National Healthcare Preparedness &
The Role of Healthcare Coalitions

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The Meningitis Outbreak and the National Healthcare Preparedness Programs

- The story of “Healthcare Coalitions and the Case of the Michigan Meningitis Outbreak”

- National Healthcare Preparedness Programs
  Office of the Assistant Secretary for Preparedness and Response (ASPR)
  U.S. Department of Health & Human Services

- Leading role in ensuring healthcare systems preparedness

- Cooperative agreements provide approximately $350M annually to 50 states, four localities and eight U.S. territories for building and strengthening their abilities to respond to incidents
National Guidance for Healthcare System Preparedness
National Healthcare Preparedness Programs, January 2012

• ASPR has identified the following eight capabilities as the basis for healthcare coalition preparedness:

  – Healthcare System Preparedness *(Healthcare Coalition Development)*
  – Healthcare System Recovery
  – Responder Safety and Health
  – Emergency Operations Coordination
  – Medical Surge *(Immediate Bed Availability)*
  – Fatality Management
  – Information Sharing
  – Volunteer Management
A Strong Foundation

Healthcare System Preparedness
(Health Care Coalitions)
Healthcare Coalitions

• Build community partnerships to support health preparedness

• Assist emergency management and ESF#8 with preparedness, response, recovery and mitigation activities

• Assists with resource coordination and patient movement by coordinating and sharing incident specific healthcare situational awareness

• Enables effective medical surge and serves as anchor for Immediate Bed Availability
Healthcare Coalitions

- Alternative Care Sites
- Behavioral Health
- Community Based Organizations
- Community Health Centers
- Dialysis Facilities
- Emergency Management
- Emergency Medical Services
- Faith Based Organizations
- Hospitals
- Long Term Care Facilities
- National Disaster Medical System
- Primary Care Providers
- Public Health
- Private Insurance
- Urgent Care Facilities
- Volunteers
Healthcare Coalitions

“The whole is greater than the sum of its parts.”

Aristotle
Healthcare Coalitions and the Meningitis Outbreak

• Coalitions…. But what role do they have when there isn’t any declared disaster?

• Response to meningitis outbreak exemplifies value of coalitions

• Real world example of success at many levels: local, state, federal

• Weaving threads of preparedness into the daily delivery of care

• “If we can’t do it everyday, we can’t do it on game day”
When Needs Exceed Resources: Healthcare Coalitions’ Response to the Meningitis Outbreak

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MI Public Health and Healthcare Emergency Preparedness Program
• The Office of Public Health Preparedness (OPHP) in the Michigan Department of Community Health (MDCH) was established in 2002 to coordinate development and implementation of public and medical health services for preparedness and response to acts of bioterrorism, infectious disease outbreak and other public health emergencies. The mission of the office has expanded to encompass "all hazards" preparedness and response.

• Funding for the program is provided exclusively through two federal cooperative agreements: the Centers for Disease Control and Prevention’s Public Health Emergency Preparedness Program and the Office of the Assistant Secretary for Preparedness and Response’s Hospital Preparedness Program.
ASPR & CDC Cooperative Agreement

- Fiduciary MCA
- 8 Regional Healthcare Coalitions
- Healthcare Organizations

- Local Health Departments
- Tribes / Other Partners

Coordinated Local, Regional and State Planning
Medical Control Authority

- MCA - an organization designated by Michigan Department of Community Health, EMS Office under Part 209 of PA 368 of 1978
  - Responsible for supervision, coordination of emergency services within a specific geographic area through State approved protocols
- Each hospital w/ED must be given opportunity to participate in a MCA
- Medical Director of MCA—board certified in Emergency Medicine/ACLS & ATLS certified
- Fiduciary for Healthcare Coalitions
Michigan (8) Healthcare Coalitions

- 83 Counties
- 45 Local Health Dept.
- 12 Federally Recognized Tribes
- 110 Emergency Mgmt. Programs
- 191 Hospitals
- 440 LTC facilities
- 800 Life Support Agencies
- >300 FQHC,MHC,RHC
Medical Surge Capacity and Capability

Tier 6 - Federal Support
  - Federal Response (Support to State and Locals)

Tier 5 - Interstate Regional Coordination
  - (Management Coordination and Mutual Support)

