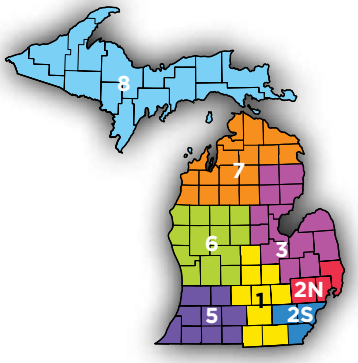
2001 - 2011

Ten years of healthcare preparedness in Michigan



September 2011

The terrorist attacks of September 11, 2001 and subsequent anthrax attacks forever changed the face of public health emergency preparedness and response. The idea of terrorism and bioterrorism on American soil was once perceived only as real as a Hollywood movie plot; we were confident it could not happen here. On this 10th Anniversary of 9-11, it is important to review how far we have come and what important challenges remain in preparedness and response for healthcare, public health, first responders, and every citizen in Michigan.

When the public health infrastructure was compromised in 2001, the capacity to rapidly respond in a coordinated fashion posed significant challenges in Michigan and across the country. Surveillance, laboratory and alerting systems were antiquated, and healthcare and public health were not typically considered an integral part of emergency preparedness. Healthcare was recognized for caring for the community, but planning for a catastrophic mass casualty event in multiple geographic areas had not been solidified.

Assessments conducted with Michigan hospitals and a majority of Emergency Medical Services agencies provided direction for the Department of Community Health in targeting the Department of Health and Human Services emergency preparedness funding. The surveys revealed that most Michigan hospitals had written disaster plans, but many had not expanded those plans to larger events or incorporated the ability to respond outside their building structures or to use volunteers. Gaps existed in the availability of established pharmaceutical caches, mutual aid agreements, decontamination capacity, personal protective equipment, and redundant communications.

2001
9-11 Attacks

2002
Michigan receives Federal Emergency Preparedness funding from DHHS

2002
Office of Public Health Preparedness and 8 Regional Healthcare Coalitions established

2002
Michigan Strategic National Stockpile program established

2003
Community Health Emergency Coordination Center established

2003
Michigan adopts the Modular Emergency Medical System (MEMS) to address medical surge

2003
Michigan Health Alert Network created

2003
MI-TRAIN searchable database developed for emergency and healthcare preparedness courses

2004
Communications systems enhanced

2004
Michigan Emergency Drug Delivery Resource Utilization Network (MEDDRUN) established

2004
Formalized partnerships with FQHC, MHC and RHC

2005
Michigan Emergency Preparedness Pharmaceutical Plan established

2005
The CDC's CHEMPACK program is deployed in Michigan

Surveys have continued to identify gaps as well as demonstrate the tremendous strides made within healthcare and public health in preparing for and responding to a significant incident that would impact the health of our citizens. The 8 Regional Healthcare Coalitions have implemented statewide initiatives to increase the capacity and routinely exercise decontamination capabilities, interoperable communications, and the establishment of Alternate Care Centers in addition to the development of volunteer resources and the ability to respond to both mass casualty and mass fatality incidents. These efforts must continue to mature and adapt to our changing environment.

Perhaps the most important success is the significant forward movement of integrated planning between traditional and "non-traditional" public safety partners and the health community as evidenced by the successful coordination and progress made to protect the health of Michigan citizens. Take a moment to review all that has been accomplished and thank you for the past, current, and future participation. No entity can or should do this alone.

Jacqueline S. Scott, D.V.M., Ph.D., Director
Office of Public Health Preparedness

2006
MI Volunteer Registry launched

2006
Disaster Portable Morgue Unit and Michigan Mortuary Response Team created

2006
Formation of Great Lakes Healthcare Partnership, FEMA V Region

2006
Initiates web-based hospital bed and patient tracking sytem

2007
Michigan's Transportable Emergency Surge Assistance (MI-TESA) medical unit project initiated

2008
Medical Reserve Corps program coordinated with the OPHP

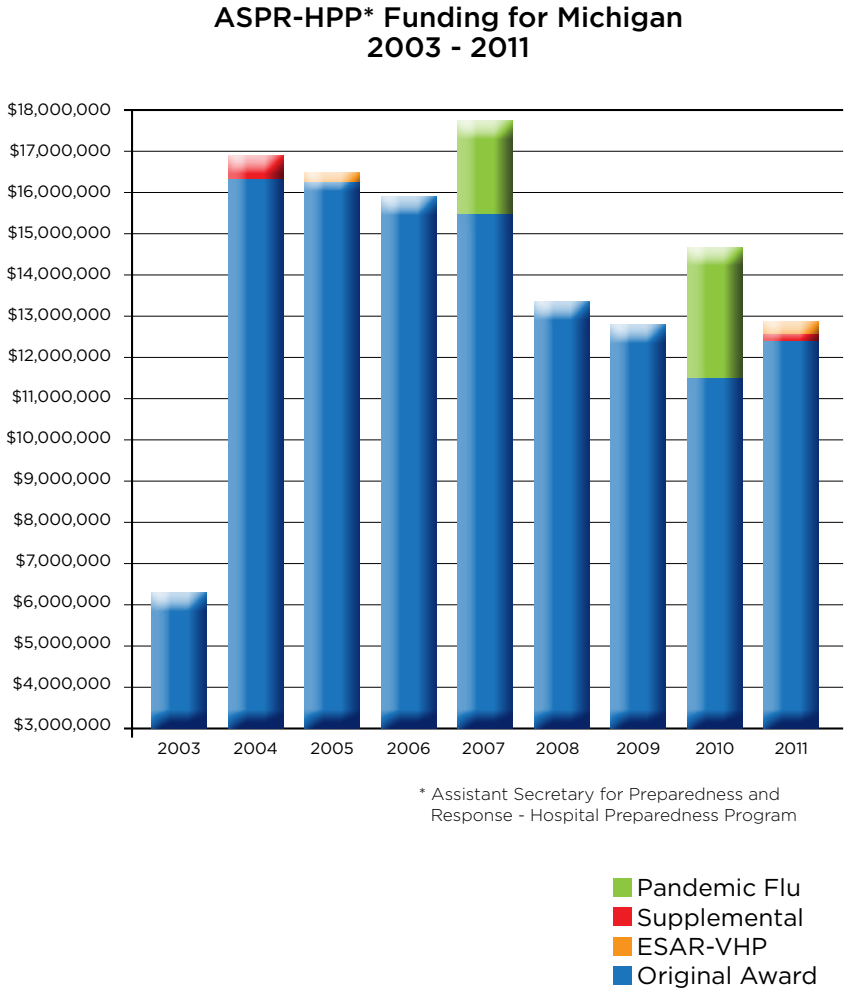
2008
Long-Term Care Emergency Preparedness Initiative launched

