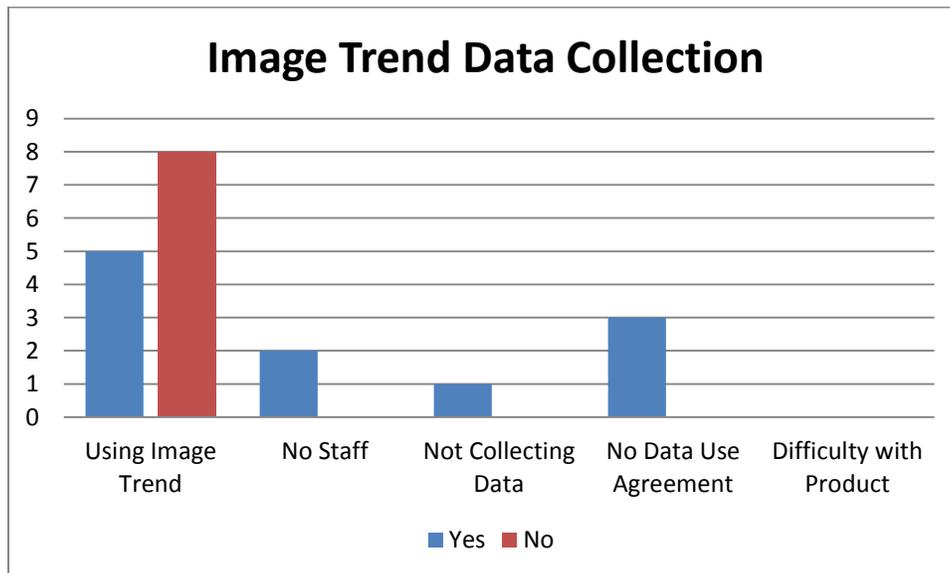
Region 2 North Hospital Emergency Department Trauma Education Requirements. Source: MDCH 2013 Trauma Needs Assessment



Region 2 North Hospital Injury Prevention and Trauma Meeting participation. Source: MDCH 2013 Trauma Needs Assessment

***Questions asked for Injury Prevention and Trauma Meetings figure:**

- > Do you provide any injury prevention services/programs in your community?
- > Do you participate in injury prevention initiatives in your community?
- > Does your hospital have meetings to address trauma related issues?
 - > Do you include EMS providers in your trauma meetings?
- > Do you include EMS providers in your trauma education opportunities?



Region 2 North Hospitals: State Trauma Database Submissions. Source: MDCH 2013 Trauma Needs Assessment

***Questions asked for Image Trend Data Collection figure:**

- > Are you submitting data quarterly to the state data base (Image Trend)?
- > If you are not submitting data, what are the reasons you are not?

Summary

To reiterate, the goal of each region's trauma network and advisory committee is to implement an "all-inclusive" trauma system in their region. This system will provide for the care of all injured patients in a regional and statewide integrated system of health care for both the pre-hospital and healthcare facility environments, and will include personnel that are well trained and equipped to care for injured patients of any severity. Each healthcare facility can participate in the trauma system to the extent or level that it is willing to commit the resources necessary for the appropriate management of trauma patients. This ensures that all trauma patients are served by a system of coordinated care, based on the degree of injury and extent of care required.

This trauma system overview is intended to be a living document providing partners, stakeholders and those involved in the regional trauma system with an understanding of the assets and resources available in Region 2 North. It is expected that this report will continue to expand and evolve as the system matures.