

## ABSTRACT: 2015 ELAM Institutional Action Project Poster Symposium

**Project Title:** Ebola Preparedness across the Mayo Clinic System

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**Background, Challenge or Opportunity:** In October, 2014 the CDC asked Mayo Clinic (MC) Rochester to become a designated facility for repatriated Ebola patients. Subsequently the MN Department of Health (MDH) called for designated Ebola treatment facilities. It became clear that all of MC's sites needed to be prepared for suspected Ebola Virus Disease (EVD) patients. As Medical Director of MC Rochester Hospitals, I was accountable for successfully meeting these goals.

**Purpose/Objectives:** To develop a seamless, safe, standardized approach to managing patients with suspected or confirmed EVD across the MC system. Scope: all MC facilities (in & out-patient, EMS in MN, WI, IA, GA, FL, AZ).

**Methods/Approach:** Governance was established with final decision rights as the Ebola Preparedness Executive Committee. It included key stakeholders representing clinical and operations groups. MC Emergency Incidence Command System was activated to coordinate activity, run simulations and debrief post responses across the system. With extended stakeholder input, each practice site's (23 hospitals/25 ERs, all outpatient clinics (> 100 sites in >70 communities) and Emergency Medical Services (EMS)) risks were defined. Goals included development and standardization of: practice guiding principles and guidelines, PPE, including tracking and sharing across sites, essential core medical teams needing patient contact, EVD risk screening, isolation and transport to designated treatment centers, HR policies pertaining to core team members. Systems and procedures ensuring safe care delivery by expertly trained high functioning teams were designed and implemented: central control site for *all* information/resources, training & assessing ongoing donning/doffing and procedural competency in full PPE, monitoring of staff exposures, and resources for core care team respite/mental health care/help with personal-family obligations. Established two bio-containment ICUs equipped to meet *all* needs of confirmed/suspected EVD patients. A pathway for timely consistent communication/messaging throughout the enterprise was implemented. Audiences included staff, non-Ebola patients on campus, or anticipating coming to MC, regional, national, and international communities, and senior leadership. We participated in media interviews including NBC National News (filmed critical care teams, Simulation Center PPE training). Regular meetings with MDH, and MN Ebola Collaborative, and site visits from MDH and CDC allowed collaboration and coordination of efforts beyond MC. To assure financial stewardship, a cost center to track all costs associated with preparedness was established.

**Outcomes and Evaluation Strategy:** MC Rochester was identified as a National Ebola Center supporting MC's patient-centered mission and destination medical center strategy. Federal funding was received to offset costs. Structures/processes developed are being applied to other system-wide emergency planning and responses. Success will be measured by achieving optimal EVD patient outcomes without viral transmission to staff or disruption of routine MC activity. Surveys will assess staff's sense of preparedness, stress and process effectiveness. Effectiveness of strategies developed in addressing new emergency responses is being monitored.

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## Mayo Clinic, Rochester, MN

### Opportunity

Support Mayo Clinic's patient-centered mission by responding to the international Ebola crisis and patient needs.

- CDC approached Mayo Clinic (MC) Rochester to become a designated facility for repatriated Ebola patients.
- The Minnesota Department of Health (MDH) called for designated Ebola treatment facilities.
- It became clear that all of MC's sites needed to be prepared for suspected Ebola Virus Disease (EVD) patients.

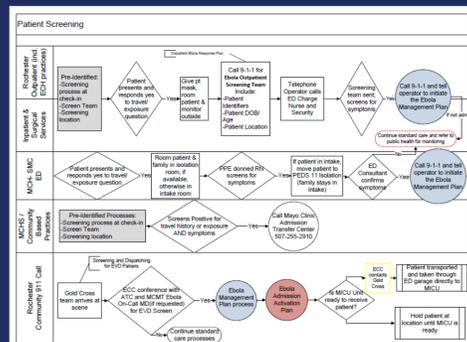
### Objective

To rapidly develop a seamless, safe, standardized approach to managing patients with suspected or confirmed EVD across the Mayo Clinic system. All Mayo Clinic inpatient and outpatient facilities as well as EMS services were included.

