
MASS FATALITY RESPONSE IN TEXAS: A STRATEGY FOR THE FUTURE

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THE CHIEF MEDICAL EXAMINERS OF TEXAS

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EXECUTIVE SUMMARY

On April 17, 2014 the Chief Medical Examiners from across the state of Texas held a workshop at the Harris County Institute of Forensic Sciences in Houston, Texas to discuss the potential for the development of a statewide strategy for mass fatality incident response. The consensus among the attendees was that there is indeed a need for a system that is capable of providing operational medicolegal support to local jurisdictions, particularly those that do not have a medical examiner's office. The group developed consensus regarding the structure and components of the system. In the opinion of the Chief Medical Examiners in Texas, a statewide mass fatality response system should: 1) be a state health and medical function that is housed on the campus of a state public university; 2) be eligible for and seek funding from multiple sources including the presiding state agency, the housing university, and federal grant programs; 3) develop a statewide rather than a regional or local response strategy; 4) incorporate subject matter experts from the public and private sector, and; 5) have a mission that includes deployment, training, and research. This paper provides a statement of the problem that has precipitated this effort and a summary of the solution as envisioned by the Chief Medical Examiners from across the state.

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STATEMENT OF THE PROBLEM

Medicolegal death investigation is an essential, statutorily regulated local government function. However, both the United States and Texas death investigation systems have well-documented structural shortcomings, one of which is the degree of disparity between individual jurisdictions in their capabilities to manage various components of death investigation.¹ The potential manifestation of this disparity in the management of a large mass fatality incident in Texas was the impetus for the development of this paper.

The Texas Code of Criminal Procedure Article 49 details the responsibilities of the medicolegal authority (Medical Examiner or Justice of the Peace) in the investigation of unexpected fatalities. According to this statute the medicolegal authority is responsible to perform, or arrange and pay “a reasonable fee” for the completion of the following for inquests that require them: death scene response and investigation, decedent removal and transport, postmortem examination (including analysis for the determination of cause and manner of death and for identification of the deceased), and management of personal effects in the absence of next of kin. These responsibilities apply whether a county fulfills its medicolegal responsibilities with a large medical examiner’s (ME) office or a single Justice of the Peace (JP). Similarly, the responsibilities of the medicolegal authority remain the same in the management of multiple fatalities (regardless of the number) as with the management of a single fatality. The law requires that counties with more than one million residents establish a medical examiner’s office, and defines a medical examiner’s office as an agency within which postmortem exams are performed by a physician. There are currently only 14 medical examiners offices in Texas, located in the larger population centers around the state. Thus, medicolegal authority for the vast majority of the geographical area of the state of Texas is maintained by Justices of the Peace, elected officials who have the responsibility to initiate and perform inquests, but who do not necessarily have any medical or investigative training or experience. The gap in the capabilities between Justice of the Peace and Medical Examiner jurisdictions is manifest in highly variable approaches to death investigations. The infrastructure within which Justices of the Peace operate is substantially less robust than their medical examiner counterparts, often resulting in little to no access to decedent storage, transportation assets, scene investigation expertise, or local autopsy capability. The statutory requirement of certain medicolegal functions has resulted in dependence, by Justice of the Peace jurisdictions on neighboring medical examiner’s offices or private pathology firms. This has resulted in an intersecting network of informal arrangements by which medical examiners offices perform autopsies for Justice of the Peace jurisdictions. These are generally non-binding agreements that do not obligate the medical examiner’s office to accept remains for autopsy, an arrangement often misunderstood by the Justice of the Peace jurisdiction which assumes that the medical examiner’s office is under contract to perform autopsy services. Additionally, these arrangements usually only include autopsy services and do not extend to scene response, transport, or storage. The Justice of the Peace retains the responsibility to issue the official cause and manner of death regardless of who completes the postmortem exam, and is not obligated to record the cause and manner of death determined by the contract pathologist on the official death certificate.

Development of a remedy for the systemic shortcomings of the medicolegal death investigation system in Texas is outside of the scope of this paper. However it is relevant in that the deficiencies

