

Oklahoma Public Health and Medical Response System Overview

Introduction

Oklahoma is a large and diverse state located on the Southern Great Plains of the United States. The State covers an area of 69,903 square miles, and ranks 20th in the nation in terms of geographic size. Approximately 3.5 million people live in Oklahoma including the citizens of 37 federally recognized Indian tribes. There are 77 counties in Oklahoma and over 1900 communities. The majority of the population of Oklahoma resides in three metropolitan areas: Oklahoma City, Tulsa and Lawton. The metropolitan areas serve as the State's "centers of excellence" in areas such as health care, training and technology. However, many critical assets are located outside of these metropolitan areas. Assets such as transcontinental pipelines, oil and gas production facilities, military installations, interstate highway systems and various agricultural enterprises are located across the State.

Oklahoma maintains a robust public health and medical system. There are seventy county health departments (including Oklahoma City/County Health Department and Tulsa Health Department) in Oklahoma in addition to the Oklahoma State Department of Health's Central Office in Oklahoma City. The State is home to approximately one hundred and thirty State licensed general/medical surgical hospitals, five Indian hospitals, two Veteran's Administration hospitals and one military hospital. There are approximately two hundred licensed EMS agencies, and over three hundred licensed nursing homes operating in Oklahoma. In addition, there are numerous community health centers, assisted living centers, dialysis centers, hospice providers, home health agencies, physician offices, and mental health providers located across Oklahoma.

Tragically, Oklahoma has experienced a number of disasters in recent years that have tested and strained response capability at both the local and State level. Large-scale events including the April 19, 1995 bombing of the Alfred P. Murrah Federal Building in Oklahoma City, the May 3, 1999 Central Oklahoma tornado outbreak, the May 27, 2002 I-40 bridge collapse, and the December 2007 ice storms have made planning for a coordinated response to a terrorist attack or other public health emergency a primary goal of Oklahoma's public health and medical community.

To better facilitate public health and medical system planning efforts, Oklahoma is divided into eight public health/homeland security regions. A Regional Homeland Security Advisory Council, a Regional Medical Planning Group (RMPG) and Regional Trauma Advisory Board (RTAB) represent each region. These organizations are empowered to develop regional medical system response plans and protocols designed to establish a coordinated public health and medical system response at the Tier I, II, III, IV and V levels as outlined in the U.S. Department of Health and Human Services' Medical Surge Capacity and Capability (MSCC) Guidebook. Each RMPG and RTAB is comprised of representatives from the local and regional medical system; as well as local, regional and state public health personnel. In addition, the Oklahoma City and Tulsa

metropolitan areas are represented by the Metropolitan Medical Response System (MMRS) that operates a Medical Emergency Response Center (MERC) in each of these cities. Based on the MMRS model, Oklahoma has a developed Regional Medical Response System (RMRS) that is currently operating in Region 3 (southwest), and is in various stages of development in Region 1 (northwest), Region 2 (Northeast), Region 4 (east central), and Region 5 (southeast). RMRS coordinates regional medical system planning efforts, and maintains a regional MERC designed to serve as the primary medical system coordinating function during times of emergency.

Tier I: Management of Individual Healthcare Assets

The foundation of Oklahoma's Tier I response will initially focus on the efforts of local EMS agencies, community hospitals and the local health department. Since 2002, Oklahoma has utilized Federal preparedness funding to enhance the capabilities of local public health and medical systems across the State to respond to acts of terrorism and other public health emergencies. The philosophy adopted by the State is that each community, regardless of size, should have a basic capability to respond to any type of disaster. By utilizing Federal funding in this way, and adopting an "all hazards" approach to disaster planning, Oklahoma has improved the Tier I response system in a large number of metropolitan and rural municipalities.