### Methods/Approach

1. Change management: ADKAR
2. Crisis Management through Incident Action Planning
3. PDCAs and DAIMC
4. Resource stewardship
5. Content expert engagement

### Example of Process Flow Maps Developed



### Processes Implemented

#### 1. Governance

- developed an Ebola Preparedness Executive Committee with decision rights. Membership included key stakeholders: Infection Prevention and Control/ID, Critical Care, OB, Pediatrics, Neonatology, Environmental Services, EMS, ED, Waste Management, Nursing, Occupational Health, Laboratory services, Facilities, Public Affairs, Supply Chain Management, Legal, Outpatient and Inpatient Practice Chairs, Enterprise Dean of Practice, Ethics, Human Resources and representatives from all MC sites/campuses.
- activated healthcare incident command system (HICS) - organize table top and real-life simulations and implement processes across the system.

#### 2. Practice

- determined risks /gaps at each practice site - 23 hospitals/ 25 ERs and > 100 outpatient clinics in > 70 communities in MN, WI, FL, AZ, IO, GE, and EMS in MN and Western WI
- standardized care (Medical, Surgical, OB, Peds etc.)
- defined essential core medical team (volunteers)
- developed HR policies pertaining to core team

#### 3. Safety - designed and implemented

- system to ensure safe provision of care by expertly trained high functioning teams
- central control function/site for all resources needed
- standardized PPE and system for tracking and mobilizing PPE across sites
- Ebola-Centers (tertiary hospitals in MN, FL) to which all patients with positive EVD screens are safely transported.
- biocontainment areas (ICUs) equipped with everything needed for all EVD patient care at Ebola Centers
- standard process for patient screening, isolation and transportation
- processes to train and assess ongoing donning/doffing competency and for proceduralists to practice interventions in full PPE
- system for safe waste management
- system to monitor care team members exposed to EVD patients
- resources for respite/mental health care for care teams and help with family/personal obligations while caring for EVD patients



#### 4. Communication

- developed a communication path aligned with processes to assist in suspected/EVD patient management
- coordinated with MC Public Affairs experts to develop a consistent communication strategy to alleviate fears, and prevent misunderstanding. Audiences included: staff, non-EVD patients on campus or anticipating coming to MC facilities, regional and national communities
- prepared regular updates to senior leadership
- participated in media interviews including NBC National News (filmed critical care teams PPE training in the simulation center)

#### 5. Coordination/collaboration outside of Mayo Clinic:

- conducted regular meetings with the Minnesota Dept. of Health
- participated in MN Ebola Collaborative
- participated in MN Dept. of Health and CDC site visits

#### 6. Financial stewardship

- tracked all costs
- incorporated existing resources/processes

#### 7. Ongoing maintenance of readiness

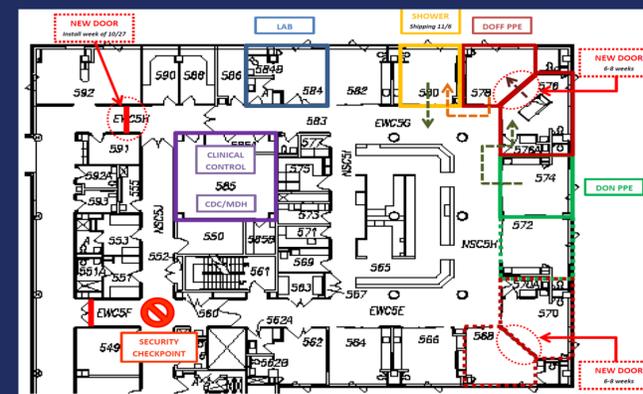
- defined ongoing simulations and competency determination
- identified core super users for just-in-time resource



### Outcomes

1. Identified as a National Ebola Center, meeting all safety and patient care requirements. - supporting Mayo Clinic's patient-centered mission and Destination Medical Center strategy
2. Successful handling of suspected EVD patients
3. Secured Federal Funding
4. Applying structure/processes to manage other system-wide emergency planning/responses
5. Improved collaboration with other tertiary hospitals in MN, CDC & MDH
6. Enhanced relationships & collaboration across Mayo Clinic Hospitals

### ICU Renovations for Bio-containment Area



### Evaluation Strategy

1. Success will equal excellent patient outcomes, no transmission of virus and no interruption of Mayo Clinic's mission critical activity
2. Staff surveys have been and will be used to assess preparedness, stress and burn-out
3. Monitor effectiveness of these strategies in addressing new emergency responses