¹ Strengthening Forensic Science in the United States: A Path Forward, National Academy of Forensic Sciences, 2009

of the system for the management of fatalities on a daily basis become exponentially more significant in the mass fatality context. There is no established state framework to support local medicolegal operations following a mass fatality incident. In fact the current structure that compromises mass fatality preparedness by operating on the assumption that these informal arrangements between JP jurisdictions and neighboring medical examiners offices will apply in a mass fatality context, thus creating the illusion of a mutual aid structure that can support mass fatality incident response. The tenuous mutual aid strategy that currently characterizes mass fatality preparedness in Texas is not a reasonable strategy for response to a large incident of the variety that has occurred throughout the United States, and is also not well suited for the comprehensive management of smaller incidents. Although the vast majority of mass fatality incidents result in a relatively low number of fatalities, even these small incidents represent a considerable and often insurmountable burden to rural Justice of the Peace jurisdictions. The current system can absorb these incidents as the recent fertilizer plant explosion in West, Texas illustrated, but the response is piecemeal and tenuous. The medicolegal responsibility in these incident responses is often met by multiple otherwise unaffiliated entities including multiple medicolegal jurisdictions, public health, funeral industry personnel, emergency management, and aid agencies. Additionally, though medical examiners jurisdictions are not legally obligated to provide mass fatality incident operational assistance to neighboring jurisdictions, it is likely that these larger jurisdictions will inherit extralocal responsibilities in the absence of an existing strategy for mutual aid. Thus it is of critical importance for the state of Texas to develop a strategy for mass fatality incident response that provides assistance to the resource poor JP jurisdictions while protecting the resource rich medical examiner jurisdictions.

STRATEGY

We insist that in spite of the current state of the medicolegal death investigation system, Texas is well positioned to move quickly toward the development of an effective system for mass fatality incident response. This position is based in part on the high degree of expertise that is scattered throughout the state, the presence of mass fatality specific assets (in the form of equipment and response teams) that already exist in the state, and the willingness for the appropriate parties on the state level to invest in a strategy that will mutually benefit Justice of the Peace jurisdictions, medical examiners offices, public officials, and the citizens of Texas. The state of Texas is replete with highly specialized subject matter capabilities that are currently not connected for mass fatality response and thus currently unavailable to assist local jurisdictions in an incident response. This subject matter expertise is distributed around the state in medical examiners offices, private pathology services, university departments, public health departments, health and human services departments, hospitals, and private industry. Additionally there is a significant array of mass fatality response assets already present across the state including public (Texas Task Force 1, Texas Military Forces) and private (Texas Funeral Directors Association) response teams, refrigerated storage assets, portable morgue facilities, human remains pouch caches, etc. It is now necessary to identify and incorporate all of the personnel and equipment assets from around the state into a single comprehensive network that can be leveraged in response to a mass fatality incident, and to develop a comprehensive command and control strategy according to which a mass fatality incident response system will operate. This will involve acquiring answers to questions regarding funding, ownership, deployment, and maintenance of a mass fatality response system. The answers to these questions may lie with an array of entities, but the primary contributors and recipients of

assistance via a mass fatality response system are the medicolegal jurisdictions across the state (primarily the medical examiners offices).

For this reason, on April 17, 2014 a meeting of the Chief Medical Examiners from across the state of Texas was held at the Harris County Institute of Forensic Sciences. The goal of meeting was twofold: first, to determine whether the Chief Medical Examiners as a group agreed that there was a need for a statewide mass fatality response system to deal with the above described problems, and if so, to develop a consensus among the Chief Medical Examiners on the structure of such a program. There was immediate agreement on the part of the Chief Medical Examiners that there does exist a need for a mass fatality response strategy in Texas. During the course of the meeting consensus was reached on the overall function and structure of the system as Chief Medical Examiners envision it. Via facilitated discussion, including consideration of existing medicolegal and non-medicolegal response system models, the group considered the: 1) framework, 2) components, and; 3) personnel options to incorporate into the proposed system. A brief summary of the proposed strategy follows. For the sake of clarity, the rest of this paper will refer to the system that is under development as the Texas Mass Fatality Operations Response Team (TMORT).

COMPONENTS AND PERSONNEL

A detailed discussion of the operational components and the variety of personnel to include into the TMORT structure was part of the April 17 meeting. In summary, the opinion of the medical examiners in Texas is that TMORT should be inclusive of all medicolegal operational components, but should not extend into mortuary (funerary) services and/or family assistance support operations. In other words TMORT should include capabilities in victim accounting, incident site operations, morgue operations, transport operations, storage operations, Victim Identification Center operations, long term storage/release services, and fatality-specific data management services.

The discussion of personnel expertise to include in the TMORT system reached similar consensus. As with the components, the group consensus was that the system should include only fatality management personnel and that the mission should not extend to mortuary services or family assistance support operations. Table 1 lists the components and personnel to be included in the TMORT structure.

Table 1. TMORT Capabilities and Personnel Consensus.

Capabilities	Personnel Categories
Victim accounting	<i>Forensic</i>
Site investigation and operations	Scene investigators, pathologists, anthropologists autopsy assistants, dentists, radiographers, photographers, fingerprint technicians, DNA technicians
Human remains transport	
Human remains storage	
Victim Identification Center operations	
Data management	<i>Support</i>
Long term storage/release services	Victim Information Center personnel (family interviews, briefings, public information support)

FRAMEWORK

The discussion of the preferred framework of the system addressed the following topics: 1) housing agency, 2) funding source, 3) deployment strategy, 4) command and control, 5) multi-agency cooperation, 6) training strategy, and 7) whether or not the system should include a research component. Each of these structural considerations is considered in the following paragraphs, and a summary of each is provided in table 2.