2009
Regional Mobile Medical Field Teams formed

2010
Sharepoint web portal created for the Michigan Strategic National Stockpile program

2011
Michigan deploys MI-TESA 140-bed mobile medical unit in support of the 2011 National New Madrid Exercise.

2011
Michigan's model for Health Emergency Preparedness Curriculum is published.



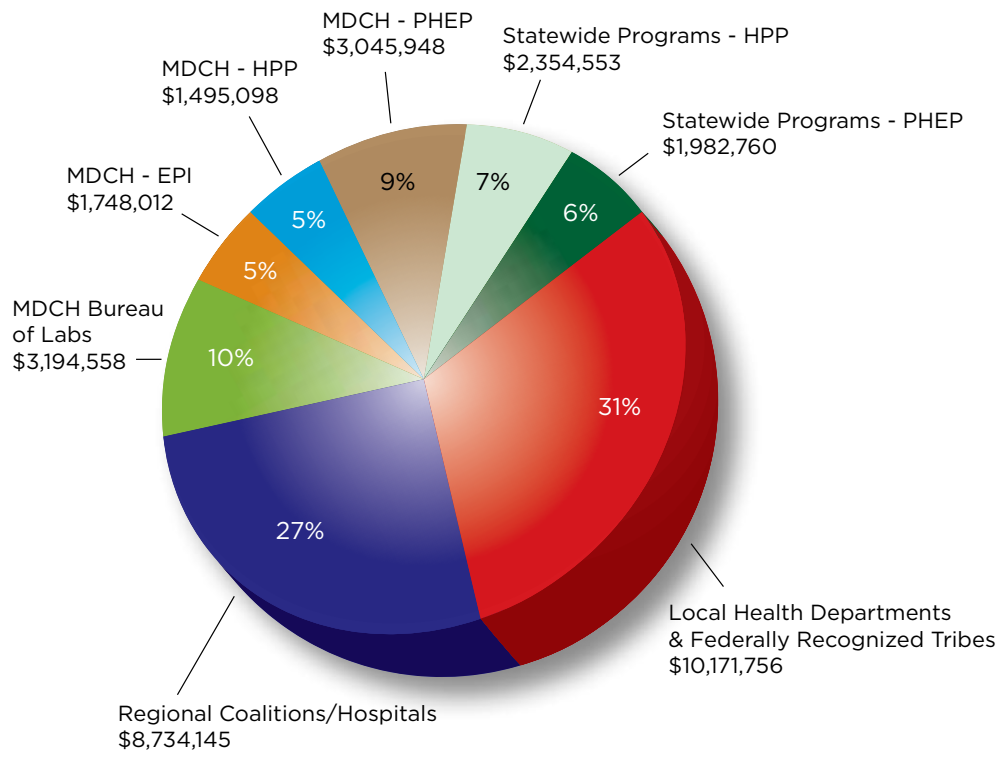
Public health emergency preparedness and response have been transformed since the events of September 11, 2001 and the anthrax incidents that followed. In 2002, Congress appropriated funds through the Department of Health and Human Services (DHHS) to help strengthen local and state public health and hospital preparedness. The Michigan Department of Community Health created the Office of Public Health Preparedness (OPHP) to coordinate the development and implementation of health focused preparedness and response activities. This office, working with diverse private and governmental organizations, ensures federal funding requirements to build increased capacity within the healthcare and public health sector are met.

The Hospital Preparedness Program (HPP) met the federal requirements to establish 8 Regional Healthcare Coalitions by aligning with the 8 Michigan State Police Emergency Management Districts in 2002. This structure laid the groundwork for what we have today. Michigan used an established semi-governmental organization, a Medical Control Authority (MCA) to serve in the regional coordination role. An MCA is an organization designated by state statute to supervise and coordinate the emergency medical

services (EMS) system through state-approved protocols for a particular geographic region. MCAs are made up of hospitals and EMS agencies that are key partners of the HPP. All hospitals and EMS agencies have equal input into the mechanisms to improve preparedness and response and use the federal preparedness funds. This is accomplished through designated representatives from each hospital and MCA maintaining votes on the regional initiatives. Interregional coalition planning in conjunction with the OPHP guides key overall statewide initiatives. Each fiduciary MCA continues to serve a critical role with healthcare leadership, staff, projects, initiatives, and deliverables to maximize the use of preparedness funds.

The subsequent pages of this publication only briefly highlight the tremendous strides made in the last decade within the healthcare preparedness program. Accomplishments are directly related to the hard work and diligence of continued participation by all hospitals, MCAs and many other diverse health and emergency management agencies. As federal funding declines, mechanisms to support continued regional healthcare coalition planning must continue as the benefits accomplished have improved outcomes for routine and significant events addressed during the last 10 years.

2011 OPHP Funding Distribution



MDCH - Michigan Department of Community Health
HPP – Hospital Preparedness Program
PHEP – Public Health Emergency Preparedness Program
State EPI – Bureau of Epidemiology

State Emergency Operations Center (SEOC)
The SEOC is the primary point of command for coordinating a state emergency response to a disaster and/or terrorism incident and the recovery activities that follow. The SEOC works in direct collaboration with the Community Health Emergency Coordination Center (CHECC) and local Emergency Operations Centers. Any local or out-of-state requests for service are authorized and deployed through the SEOC.

Community Health Emergency Coordination Center (CHECC)
The primary function of the CHECC is to support the SEOC by providing real-time public health information, subject matter expertise, and pharmaceutical distribution. The Office of Public Health Preparedness (OPHP) coordinates the maintenance and staffing of the CHECC, primarily with MDCH personnel. When activated, the CHECC conforms to the National Incident Management System.

Additional responsibilities of the CHECC include:

- coordinating the public health and healthcare response to an incident with regional and local partners
- providing updated information from all sources (e.g., local health departments, healthcare agencies, regional partners, MDCH bureaus and divisions) to the MDCH executive group
- providing technical assistance and expertise to local public health agencies, medical professionals, and other healthcare partners during a public health emergency
- coordinating federal support and assistance with the Centers for Disease Control and Prevention's (CDC) Emergency Operations Center and other federal agencies
- disseminating healthcare information to emergency preparedness partners

MI-TRAIN
Providing ongoing education is another key component to enhance Michigan's healthcare and emergency preparedness. The OPHP developed a learning management system, called MI-TRAIN, that includes a searchable database of courses relevant to public health, healthcare, and emergency preparedness. Through MI-TRAIN, users have access to more than 10,000 courses from more than 2,500 nationally recognized training providers.

EMSYSTEM/EMResource
This Internet-based system, which has been adopted by all of Michigan's healthcare agencies, collects and shares the real-time status of hospital bed capacity within the mandated two-hour time frame following a request.

This important tool is used by each region's Medical Coordination Center. Hospitals' ventilator availability is also collected using EMResource and the system has been successfully used in real Michigan incidents.

Michigan Mortuary Response Team (MI-MORT)
The MI-MORT team was established to provide Michigan with a mass fatality resource that could be readily deployed to any location in the state in response to an incident in which the number of fatalities exceeds local or regional resources. The MI-MORT team consists of various professionals who would support the local medical examiner and provide technical assistance and personnel to recover, process, and identify deceased victims in a dignified manner. This team is composed of forensic professionals, funeral directors, search and recovery personnel.

Disaster Portable Morgue Unit (DPMU)
The DPMU contains equipment and supplies necessary to initiate a fully functional morgue. All materials are inventoried into deployed incident need kits by section of use and are housed in trailers for mobilization. The DPMU is designed to be erected as needed inside of a functional, not currently occupied facility and has its own DPMU team for a assembly/disassembly of the infrastructure and inventory management of equipment and supplies. This resource is a joint effort of the OPHP, the Michigan Funeral Directors Association, the Michigan Dental Association, and the Disaster Assistance Recovery Team.