Scene Response

At the Tier I level, the local EMS agency responds to the scene of the incident and coordinates efforts with other first responders under an established incident command system (ICS). EMS establishes on-site triage and treatment operations, and moves patients to the nearest hospital based on injuries and/or symptoms. If necessary, EMS may establish a casualty collection center near the scene, and coordinate patient movement from this site. In the event the affected population requires field decontamination, EMS coordinates with local fire officials to decontaminate patients at the scene. If the number of injured or ill patients overwhelms local EMS, then they will utilize mutual aid to request assistance of other EMS resources in the immediate vicinity. EMS agencies may also provide emergency services to the special needs population without transport. During a power outage, oxygen dependent patients may receive oxygen supplies through EMS. Nebulizer dependent patients may also receive required treatments without further transport. Public Health agencies have been incorporate into the ICS in many jurisdictions and personnel may respond to the scene depending on the incident. Medical operations at the scene will eventually transition from an EMS/injury focus to a focus on public health issues. Incorporating public health personnel into the scene structure early allows time to anticipate and act on potential public health issues (such as tetanus immunization, food safety, injury epidemiology, etc.). Some scenes, such as illness outbreaks in facilities, may have public health personnel acting in an immediate leadership role.

Medical System Response Activities

Tier I involves the movement of patients to the nearest hospital(s) based on the facility's ability to handle the surge. In most cases, this initial response will involve community general medical/surgical hospitals, but may extend to specialty hospitals and rehabilitation hospitals in areas where they exist. Local Veteran's Administration (VA) and military hospitals may also offer treatment options if authorized by Federal authorities. The local hospital(s) utilize information obtained from first responders to determine whether to activate the hospital emergency operations plan (EOP). If activated, the hospital immediately begins to undertake efforts to create additional capacity within the emergency department (ED), operating room (OR) and inpatient units by canceling elective surgeries, discharging stable patients, calling in off-duty staff and physician, etc. Depending on need, the hospital may establish triage and/or treatment sites within or near the hospital. In most cases these sites will be in the hospital, however some facilities may have plans to utilize nearby physician offices or clinics as alternative treatment sites. Maintaining the integrity of the hospitals and other healthcare facilities is of primary concern at the Tier I level. This includes establishing plans designed to protect both staff and patients. As a result, planning and preparedness efforts reinforce the importance of keeping treatment centers fully open during emergency response operations based on the incident. The receiving hospital(s) will activate decontamination operations outside of the facility, if necessary, in order to protect the integrity of the hospital(s). If patients require protective isolation, hospitals will admit the individual(s) to a negative airflow ED room. Hospitals that have portable technologies to create additional isolation capacity in the facility may use these units to create isolation rooms/areas to house a larger numbers of patients. Depending on the incident, hospital infection control practitioners (ICP) may utilize the Public Health Information and Disease Detection in Oklahoma (PHIDDO) system to report disease or exposure information directly to the Oklahoma State Department of Health (OSDH). If necessary, OSDH will issue appropriate health alerts concerning the incident using the agency's Health Alert Network (HAN).

Communication, Coordination and Notification

Throughout the Tier I response, local EMS and hospital personnel remain in contact by use of various communication systems (800 MHz radios, HEAR radios, telephones and/or computers) in order to assess the individual healthcare assets available to respond to the emergency. In Region 6 and 8 (Oklahoma City), Region 7 (Tulsa) and Region 3 (southwest Oklahoma), the Medical Emergency Response Center (MERC) activates to initiate coordination of patient movement and resource utilization. In the two major metropolitan areas, a MERC coordinator and representatives of the hospitals and EMS agencies located in the jurisdiction staff each MERC. The primary role of the MERC is to coordinate the local medical system response during times of emergency. It serves as a primary "arm" of Emergency Support Function #8 (ESF-8) under the county emergency operations plan (EOP). If at anytime it is determined that the available local resources will not be sufficient to respond to the health and medical needs of the affected population, then the local emergency manager (EM) and county health department

administrator (ESF-8) will be notified. It is at this point, that the response escalates to the Tier II and Tier III levels.

Tier II: Management of Healthcare Coalition

The Oklahoma Tier II level response focuses on utilization of available tools and systems to effectively coordinate all public health and medical resources in the jurisdiction. These resources include not only EMS agencies and hospitals, but also volunteers, physician offices, Federally Qualified Health Centers (FQHC), nursing homes, home health agencies, hospice providers, rehabilitation facilities, mental health facilities, pharmacies, mortuary services, alternative care centers, special needs shelters, and any other entity involved in the public health and medical response effort. The State's Tier II response is designed to organize all necessary entities into one coordinated functional unit designed to meet the immediate health and medical needs of the population.