Housing

The consensus regarding housing is that TMORT would benefit from being housed on a university campus. This solution would benefit TMORT because the vast majority of the time, TMORT will essentially be a training entity. The anticipated university benefit comes in the form of student and faculty access to an active response system as well as a research-focused facility and the associated network of subject matter expertise.

There is precedent for a university-based mass fatality response framework in the United States. The Florida Emergency Mortuary Operations Response System (FEMORS) is a partnership between the state of Florida and the William R. Maples Center for Forensic Medicine at the University of Florida that was created to develop and implement protocols for response to mass fatality incidents within the state of Florida. FEMORS includes trained personnel from multiple state and local agencies, and maintains an array of specialized mass fatality specific equipment and resources. The FEMORS mission, “to assist and support the local District Medical Examiner’s Office, Florida Department of Law Enforcement and other responding agencies, in the event of a mass fatality incident as directed by the Florida Department of Health” represents a valuable and very successful model for Texas to emulate.

Funding

The Chief Medical Examiners envision TMORT as a state entity funded in part by the state of Texas, a housing university, and grant awards. FEMORS is co-funded by the University of Florida and the Florida Department of Health and receives funding from federal grant programs including the CDC Bioterrorism, National Hospital Preparedness (HPP) and Public Health Emergency (PHEP) Programs. TMORT is eligible for the same, and additional grant funding programs.

Deployment strategy

FEMORS maintains a single team that deploys around the state. The Texas medical examiners were unanimous in their opinion that TMORT should adopt a similar state team structure, the consensus being that the alternative, a regional approach, would place an unreasonable burden on the larger medical examiners offices in the state. Thus, similar to FEMORS, the proposed TMORT deployment strategy is to roster and deploy pre-credentialed subject matter expertise from across the state rather than from neighboring jurisdictions.

Command and control

The consensus among the Chief Medical Examiners regarding the command and control role of TMORT in a mass fatality response is that TMORT will not seek or assume medicolegal authority in any local jurisdiction. This responsibility will remain with the local medicolegal authority regardless of the circumstances of a particular incident. However, upon request, TMORT could provide operational command assistance to a local medicolegal authority. TMORT will operate within the Incident Command Structure (ICS), to ensure compatibility of its command structure with support agencies.

Multi-agency coordination

A number of agencies, including Texas Task Force 1, the Texas Funeral Directors Association, and Texas Military Forces Joint Task Force 71 (Fatality Search and Recovery Team) maintain mass fatality response capabilities that are valuable to the TMORT system. The consensus of the Chief Medical Examiners was that TMORT will coordinate with these agencies as independent entities, and incorporate them into TMORT's training and exercise curriculum.

Training strategy

The Chief Medical Examiners envision TMORT as a training entity that is prepared for, and capable of deployment following activation by the state of Texas. The training curriculum is to be based on the assumption that TMORT will deploy responders to fill roles that are within their range of expertise. This means that the trainings that TMORT provides will be operational trainings in morgue, site, and victim information center operations rather than discipline-specific trainings. Exercises will also be an important component of the TMORT training curriculum, and the Chief Medical Examiners envision a rotating schedule of mass fatality site, morgue, and family assistance center exercises. These exercises will require significant cooperation between local, state, federal, private, and university agencies and TMORT will manage these relationships. A substantial just-in-time training curriculum will also be important to the success of TMORT and will require the development and maintenance of field operating guides and job action sheets. The training focus of the TMORT program is another reason that a university affiliation is important.

Research

TMORT will maintain a valuable research focus. Currently, mass fatality preparedness is largely informed by anecdotes and the experience of its participants, and there is a need for research to support progress for future initiatives. Specifically, scientific support is needed to bolster commonly held opinions regarding the reality of mass fatality incident characteristics. Broad research questions that TMORT may address include: what is the historical reality of mass fatality incidents in the United States and how has this changed? Are our preparations meeting this reality? How does the risk of particular types of mass fatality incidents vary across the state/country/world? How does fragmentation of human remains impact the duration of an incident response and how should this impact which technologies are utilized? What is the financial and logistical impact of a large scale mass fatality incident response on a local jurisdiction? What impact have/will recent legal and government opinions regarding the forensic sciences had/have on mass fatality response? These are questions that require answers supported by research, and a

university-based system is uniquely suited to address them because of access to students and faculty in a research environment.

Table 2. TMORT Framework Consensus.