Michigan Emergency Preparedness Pharmaceutical Plan (MEPPP)
As part of its mission to ensure health care preparedness and response for public health emergencies, the OPHP developed a statewide plan, the Michigan Emergency Preparedness Pharmaceutical Plan, which coordinates with federal resources (the Strategic National Stockpile) and regional partners for storing, securing, and distributing pharmaceuticals. The plan contains information on current local, regional, state, and federal caches of available pharmaceuticals. Updated quarterly, the MEPPP provides critical information on the type of cache, target population, content, deployment, and asset availability to ensure prompt identification and distribution of resources during an emergency.

Michigan Strategic National Stockpile (MISNS)
The Strategic National Stockpile (SNS) is a federal repository of pharmaceuticals and medical supplies that can be delivered to the site of a biological or other kind of attack. These federally purchased supplies are available by request through the governor during a public health emergency when local supplies are deemed insufficient for protecting the health of American citizens.

Public-private partnerships are a key component of Michigan's plan. The state has partnered with the Michigan Pharmacists Association, the Michigan Wing of the Civil Air Patrol, the Michigan Volunteer Defense Force, the Michigan Public Health Institute, and commercial warehousing partners in order to receive, store, ship, track, and dispense pharmaceuticals and medical supplies efficiently.

Other state and local healthcare partners include community pharmacies, federally recognized tribes, media, and agencies that serve special populations in an effort to ensure that these lifesaving assets can reach every Michigan citizen during an emergency. In addition to the MISNS plan, all 45 local health departments and approximately 180 hospitals have developed plans that describe local capabilities, protocols, and partnerships that will enable them to dispense these assets quickly and efficiently.

Michigan Emergency Drug Delivery Resource Utilization Network (MEDDRUN)

Once Michigan has determined that its local supplies are insufficient and requested assistance from the SNS, there will be a delay before the support arrives. MEDDRUN was created to fill this interim time frame. This program, coordinated by the OPHP and developed by the medical directors of each healthcare coalition, provides standardized caches of medications and supplies to treat approximately 100 casualties.

MEDDRUN rapidly delivers these medications and supplies to hospitals and directly to the disaster site. This is critical as the need to provide nerve agent antidotes is extremely time sensitive. These resources can be deployed to 90 percent of Michigan locations in less than one hour following a request.

These caches are strategically located between Michigan's rotary air sites and select ground Emergency Medical Services (EMS) agencies to minimize deployment time. MEDDRUN is an immediate resource for the state to activate in tandem, if needed, with the MISNS.

CHEMPACK

CHEMPACK is a CDC-supplied, state-managed, supplemental source of pre-positioned nerve agent/organophosphate antidotes and associated pharmaceuticals that will be readily available for use when local supplies become depleted. This large quantity resource is intended to have assets rapidly available to state and/or local emergency responders. This would be a second resource to the MEDDRUN assets (noted above), which are mobilized more quickly.

Michigan Health Alert Network (MIHAN)
The MIHAN is a web-based system that, in the case of a disaster, allows for uninterrupted communications and immediate alerts and notifications with emergency preparedness partners across all disciplines. The MIHAN has more than 4,000 users and is able to send alerts through landline phones, cell phones, text pagers, 800 MHz radio systems, and email. This extensive network is the primary notification tool used during health-related emergencies or natural disasters.

Emergency preparedness partners are also connected by an 800 MHz radio system and satellite phones to ensure redundancy in communications. These interoperable communication systems are tested regularly throughout the local, regional and state levels.

Public information and risk communication
The OPHP has two public information goals: provide public education to build a culture of safety and resilience, and get accurate information to people quickly during an emergency. The OPHP has developed a Crisis and Emergency Risk Communication Plan, built strong partnerships with key community agencies, and established clear channels for disseminating public information. It maintains a Risk Communication Team, robust communication technology, contact databases, outreach tools, and a library of resources. The OPHP's Public Information Coalition has built partnerships with trusted community leaders who assist with disseminating information in culturally and linguistically sensitive ways by using their newsletters, websites, email lists, face-to-face community settings, and networks.

Great Lakes Healthcare Partnership (GLHP)
The GLHP is composed of Healthcare Preparedness Programs within FEMA Region V (City of Chicago, Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin). The GLHP's projects focus on regional (interstate) coordination for significant medical and public health incidents. Current plans include a regional communications/alert plan, a burn surge plan, a regional medical resource inventory and an overarching interstate coordination plan. The GLHP's projects are vital components of interstate coordination.

During an incident, improved communication, planning, and regional asset inventories can speed the mitigation of an incident.

MI Volunteer Registry
Healthcare volunteers are a critical component in any coordinated response to a disaster. To ensure there are teams of ready-and-willing volunteers, the OPHP created the MI Volunteer Registry, a website where healthcare volunteers can register to be part of a disaster response. The growing system includes physicians, nurses, pharmacists, medical examiners, paramedics, and others who live and work in communities throughout the state.

When disaster strikes, the healthcare teams must move quickly. Registering in advance of an emergency allows the OPHP to verify volunteers' medical credentials and to rapidly mobilize volunteers when requested.

The MI Volunteer Registry not only includes healthcare personnel, but general support volunteers who do not require licensing. Several groups are now part of the MI Volunteer database, including the Medical Reserve Corps, State Animal Response Teams, security personnel, electricians, etc. (www.MIVolunteerRegistry.org)

The Medical Reserve Corps (MRC)
In communities across Michigan, the MRC is recruiting and organizing volunteers who want to donate their time and expertise to supplement existing emergency and public health resources. The MRC includes members from the healthcare professions, but also many others, including interpreters, chaplains, office workers, legal advisors, and others who would play essential support roles in an emergency situation. These volunteers are trained by the local partners and credentialed through the MI Volunteer Registry so they can be easily identified and deployed to an emergency situation when needed. These individuals may also volunteer in other, non-emergency capacities within their communities on an ongoing basis.

Preparing for a medical surge in the midst of a disaster

The need to support the healthcare system for a potential medical surge incident has been at the core of all Hospital Preparedness Program (HPP) activities at the organizational, regional, and state levels. The OPHP's ongoing planning for medical surge incidents aligns with the national planning efforts and guidelines developed by the Department of Health and Human Services (DHHS).

As part of its preparedness planning, the OPHP conducted an assessment among Michigan's hospitals and EMS agencies in 2003 that provided data identifying gaps in preparedness and allowed regions and the state to prioritize initiatives to address the most critical medical surge needs in Michigan. Follow-up surveys were conducted in 2005 and 2009. The results illustrate the substantial progress made in many key areas. (See 2003 - 2009 progress in chart at right)

Hospital Emergency Preparedness Resource Inventory

	2003	2009
Hospital policies and procedures		
Acts of bioterrorism	71.3%	88.2%
Public health emergencies (pandemics)	40.3%	87.6%
Decontamination of staff/patients	67.4%	94.7%
Security of supplies/equipment	51.9%	81.7%
Alternate Care Sites outside facility	64.6%	83.8%
Strategies for distributing pharmaceutical supplies to:		
Facility staff/immediate family	12.2%	80.0%
Emergency responders	27.6%	63.5%
Surge of patients	29.3%	70.2%
Equipment		
Adult ventilators	1,865	2,053
Pediatric ventilators	437	551
Portable high-efficiency air filtration units	182	432
Personal protective equipment available	68.5%	91.7%
Air intake shutdown capability		
Entire facility	27.1%	81.9%
Certain rooms/areas	22.1%	80.5%
Decontamination capability		
Portable facilities	82	186
Dedicated rooms in a facility	59	104
Average number of patients per hour	10	26
Communications		
Use of 800 MHz radios	30.9%	89.7%
Isolation capacity	62.4%	88.2%

The OPHP follows the DHHS Medical Surge Capacity and Capability (MSCC) system, which uses a tiered system that builds sequentially and includes all partners as part of a medical surge response.