Medical System Response Activities

The Oklahoma Tier II response involves coordination of response activities with the local ESF-8 officer and designated ESF-8 support entities. In the two large metropolitan areas, the ESF-8 activities are coordinated by the local Metropolitan Medical Response System (MMRS) with either the local EMS agency or public health official assuming the lead role. The county health department administrator serves as the local ESF-8 coordinator under the county emergency operations plan (EOP) and is referred to as the county Health and Medical Coordinator (HMC) in the document. The primary duty of the HMC is to ensure effective coordination of all resources necessary to respond to the public health and medical needs of the population of the jurisdiction. In those areas where they exist, the Medical Emergency Response Center (MERC) serves as a support entity under ESF-8 and is responsible for coordinating the medical system response efforts of the jurisdiction. In regions of Oklahoma where a MERC does not currently exist, the HMC will establish an ICS designed to coordinate the efforts of the medical system in response to the disaster. Primary focus of Tier II will be to effectively assist individual healthcare entities manage the medical surge related to the incident.

Communication, Coordination and Notification

The HMC will establish communications with each medical organization involved in the response. The HMC is responsible for establishing a communication plan with all involved medical system entities using available technologies, and will initiate a system designed to track critical information and requests related to the community public health and medical system response activities. In addition to phone and radio communications, responders will utilize Oklahoma's web-based hospital reporting system (*EMSystem*) to monitor hospital status and capacity. If a MERC is present in the community, pertinent information will be compiled at the MERC and transmitted to the HMC as requested. In addition, the HMC and/or MERC will update the Oklahoma State Department of Health (OSDH) emergency operations center (Situation Room) on the status of response

activities. This communication will occur to allow for sufficient State-level planning in case the incident escalates beyond Tier II or III.

Tier III: Jurisdiction Incident Management

The Tier III response involves formal activation of the community and/or county EOP. Upon activation of the jurisdiction's EOP, the local EM establishes a unified command system to manage the activities of the various agencies involved in response operations. These agencies may include; emergency management, law enforcement, fire service, public works, public health, EMS, hospitals and other medical providers, schools, and any other agency necessary to respond to the incident. A primary function of Tier III will be to establish the incident action plan (IAP) that sets the overall strategy for community response operations. The agencies organized under the Tier III response will work together to collect and analyze information and effectively utilize the resources available to respond to the incident.

Medical System Response Activities

As in Tier II, the county HMC will ensure coordination of the public health and medical system response activities involved in Tier III. Tier III activities involve the establishment of a jurisdictional NIMS compliant ICS designed to coordinate efforts and manage resources at the local level. Under the county EOP, the EM will activate the county EOC in response to the incident. The EM will formally activate the ESF-8 function, and the HMC will coordinate public health and medical operations under the resulting jurisdictional unified command system. The HMC will support the response operations of the local public health and medical system by working in conjunction with the various other agencies involved in the overall community level response.

Communication, Coordination and Notification

The HMC will establish communications with each medical organization involved in the response. The HMC is responsible for establishing a communication plan with all involved medical system entities using available technologies, and will initiate a system designed to track critical information and requests related to the community public health and medical system response activities. In addition to phone and radio communications, responders will utilize Oklahoma's web-based hospital reporting system (*EMSystem*) to monitor hospital status and capacity. If a MERC is present in the community, pertinent information will be compiled at the MERC and transmitted to the HMC as requested. In addition, the HMC and/or MERC will update the OSDH Situation Room on the status of public health and/or medical system response activities. This communication will occur to allow for sufficient State-level planning in case the incident escalates beyond Tier II or III.

Tier IV: Management of State Response and Coordination of Intrastate Jurisdictions

The Tier IV level response in Oklahoma will involve activation of the State Emergency Operations Plan (EOP) and Emergency Operations Center (EOC). State-level monitoring of local response activities will likely be ongoing from the outset of the event. At the point that it becomes evident that the incident will exceed the capabilities of the local jurisdiction, the Oklahoma Department of Emergency Management (OEM) will activate the State-level (Tier IV) response. The Tier IV response will result in assisting the affected jurisdiction's management of the incident by providing available State resources, and coordinating incident management with other affected States. The State will not assume overall command and control of the incident unless requested to do so by the local jurisdiction. The Tier IV response will also assist in coordinating resources available from other States (Tier V), and integrating response efforts with Federal partners (Tier VI).