Tier 4 - State Response and Coordination of Intrastate Jurisdictions
  - (Management Coordination and Support to Jurisdictions)

Tier 3 - Jurisdictional Incident Management
  - (Medical Incident Command System (ICS) and Emergency Support (EOC))

Tier 2 - Health Care "Coalition"
  - (Information Sharing, Cooperative Planning, Mutual Aid)

Tier 1 - Health Care Asset Management
  - (Emergency Management Plans (EMP) and Emergency Operations Center (EOC) using Incident Command)

Federal Response (Regional and National)
- Michigan
- Other State

Jurisdiction 1
  - (Public Health/Emergency Management/Public Safety)

Jurisdiction 2
  - (Public Health/Emergency Management/Public Safety)

Medical Support

Health Care Organization (HCO) A

Health Care Organization (HCO) B

Health Care Organization (HCO) C

Non-Health Care Organization Providers
Medical Communications Pathway During Emergency Response

- Local EOCs Healthcare Representatives
- Regional MCC
- Hospital EOCs
- SEOC Department EMCS
- CHECC
- Governor

Primary Contact
Consulting

- Local EOC activated and communicates a need for a medical/public health resource to SEOC
- MDCH EMC communicates need to CHECC
- CHECC communicates with medical/public health subject matter experts to obtain information. May include local public health department and regional MCC.
- CHECC communicates information obtained back to SEOC who in turn communicates to the local EOC
- The Hospital EOCs communicate status of hospital resources to MCC
- MCC provides this information as requested to the local EOC healthcare representative

SEOC - State Emergency Operations Center
CHECC - Community Health Emergency Coordination Center
EOC - Emergency Operation Center
EMC - Emergency Management Coordinator
Each Coalition has the following:

- Medical Director
- Regional Healthcare Coordinator
- Assistant Healthcare Coordinator
- Emergency Preparedness Coordinators - LHD within Region
- Regional Epidemiologist
- District Emergency Management Coordinator
Region 2 South (R2S):

- Monroe, Washtenaw, & Wayne County
  - Includes the City of Detroit

- Smallest geographically, but serves 25% of MI’s population and houses the most healthcare facilities and EMS agencies
R2S Planning Partners

- Canadian Representatives
- DMAT/ NDMS
- Hospital Representatives
- Emergency Management
- EMS (Fire and Private)
- FQHCs
- Health Departments
- Industry ( BC/BS, GM Compuware )
- Law Enforcement (Local, Sheriff and FBI)
- LEPCs
- Long Term Care sites
- MCAs

- Medical Examiner
- MMRS
- Poison Control
- (LHD within Region) Public Health Authorities
- Immunization Coordinator
- Epidemiologist
- Strategic National Stockpile Coordinator
- Public Information
- Public Safety
- Red Cross
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Region 2 South Overview

• Improved “all-hazard” emergency preparedness
  – Established regional portable gas spectrum analyzer and 24/7 operational response team as a resource for hospital and pre-hospital facilities.
  – Provided funding to hospitals to procure needed equipment, supplies, and training (unique to each facility).
  – Developed emergency plans and procedures that facilitate a coordinated health care response to any disaster (natural, man-made or intentional).
  – Purchased (and maintains) medical supplies and equipment for Alternate Care Centers (ACCs) and Neighborhood Emergency Help Centers (NEHCs).
Region 2 South Overview

- **Improved “all-hazard” emergency preparedness**
  - Purchased (and maintains) medical supplies and equipment for Mass Casualty Incidents (MCI).
  - Hosted educational conferences.
  - Established (and maintains) statewide asset of a 100-bed mobile field hospital (MI-TESA Medical Unit).
Region 2 South Overview

• Improved CBRNE (Chemical, Biological, Radiological, Nuclear and Explosive) emergency preparedness
  – Established caches for CBRNE incidents in hospital pharmacies.
  – Coordinated the regional implementation of the CHEMPACK & MEDDRUN programs.
  – Assisted in the coordination of regional planning to implement the Strategic National Stockpile (SNS).
  – Establishing radiological monitoring equipment at hospitals.
  – Funded the establishment of antibiotic and antiviral stockpiles at hospitals to protect hospital staff.
  – Funded the establishment of antibiotic and antiviral stockpiles for public health department staff.
Early October 2012:

• CDC reports multi-state investigation of Fungal Meningitis patients that received an epidural steroid injection
  – *Report stated 35 cases in 6 states*
    • None of the initial case were reported in MI
  – *Four MI facilities identified as receiving contaminated lot numbers*
  – *Facilities began contacting and advising all patients that received contaminated lots for possible symptoms*
The geographical locations of the four identified facilities in the CDC report that received the contaminated lots
CDC released updated report alerting that all injectable products from the New England Compounding Company (NECC) dated after May 21, 2012 were recalled.