Each tier has a trigger point that activates resources to assist in patient care:

- **Tier 1** represents the primary site of hands-on medical evaluation and treatment (typically hospitals). Each hospital has an Emergency Operations Plan that includes provisions to identify staff, space, and supplies to surge above 20 percent of the average daily census. However as an incident escalates, resources get depleted and the risk of patient morbidity and mortality increases, response and assistance from local, regional and state agencies may be needed.

- **Tier 2** is activated when the local resources are becoming depleted and a request is made for regional resources. All 8 Regional Healthcare Coalitions have established Medical Coordination Centers (MCC) that stand ready to support local Emergency Management to provide a flexible, coordinated, uninterrupted healthcare response to an incident. The regional MCC is available 24/7/365 and helps facilitate standardization and interoperability of health care operations to ensure optimum and efficient use of resources. As part of its response, the region may also identify a need to activate the Modular Emergency Medical System (MEMS). The MEMS framework augments local response efforts by organizing outside medical resources in two types of expandable patient care modules: Neighborhood Emergency Help Centers (NEHC) and Alternate Care Centers (ACC). These pre-identified sites, equipment, and supplies would be implemented in conjunction with local and state public health and emergency management support. Staffing for such sites will continue to be a challenge as hospitals and regions plan to use available resources and volunteers through the MI Volunteer Registry.

- At **Tier 3,** local Emergency Operations Centers (EOC) coordinate activities among the multiple entities involved in response for that jurisdiction. Local EOCs are responsible for defining incident objectives and an overall response strategy for the community. For public health and medical incidents, local EOCs are important partners working with the regional MCCs.

- As the incident expands, **Tier 4** activates the SEOC and the CHECC. During a medical or public health emergency, the MDCH becomes the lead agency. The CHECC serves as the multi-agency coordination entity for MDCH, working in direct collaboration with the SEOC.

- **Tiers 5 and 6** represent the coordination done by the SEOC with neighboring states and the federal government for additional medical assets and assistance. Federal medical assets would be organized for response and coordinated through the Department of Health and Human Services.

Michigan's Transportable Emergency Surge Assistance (MI-TESA) Medical Unit: Expanding medical surge capacity

As noted in the preceding medical surge section, Michigan continues to build an important mobile medical field unit, the MI-TESA. The MI-TESA Medical Unit consists of two mobile field hospitals containing supplies and resources to care for up to 140 patients. Together or separately they expand medical surge capacity and reestablish emergency triage and treatment in a disaster area where the healthcare infrastructure has been disrupted. MI-TESA can also be activated to assist another state through the Emergency Management Assistance Compact.

The MI-TESA's 100-bed unit is stored and maintained by the Region 2South Healthcare Coalition, and the 40-bed mobile unit resides within Region 5. These two units are fully interoperable and modular and are able to meet the needs of incidents of varying sizes and locations. Regular training and exercises have assisted in modifications of the deployment and operational plans. Fully deployed, the hospital has 21 interconnected tents and is equipped with the necessary medical equipment, pharmacy, X-ray, and ventilator capacity to treat patients in a major disaster. In addition to general medical/surgical patients, the hospital can be broken down into separate wards for triage, isolation, ob-gyn, pediatric, and psychiatric.

In the event a disaster overwhelms medical resources, MI-TESA could be deployed and set up virtually anywhere. Its insulated all-weather tents can be partially or fully deployed within 10 hours with a team of about 100 people including physicians, nurses, regional coalition mobile medical, ambulance, and other established medical response teams. However, more work is ahead as additional personnel to setup and staff teams are needed.

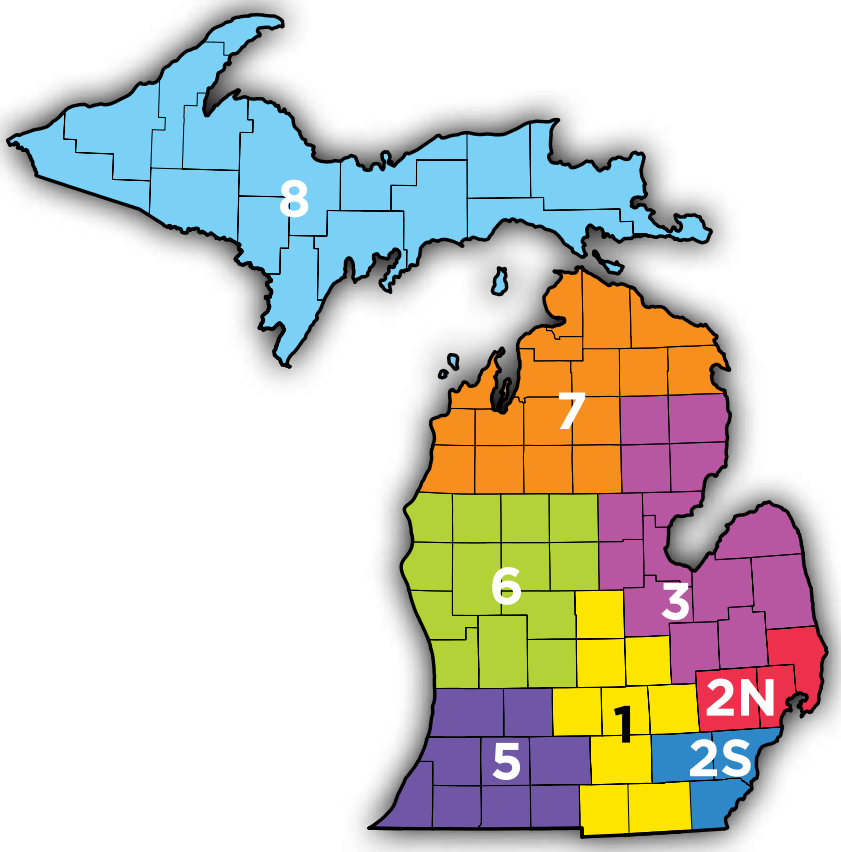
Activating MI-TESA – Michigan's role in the 2011 National New Madrid Exercise

The National New Madrid Exercise was a disaster drill that included Midwestern states that would likely be affected by an earthquake occurring on the New Madrid fault line. The exercise provided our state with the opportunity to deploy R2S's 100-bed MI-TESA and Region's 5's 40-bed TESA in a combined, simulated relief effort for the first time.

The volunteers included doctors, nurses, and other healthcare professionals who ran through training scenarios to test the equipment. The MI-TESA team spent 10 hours to set up the 14,000-square-foot unit. While exercise preparations focused on the scope, logistics, and identification of equipment and supplies, the exercise also helped define the personnel who would be needed to activate and operate the mobile medical unit.

Established technical support teams and Mobile Medical Field Teams (MMFT) constructed and operated the 140-bed MI-TESA unit. The New Madrid Exercise served as a training platform for additional healthcare partners statewide to form their own MMFTs.

Along with testing activation, transportation, and integration procedures, this exercise also provided the opportunity to identify gaps in preparedness planning and continue to enhance the mobile assets before they are called to deploy for an actual incident.



Michigan's 8 Regional Healthcare Coalitions

The success of Michigan's healthcare preparedness statewide can be linked directly to the OPHP's formation of 8 Regional Healthcare Coalitions in 2002.