Medical System Response Activities

The primary role of the State-level ESF-8 in Tier IV will be to assist in responding to the public health and medical needs of the affected jurisdiction(s). At the Tier IV level, the HMC will still function as the local coordinator for public health and medical services. The OSDH Situation Room will be activated as a component of the State EOC to support the response activities of the local HMC. OSDH will maintain communications with the State EOC and local HMC and coordinate the inflow of needed supplies, equipment, volunteers, etc. A State-level ICS will be activated to manage support activities at the Tier IV level. The ICS staff located in the OSDH Situation Room will work with the local HMC to coordinate the deployment of available medical supplies, equipment and pharmaceutical caches. OSDH will also interact with the other State-level Emergency Support Functions to ensure all the needs to the public health and medical system of the affected jurisdiction(s) are met.

Communication, Coordination and Notification

OSDH will work with OEM and the affected jurisdiction(s) to establish a communication plan designed to monitor and assess response activities related to ESF-8. Information concerning the local public health and medical system response will be transmitted using available technologies. OSDH will initiate a data tracking system designed to compile critical information and support requests related to the public health and medical system response activities. This information will be maintained in the OSDH Situation Room and utilized by the ESF-8 Command and General Staff (C&GS) to conduct support operations at the State level. OSDH will utilize *EMSystem* to monitor hospital status and capacity on a statewide basis. The information collected may include the status of the ED, bed capacity, available specialist physicians and available supplies and equipment. The system can also be utilized to issue alerts and notifications regarding the incident. Hospital infection control practitioners (ICP) can also transmit data directly to OSDH

over its PHIDDO system concerning specific clinical related data. In addition, OSDH may utilize the Health Alert Network (HAN) to issue information concerning the event to first response agencies.

Mutual Aid Requests and Deployment of Public Health and Medical System Volunteers

State and local jurisdictions will request mutual aid assistance under the Oklahoma Emergency Management Compact. Under the terms of this statute, all resources necessary to respond to an incident can be mobilized and deployed by OEM as a component of emergency response operations. It serves as a statewide MOU between agencies involved in response operations, and eliminates the need for individual MOUs between various agencies and organizations. The *Oklahoma MRC* (which encompasses ESAR-VHP) will be activated by the Commissioner of Health (or designee), MMRS Director and/or an RMRS Coordinator. Upon activation, the MRC State Coordinator is assigned a role under the OSDH ICS and coordinates the notification, staging and deployment of volunteers at the State level. Use of volunteers by the local jurisdiction is coordinated by the assigned ICS function at the Tier I, II and III level. Coordination between the incident management functions of each level is critical in order to assure effective use of volunteer resources.

Tier V: Interstate Regional Management Coordination

OEM will lead Oklahoma's efforts at the Tier V level. Under the State EOP each ESF will coordinate activities with OEM at the State EOC. Aid and assistance offered by other states will be managed through EMAC at the State EOC. All support agencies will utilize EMAC as the primary tool to request the resources and support necessary to response to the incident.

Medical System Response Activities

The State of Oklahoma's Commissioner of Health is responsible for ensuring the coordination of all public health and medical service activities at the State level. As part of the OSDH ICS, an ESF-8 Liaison Officer will be assigned to the State EOC. The ESF-8 Liaison Officer will maintain communications with the OSDH Situation Room to stay abreast of local and State ESF-8 response activities, and report pertinent information related to overall State response operations. The ESF-8 Liaison Officer will also function as the primary EMAC coordinator for public health and medical services (ESF-8). The ESF-8 Liaison Officer will be the primary point of coordination of interstate assistance related to public health and medical services. Working under the ICS, the ESF-8 Liaison Officer will process information regarding public health and medical system needs to other states using the EMAC system, and will forward responses to the appropriate ICS Command or General Staff member for action.

Communication, Coordination and Notification

Communication and coordination of Tier V activities will be coordinated at the State level under the provision of the State EOP. Requests for assistance from other states will be made using EMAC and will be based on the needs communicated by the affected jurisdictions. The State EOC will function as the EMAC clearing house for the State of Oklahoma. Resource requests from the local jurisdiction(s) will be communicated to the appropriate ESF Officer, and EMAC requests will be developed and issued from the State EOC to other states.