– Patient outreach calls expanded from contaminated lot recipients to patients that received any NECC products.
October 2012:

- St. Joseph Mercy Hospital (SJMH) in Ann Arbor, MI reported a large number of patients presenting.
  - Most required diagnostic lumbar punctures
  - Many patients admitted due to positive findings
  - Influx would be handled internally - no additional resources needed

- Hospital opened a clinic in a closed wing of the facility
- Open dialoged with R2S and SJMH to maintain awareness and offer support if needed
Due to the location, SJMH became the referral site for patients who required diagnostic testing or care related to the recalled product.
November 7, 2012:

- SJMH requested assistance identifying additional staffing resources from R2S
  - R2S coordinated a conference call between MDCH, SJMH, and R2N to discuss options
  - MDCH was able to identify 95 volunteers that met the criteria requested on the MI Volunteer Registry
  - Within 24 hours, MDCH re-verified medical credentials and conduct background checks of the identified volunteers
(Staffing Resources, continued)

- SJMH affiliated hospital, located in Ohio, was willing to send staff, but were not licensed to work in MI.

- MDCH worked with the licensing agency to grant a MI license within 24 hours of receipt of appropriate credentials of the identified Ohio staff.
While staffing resources were established, the patient profile began evolving

- Patients begun developing abscesses at the injection site
- More complex diagnostic testing, treatment, and much longer patient stays in the facility

- Each symptomatic and asymptomatic patient required a MRI to screen for abscesses
- MRI results – extremely subtle
November 9, 2012:

- SJMH contacted R2S with their potential need for regional hospital assistance
  - R2S and Region 2 North (R2N) identified regional hospitals that were capable of caring for these patients
  - Hospitals were required to have: Neurosurgery, Neurology, Intensivist, MRI capability, Infectious Disease, and Clinical Pharmacy specialists
• *(Hospital Assistance Request, Continued)*
  
  – R2S and R2N began gathering contact information for the facility’s CEO, CMO, and COO
  
  – MDCH, through R2S and R2N, distributed a formal request to the identified contacts for assistance with patient care and established the 24 hr POC for each facility
  
  – All capable R2S hospitals responded to the request willing to assist with their current bed availability
• R2S coordinated daily conference calls between SJMH, R2S, R2N, and MDCH
  – *R2S took the lead on developing a coordinated and consistent update to the R2S facilities, R2N, and MDCH*
    • Updates were sent to hospital’s Facility Liaison and points of contact (POC)
    • R2S and R2N used the daily updates to distribute the evolving patient care guidelines to all facilities
November 13, 2012:

- SJMH noted the alarming number of asymptomatic patients with positive findings on their MRIs
  - *Of 7 asymptomatic patients screened that day, 5 were positive for abscesses*
  - *SJMH staffed a call center to continue patient outreach to those at risk and schedule MRIs*
    - Roughly 400 additional patients needing MRIs
    - MDCH sent additional staff to assist 11-19-12 to 11-23-12
• *(Patient Results, Continued)*
  
  – R2S and R2N continued to collect updated hospital census data to prepare for potential transfers from SJMH

  – From the data, R2S gave SJMH a “menu” of facilities that could be presented to patients requiring transfer
November 14, 2012:

- SJMH able to care for the 70 patients admitted, but pharmacy needed assistance
  - Pharmaceuticals used to treat required complex compounding
  - SJMH requested additional Pharmacy Technician support from R2S
  - R2S and R2N forwarded the request to the Pharmacy Subcommittees and Facility Liaisons
(Pharmacy Technicians Assistance, continued)

– Through this distribution, SJMH was able to schedule enough temporary staff to sustain operations through 2012
November 16, 2012:

- SJMH confirmed that patients were transferred to the facilities identified by R2S and R2N
  - With 79 patients admitted related to the outbreak, SJMH began utilizing the “menu” of available treatment centers
  - SJMH coordinated with R2S and MDCH to host weekly webinars
  - Patient care standardized between facilities
• (Patient Transfers, Continued)
  – The weekly webinars provided clinical updates and discussed specific patient cases
  – The webinar information was distributed to the regional facilities, the Regional Healthcare Coalitions statewide, and MDCH

• Hospitals expecting to receive patients were encouraged to distribute the webinar information to their Infectious Disease professionals, Neurosurgery department, Hospitalists, and Nursing Directors
November 16, 2012:

• SJMH overwhelmed with number of patients presenting in the Emergency Department (ED)
  – **Most of the ED patients were unrelated to the Meningitis outbreak**
  – **R2S contacted regional hospitals to request assistance in receiving SJMH ED visits**
    • All were willing
    • Bed data collected
    • R2S provided information to SJMH facilitate transfers
November 26, 2012:

- SJMH began discharging patients related to the outbreak
  - MRI scans still ongoing, beginning to return more negative results
    • Roughly one-third of the patients were positive for epidural abscesses
    • CDC adopted and distributed the MRI guidelines developed internally by SJMH
  - Daily conference calls were scaled back to once per week
January 10, 2013:

- SJMH had 17 inpatient cases related to the outbreak in the facility
  - Roughly 175 patients were treated at SJMH
  - All of the 600 patients requiring a MRI scan had been contacted and scheduled
    - Of the remaining patients to have scans conducted, 10 were admitted for abscess treatment
  - SJMH began working with the CDC to develop follow-up care guidelines
Michigan Patient Summary as of February 7, 2013

– 243 Meningitis cases were treated
– 154 patients requiring treatment for only abscesses were seen
– 41 patients requiring treatment for both, Meningitis and abscesses, were treated
– 12 deaths resulted from the outbreak in MI
• All Disasters Local
  
  – *In healthcare, all disasters begin locally*

  – *Activation of hospital incident command to consult w/internal resources*

  • Clinical Staff – Physicians and Nurses
  • Infectious Disease
  • Emergency Center
  • Clinical Labs and Pharmacy
• **All Disasters Local (continued)**

  – *Pooling of hospital and as needed, system resources*

  – *Consult as needed w/applicable agency(ies), i.e. CDC*

  – *Effectively manage event internally*
• Second Wave – Fungal Infections

  – *Increased volume of meningitis patients & those re-presenting w/epidural abscesses near injection site*

  – *MRIs and surgeries escalated*

  – *Experiencing capacity issues, i.e. opening of closed unit/24-hour care, resources stretched and tiring*
Beyond Our Walls

- Administrative decision made to dialogue w/R2 South Medical Director, Dr. Atas
- System facilities active members of R2S
- Region a rich reservoir of knowledge & resources of healthcare agencies
- Access to OPHP & MDCH
• Beyond Our Walls (continued)

  – Prior engagement w/R2S occurred 2011

  • Patient presented to ED after swallowing rat pellets
  • Off-gassing of pellets resulted in activation of county hazmat team
  • Prompted a call to Region 2 South for regional perspective & support
Beyond Our Walls (continued)

– Dr. Atas provided consult, dialogue with other hospitals & connection with State Poison Control

– That successful interaction indicated connecting with R2S a reasonable “next step.”
• Dialogue with R2S, 2N & OPHP/MDCH

  – *Call to Dr. Atas, in consult w/Linda Scott provided opportunity to dialogue*

  – *Response was immediate, prompting search for volunteers (nurses, pharmacy techs)*

  – *MDCH assisted w/Ohio licensing & consult, support for meningitis clinic*
Dialogue with R2S, 2N & OPHP/MDCH (continued)

- Coordinated information to R2S facilities
- Facilitated distribution of patient care guidelines
- Collected hospital census data
- Provided list of facilities accepting patient transfers
- Planned/promoted weekly webinars to inform on standardized care
Regional Healthcare Coalition – Aid Beyond Conception

– Connecting w/Regional Healthcare Coalition provided support in a single event/single facility “real life” crisis, utilizing regional and state support as needs unfolded

– Aid beyond original conception
Questions?
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