Each coalition works to implement the activities of the national HPP while developing and facilitating a coordinated healthcare response to disasters in their regions in an all-hazards fashion. State and federal funding allows each region to augment its existing resources and hospital preparedness to meet the health and medical needs of the community during an emergency. Statewide readiness has been deeply enhanced as each region has built strong interagency collaborations and developed comprehensive plans to respond to public health emergencies or mass disasters due to terrorism or natural causes.

Since 2002, the regions have built an unprecedented level of collaboration among healthcare communities, emergency management and public health departments, emergency medical service organizations, fire and police departments, institutes of higher learning, state and local governments, nonprofit organizations and businesses. The regions with Canadian or other state borders have also formed strategic partnerships with hospitals, EMS agencies and government officials. Each region has an advisory committee and a planning board responsible for implementing the activities delineated in the federal and state cooperative agreements.

The regional healthcare coalitions have matured in scope and impact as the resources and the mission from the OPHP, ASPR (originally HRSA) and the CDC have expanded to encompass "all hazards" preparedness and response.

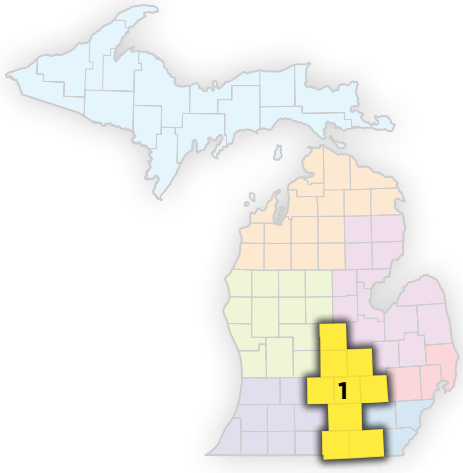
In addition to developing comprehensive disaster preparedness plans, the regions have used the funds to: (partial list)

- Equip and implement a regional Medical Coordination Center
- Purchase hospital and EMS-based personal protection equipment
- Develop hospital-based pharmaceutical caches
- Purchase fixed and portable 800 MHz communications equipment and satellite phones
- Purchase hospital-based decontamination systems
- Coordinate tabletop and functional "real-time" exercises that prepare responders and hospital personnel for all types of emergencies and disasters
- Provide local and regional disaster preparedness education and participate in other state and federal educational opportunities

- Participate in the CHEMPACK and MEDDRUN programs
- Plan for and purchase Mass Casuality and Fatality Response Trailers
- Test and train users on EMResource web-based application
- Identify locations and be ready to activate Neighborhood Emergency Help Centers and Alternate Care Centers
- Develop a centralized SharePoint site with specific education, training, calendar, inventory, document sharing, and other resources in a secure and common environment
- Develop database and inventory control systems
- Assist in identifying/recruiting healthcare volunteers for the MI Volunteer Registry site

The funding, planning, and training efforts in all eight regions have resulted in substantially more statewide disaster preparedness than existed before 2001. Several healthcare coalitions have also developed specialties and/or have been tested by real-life traumas and events, which have further enhanced the readiness of their regions. These specialties are highlighted in the following pages.

Region 1



9 Counties
1,051,538 Population
7 MCAs
14 Hospitals
8 Local Health Depts.
104 EMS agencies

Region 1 is home to Michigan's capital, the Michigan International Speedway, and several colleges and universities including Michigan State University. The Coalition partners with a range of agencies including public health, emergency management, EMS, long-term care facilities, state government, local universities, the American Red Cross, and the Citizens Corps.

Region 1 Healthcare Coalition Highlights

- Because of its proximity to Michigan's state government, Region 1 has strong partnerships with state and local public health and emergency management. The Healthcare Coalition hosted the state's first smallpox vaccination clinic in 2002 and co-hosts an annual statewide Emergency Preparedness Symposium with District 1 Emergency Management.

- It was the first region to report a case of the H1N1 influenza virus in one of its hospitals and as the H1N1 virus spread, Region 1 activated its MCC to successfully coordinate the SNS pre-deployment of supplies after ongoing teleconferencing across the region identified community needs.

- The Coalition is heavily involved in drills and exercises and supported more than 20 local and regional exercises in 2010. Past exercises included a pandemic flu drill (Dire Play2), which included more than 40 participating sites during a two-week period.

- The Coalition follows a "Movable Assets & Resources" model that gives each partner access to regional caches of medical materials, allowing maximum use of funding resources across the region. These assets were deployed to partners during the 2009 H1N1 pandemic and the 2011 winter storms.

- The coalition will continue to develop resources and training materials to assist with the continuing education needs of its regional partners.

Region 2North

3 Counties
2,204,739 Population
3 MCAs
24 Hospitals
3 Local Health Depts.
90 EMS agencies

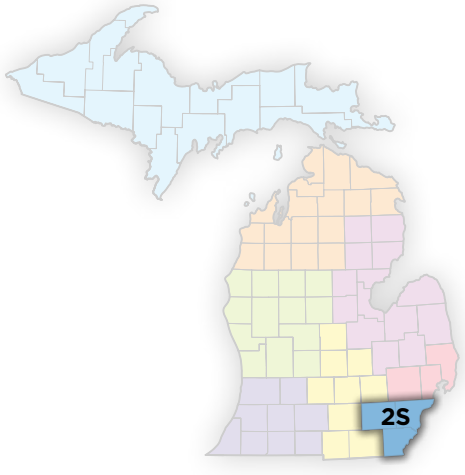
Region 2North (R2N) is the second most populous region in Michigan. Its three counties – Oakland, Macomb, and St. Clair – are home to 2.2 million people, several universities and a large business and technology sector. R2N also shares an international border crossing with Canada.

Its partner organizations include hospitals, MCAs, health departments, emergency management agencies, long-term care agencies, Visiting Nurse Association, the American Red Cross and nine casualty transportation companies.

Region 2North Healthcare Coalition Highlights

- The Coalition is active in offering education and training opportunities to its partners and hosts an annual preparedness conference that is routinely attended by nearly 300 people.
- All hospitals are fully equipped and trained to provide decontamination in a radiological or chemical emergency.
- All hospitals, casualty transportation agencies and members of the R2N are equipped with redundant interoperable communications, which is tested monthly, and other essential response equipment.
- R2N established a Medical Reserve Corps (MRC) in 2009 with the intent to train a Mobile Medical Field Team that can be mobilized on request. It now has 50 members.
- R2N has put significant investment in training and exercising disaster preparedness among its partners. In 2010, the Coalition conducted a Regional Mass Fatality tabletop exercise and identified gaps in hospital mass fatality plans. With input from hospitals and the Oakland County Medical Examiner's office, the region created Mass Fatality Hospital Surge Kits that will be crucial for use in any extended Mass Fatality surge situation.

Region 2South



3 Counties
2,405,392 Population
4 MCAs
35 Hospitals
4 Local Health Depts.
92 EMS agencies

Region 2South (R2S) is the most populous region in the state with more than 2.4 million people. It includes the city of Detroit, two international border crossings and a border with Ohio. The region has several universities including the University of Michigan and Wayne State University. The R2S Healthcare Coalition has 267 regional partners and has also formed strategic partnerships with hospitals, EMS agencies, and government officials in Canada and Ohio.

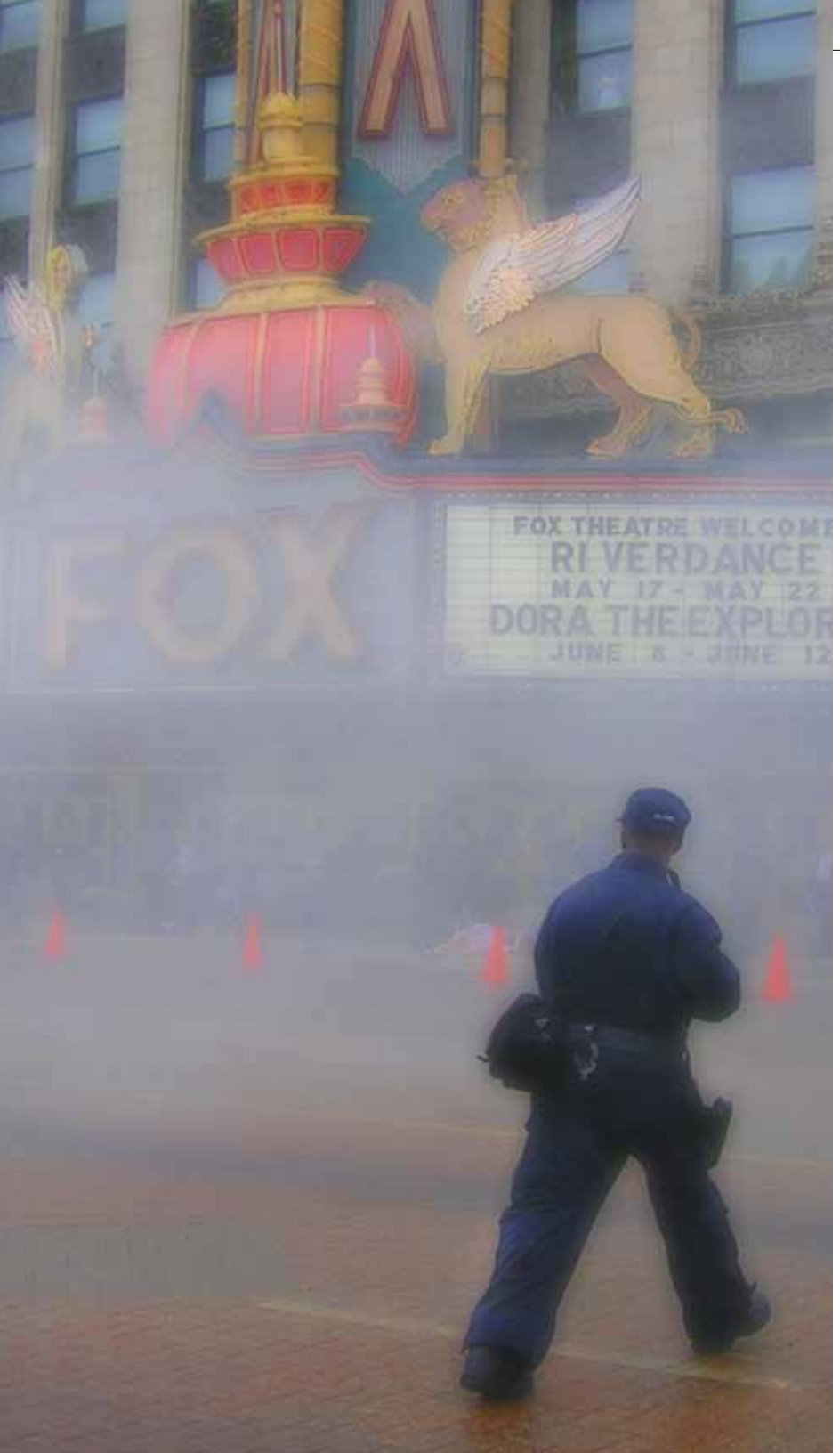
Region 2South Healthcare Coalition Highlights

Since 2002, the Coalition has been involved in developing and executing the medical operation plans for all the major events that have occurred in Southeast Michigan, including:

- Super Bowl XL
- Major League Baseball All Star Game
- American League Championship Series and World Series
- NCAA Final Four
- The Grand Prix
- Detroit Free Press Marathon
- Annual Target Fireworks displays

R2S also pre-deploys medical supplies and equipment to help support preparedness efforts for all major events in the region.

One of the largest coordinated response efforts occurred in 2005 as R2S worked closely with the City of Detroit and Wayne County Department of Homeland Security and Emergency Management to coordinate and manage health-care volunteers to serve as the Hurricane Katrina Evacuee Reception and Assistance Processing Center set up at the Coleman A. Young International Airport. R2S also coordinated volunteers for deployment to Louisiana in case Michigan was asked to deploy additional healthcare personnel to assist in response efforts.



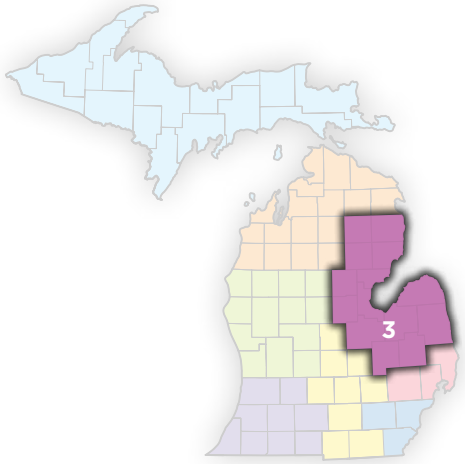
- In 2007, the Coalition established a task force that researched, conceptualized, designed, implemented, and now maintains the Michigan Transportable Emergency Surge Assistance Medical Unit (MI-TESA), a 100-bed mobile hospital that can be deployed anywhere in the state in the event of a disaster. The Coalition provides vehicles and staffing to assist with MI-TESA management, deployment, and operation and it conducts regular exercises to maintain its readiness.

- R2S is a highly proactive training region providing a very successful and in-demand training curriculum, including: Basic Disaster Life Support (BDLS), Advanced Disaster Life Support, Critical Incident Stress Management (CISM), Psychological First Aid, and Incident Command System training tailored to health-care. The Coalition has trained more than 1,000 students from all disciplines and positions in BDLS and is one of the only providers of the CISM courses in Michigan.

- The Coalition conceptualized and developed an electronic SNS asset request platform for the medical community, which was later expanded and implemented as a statewide system. (http://mirequest.org/SNS/de-fault.aspx)

- Special needs planning is a major initiative in R2S. The Coalition formed a Long-Term Care Workgroup that developed a bed and equipment availability form that was adapted for incorporation into an electronic web-based application. Since 2009, the use of these electronic resource reporting forms has become a statewide initiative for all long-term care sites across Michigan.

Region 3



14	Counties
1,123,675	Population
12	MCAs
24	Hospitals
10	Local Health Depts.
126	EMS agencies
1	Federally recognized tribe

Region 3 is a highly diverse area, ranging from medium-sized cities and highly fertile agricultural areas to very sparsely populated areas of undeveloped woodlands. There are four significant urban areas (Flint, Saginaw, Bay City, and Midland), two international airports, two international seaports, and a lengthy shoreline that shares an international border with Canada. The Coalition has formed a strong partnership with its hospitals and pre-hospital providers, MCAs, local and state public health entities, fire and law enforcement, emergency management, the American Red Cross, and other key response agencies.

Region 3 Healthcare Coalition Highlights

- The Coalition has developed and deployed a state-of-the-art videoconference system to 31 sites, including hospitals and MCAs, throughout its 14 counties. The system allows partner agencies to participate in regional meetings and training sessions without traveling long distances and has been used in many exercises, most recently during the Northern Inferno exercise. As part of that event, the Region 3 Medical Coordination Center hosted a just-in-time training lecture for the hospitals in the northern portion of the region, providing them with necessary information on the proper diagnosis and treatment of patients with smoke inhalation.

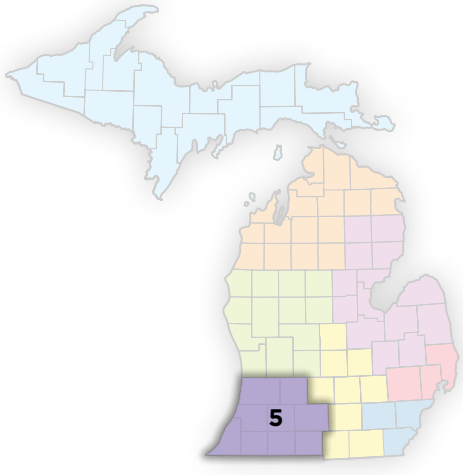
- The Coalition has also developed five online training modules that provide an orientation to the MCA, the Mass Casualty Incident and Alternate Care Center trailers, 800 MHz radio refresher, and a general orientation to Region 3. The modules provide an overview of what the Healthcare Coalition can provide during an emergency and the modules are available to all of the coalition's partners.

- In 2007, the Coalition began the first operational testing of the MEDDRUN program with the first actual air deployment of two MEDDRUN packs via helicopter. The protocol Region 3 developed is now being used by other healthcare coalitions throughout Michigan.

- The Coalition has had a close working relationship with the Saginaw Chippewa Indian Tribe since 2002. The Tribe has worked with the Coalition in planning and implementing exercises as well as numerous training courses. They are a key partner and a reliable asset to Region 3's success.

- Region 3 continues to publish a Regional News Update to provide its partners with information on the events, trainings, and conferences in its region and the state.

Region 5



9 Counties
896,848 Population
9 MCAs
22 Hospitals
7 Local Health Depts.
94 EMS agencies
3 Federally recognized tribes

The nine southwestern counties that make up Region 5 are a mix of mostly smaller and rural farming communities and some urban areas. Region 5 is home to Western Michigan University and a number of local wineries. The Coalition membership consists of representatives from hospitals, public health agencies, MCAs, emergency medical service providers, and many more healthcare, long-term care, human services, and emergency response organizations. It also has a strong partnership with the three federally recognized tribes that live in the region.

Region 5 Healthcare Coalition Highlights

- The Coalition hosts a region-wide program with sophisticated patient simulators (based at the Michigan State University/Kalamazoo Center for Medical Studies) for advanced instruction and disaster training. A fully equipped trailer allows trainers to take the simulators out to regional hospitals and EMS agencies for training in the field.

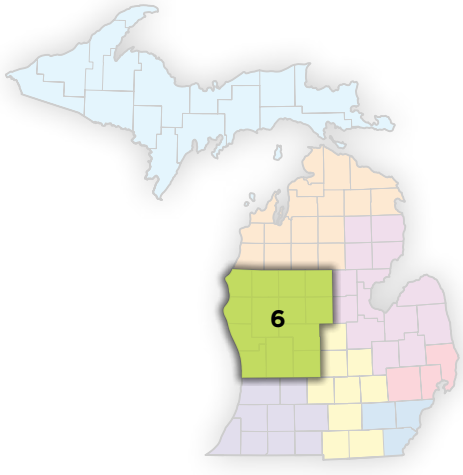
- Region 5 is the host for a 40-bed MI-TESA Medical Unit that can be deployed anywhere and is fully interoperable with the 100-bed MI-TESA Unit in R2S. The Coalition provides tow vehicles and staffing to assist with MI-TESA management, deployment, and operation and it conducts regular exercises to maintain its readiness.

- In addition, the Coalition maintains mass-casualty trailers stocked with medical supplies. Antibiotic and anti-viral medications are stockpiled to protect medical workers during disasters. Special air filtration hoods are available, and portable ICU-level ventilators have been acquired to augment those at hospitals.

- In 2005, the region was called upon to receive, triage, and provide medical treatment for more than 300 Hurricane Katrina evacuees at the Michigan National Guard's Fort Custer training facility in Battle Creek. Region 5's response was made possible by strong collaboration among the Coalition's healthcare, public health, and emergency management partners.

- In 2008, Region 5 was designated by the Centers for Disease Control and Prevention (CDC) as a Model Community, honoring the region for "establishing and implementing effective strategies that enhance collaboration and strengthen the relationship between public health and emergency care, thereby serving as an example to other communities to promote the improvement of daily operations and disaster preparedness nationwide."

Region 6



13 Counties
1,447,189 Population
12 MCAs
23 Hospitals
7 Local Health Depts.
138 EMS agencies
1 Federally recognized tribe

Region 6 spans a large area across the middle of the state extending from the western border to the center of the state. It is comprised of 13 counties that consist primarily of small, rural communities, and the three larger counties of Kent, Ottawa, and Muskegon.

Region 6 partners include hospitals, MCAs, life support agencies, long-term care facilities, health departments, emergency management bodies, a tribal network, and the Center for Simulation Excellence.

Region 6 Healthcare Coalition Highlights

- The Coalition, in partnership with Mercy Health Partners Muskegon, created the Center for Simulation Excellence. This 4,700-square-foot facility is complete with exam rooms, intensive care, emergency, and surgical units that can simulate emergency scenarios such as auto accidents and a building collapse.

  The simulation capabilities include life-like training manikins and the ability to incorporate ambient noises such as unanticipated distractions (e.g., sirens, family interactions) and environmental noises typically associated with the various hospital units.

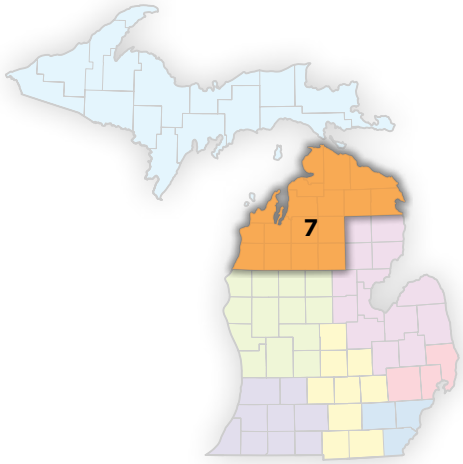
- The Coalition pioneered a tracking system for volunteers, education and training courses, and disaster asset inventory using Microsoft SharePoint and United Parcel Service software products.

- In 2008, the Coalition supported the successful emergency response to the 2008 medical helicopter crash atop the center tower of Spectrum Health Butterworth Hospital in downtown Grand Rapids. The MCC was activated and Region 6 helped coordinate communications among the ICC, the hospital's EOC, and the SEOC.

Region 6 partners have used all available resources in planning for or responding to:

- County-based emergencies resulting from widespread flooding affecting thousands of residents
- Power outages that knocked out power to one or more hospitals, nursing homes, and other municipal sites
- Support of hospitals and their command centers during the 2011 blizzards
- Pre-planning and support during the Rothbury music festival
- Pre-planning and support during President Gerald R. Ford's internment in Grand Rapids
- Pre-planning and support of Muskegon Summer Celebration events
- Use of response plans and systems to work with local public health districts during the H1N1 pandemic
- Formation, training, and use of a Type III Incident Management Team to support cross-disciplinary work with Emergency Management

Region 7



17 Counties
442,961 Population
9 MCAs
12 Hospitals
6 Local Health Depts.
107 EMS agencies
3 Federally recognized tribes

Region 7 spans 17 counties across the northern portion of the Lower Peninsula. It is predominately rural with a year-round population of roughly 500,000. The region is home to an abundance of natural resources and a thriving ecotourism-based economy. Extreme seasonal population fluctuations due to tourism and second-home ownerships are a challenge as this region experiences more than 12 million visitor-days per year. Region 7 partners includes hospitals, MCAs, emergency management bodies, long-term care facilities, health clinics, renal dialysis and/or home care service providers, and three federally recognized tribes.

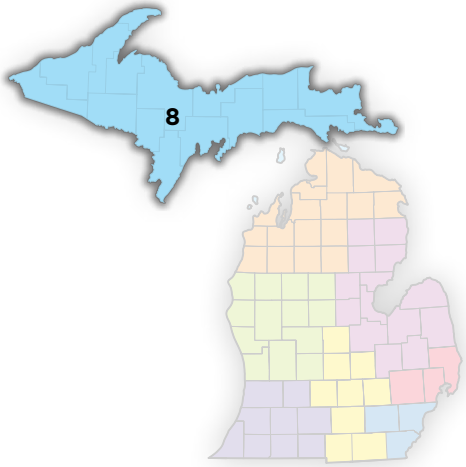
Region 7 Healthcare Coalition Highlights

- Decontamination equipment and capability are available for an explosion, chemical spill, or other disaster.
- All hospitals and life support agencies are equipped with and trained on redundant, interoperable communication systems.
- Unique partnerships between homeland security and the medical network resulted in three Alternate Care Centers, each equipped to supply a 50-bed makeshift hospital unit in the event the local hospital is compromised or overwhelmed in a disaster.
- Medical disaster training is promoted and used throughout the region, including the availability and use of life-like, high-fidelity human patient simulators.

The simulator patients are used to enhance scenario-based disaster training for emergency medical responders and hospital personnel.

- In late May 2010, Region 7 played a supportive role in response to wildfires that consumed more than 5,000 acres in Crawford, Roscommon, and Kalkaska counties where residents of a skilled nursing facility had to be evacuated. The region activated its Medical Coordination Center (MCC) in support of the EOC and local hospital, and deployed an Alternate Care Center (ACC) trailer to accommodate nursing home residents in need of overnight housing.

Region 8



15	Counties
305,511	Population
12	MCAs
16	Hospitals
6	Local Health Depts.
72	EMS agencies
5	Federally recognized tribes

Region 8 makes up the Upper Peninsula and is joined to the Lower Peninsula by the Mackinac Bridge. With a population of just 19 people per square mile, Region 8 contains nearly one-quarter of Michigan's land area but only 3 percent of its total population. The region is composed of 15 rural counties and is home to five federally recognized tribes. Region 8's partners include hospitals, MCAs, ground-based EMS agencies and volunteer EMS personnel, health departments, emergency management agencies, Wisconsin life support agencies, and the five tribal nations.

Region 8 Healthcare Coalition Highlights

- 24/7 decontamination equipment is available in all hospitals.
- Regional efforts are under way to conduct a hazard vulnerability analysis.
- All hospitals and life support agencies are equipped with redundant, interoperable communication systems including 800MHZ two-way, hand-held radios, cellular and satellite phones.
- Region 8 shares a long border with Wisconsin and has worked extensively with Wisconsin in preparedness planning as well as day-to-day operations. Life support agencies who work in both Michigan and Wisconsin were equipped with 800 MHz radios that would allow for enhanced, cohesive communication between the two states in the event of any major disaster and/or events such as forest fires and search-and-rescue efforts.

- The Coalition's partners have used their planning and preparedness assets to respond to a number of major incidents and events that have taken place during the last eight years:
    - President Barack Obama's 2011 visit to Marquette
    - A shooting threat to Northern Michigan University students in 2011
    - The 2007 Sleeper Lake Fire that burned 20,000 acres of land
    - The 2003 Dead River Dam collapse, which caused a surge of eight billion gallons of water into the reservoir.

- During the Presidential visit to Marquette in February 2011, Region 8 personnel coordinated the healthcare emergency preparedness planning. The visit gave the Coalition the opportunity to coordinate with its partners, exercise its plans, and use the resources that it had put in place during the past 10 years. In addition to conducting the site assessment with the Secret Service, Region 8 staffed the Marquette General Hospital EOC, the decontamination team and communications hub. Motorcade planning, emergency rendezvous planning and airport emergency standby planning were also coordinated by Region 8. The team stayed in contact with 800 MHz radios during the entire visit.

Glossary

ACC- Alternate Care Center
ASPR – Assistant Secretary for Preparedness and Response
CDC – Centers for Disease Control and Prevention
CHECC – Community Health Emergency Coordination Center
CISM – Critical Incident Stress Management
DHHS – Department of Health and Human Services
DPMU – Disaster Portable Morgue Unit
EMS – Emergency Medical Services or Emergency Management System
EOC – Emergency Operations Center
EPC – Emergency Preparedness Coordinator (Public Health)
ESAR-VHP – Emergency System for Advance Registration of Volunteer Health Professionals
FEMA – Federal Emergency Management Agency
FQHC – Federally Qualified Healthcare Clinic
GLHP – Great Lakes Healthcare Partnership
HHS – Department of Health and Human Services (also DHHS)
HPP – Hospital Preparedness Program
HRSA – Health Resources and Services Administration
MCA – Medical Control Authority
MCC – Medical Coordination Center
MDCH – Michigan Department of Community Health
MEDDRUN – Michigan Emergency Drug Delivery Resource Utilization Network
MEMS – Modular Emergency Medical System
MEPPP – Michigan Emergency Preparedness Pharmaceutical Plan
MHC – Migrant Health Center
MIHAN – Michigan Health Alert Network
MI-MORT – Michigan Mortuary Response Team
MISNS – Michigan Strategic National Stockpile
MI-TESA – Michigan Transportable Emergency Surge Assistance
MMFT – Mobile Medical Field Team
MRC – Medical Reserve Corp
NDMS – National Disaster Medical System
NEHC – Neighborhood Emergency Help Center
NIMS – National Incident Management System
NRP – National Response Plan
OPHP - Office of Public Health Preparedness
SEOC - State Emergency Operations Center
SNS – Strategic National Stockpile
RHC – Rural Health Center
RHCC – Regional Healthcare Coalition Coordinator

Population figures based on 2010 census

Regional Healthcare Coalitions: **Leadership Team**

Back row, left to right: Greg Place; Dave Schoenow, M.D.; Matt Price; Jeff Nigl, M.D.; Jim Brasseur; Rick Drummer; Amy Shehu; Mike Tilley
Middle row, left to right: Mark Malcuit; Eric Persha; Allison Duda; Lynn Blavin, M.D.; Kal Attie, M.D.; Jennifer Stefaniak; Tim Bulson; Jeremy Searls
Front row, left to right: Mary Fox; Jerry Evans, M.D.; Jenny Atas, M.D.; Bill Fales, M.D.; Bob Dievendorf

Not pictured: Don Edwards, D.O.

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