Structural Consideration	Proposed Solution
Housing Agency	Public State University
Funding Source	Combination of state, university, and grant funding
Deployment Strategy	Single team with members from across the state (no regional teams)
Command and Control	<u>No</u> transfer of medicolegal authority. Optional transfer of operational control
Multi-agency Cooperation	Coordinate with outside agencies as independent agents
Training Strategy	TMORT will primarily exist as a training and research entity that can be deployed as a response agency. Operational, rather than discipline-specific training focus that leverages university, SME expertise
Research Component	TMORT will conduct practical, theoretical, and survey research to answer questions that complicate mass fatality preparedness

MANAGEMENT

TMORT is a proposed training and response entity that coordinates with numerous outside agencies and a variety of subject matter experts to ensure that the state has a rapidly deployable medicolegal response support capability that can provide assistance to local jurisdictions following mass fatality scenarios that overwhelm local capabilities. The development and maintenance of the TMORT program requires a dedicated staff of personnel with specific roles related to management, training, logistics, and scientific research. The FEMORS model again provides precedent for a core management strategy. FEMORS is currently managed by five full-time personnel, and maintains a team of approximately 180 pre-credentialed and trained subject matter experts in anthropology, pathology, odontology, radiology, fingerprint analysis, DNA and mortuary analysis. TMORT will not include a mortuary operations component, as the existing state capability is robust. Table 3 lists the subject matter personnel classifications that the proposed TMORT structure would incorporate, as well as the associated responsibilities and qualifications.

Table 3. Proposed TMORT Subject Matter Positions.

Proposed Position Title	Duties	Required Qualifications
Rapid Assessment Team	Performs Go Team Duties as Back-up to TMORT Commander	Mass fatality disaster response experience, management and administrative experience
TMORT Commander	Provides leadership and direction under the authority of the local medicolegal authority for all aspects of mass fatality management	Mass fatality disaster response experience; management AND administrative experience

TMORT Deputy Commander	Support TMORT commander in operational coordination, acting commander in TMORT Commander absence	Mass fatality disaster response experience; management AND administrative experience
Incident Site Team Leader	Supervises human remains search and recovery, personal effects, storage, and transport	Mass fatality disaster response experience; management AND administrative experience
Morgue Team Leader	Supervises disaster morgue operations	Mass fatality disaster response experience; management AND administrative experience
Victim Information Center Team Leader	Supervises Victim Information Center	Mass fatality disaster response experience; management AND administrative experience
Pathologist, Forensic	Examines recovered remains, details anatomic observations; May serve as section leader for Pathology	Forensic Pathology M.D. or D.O., ABP certified in anatomical and forensic pathology
Pathologist, M.D., or D.O.	Examines recovered remains and details anatomic observations under the supervision of a forensic pathologist	M.D. or D.O. without ABP certification
Anthropologist, Forensic	Search or examination of bone or fragments; May serve as section leader for scene or morgue Anthropology	Ph.D., ABFA certification with forensic/postmortem experience
Anthropology specialist	Search or examination of bone or fragments under the supervision of a forensic anthropologist	M.A. or Ph.D. without forensic/postmortem experience
Odontologist, Forensic	Examines dental remains, processes antemortem dental records for ID; May serve as section leader for ante or postmortem Odontology	Licensed Dentist with forensic/postmortem experience
Odontologist, Non-Forensic	Examines dental remains, processes antemortem dental records for ID under the supervision of a forensic odontologist	Licensed Dentist without forensic/postmortem experience
Administrative Officer	Coordinates Administrative and Financial documentation duties	Administrative and Financial Experience
Data Management specialist	Established and troubleshoots network operation and database modifications; assists command staff	Programming, IT or MIS Experience, MS Excel power user
Medicolegal death investigator	Identification coordinator; postmortem data entry and VIP searching for possible ID linkages; May perform VIC interviews or contact families for information; May serve as section leader for Victim Information Center, Medical Investigations, Admitting, Photography, Personal Effects, Remains Inventory Management; May assist with pathology, anthropology, odontology, DNA, or scene search sections	Medicolegal Death Investigator, or Law Enforcement Death Investigation Detective

Morgue Officer	May fill the following roles: admitting, personal effects, radiography, remains inventory, VIC interviewer. Provide training to Morgue Officer candidates	Medical examiner personnel, credentialed graduate students
Safety and Health Officer	Monitors proper PPE usage and safety factors in the morgue environment. Manage well-being of scientists	Chemistry/bloodborne precaution background
DNA Specialist	May serve as Section Leader for postmortem DNA collection and VIC DNA Section for specimen collection from families	Laboratory level forensic DNA experience
Fingerprint Specialist	Obtains print impressions from remains or antemortem specimens; Compares ante and postmortem prints for ID	Postmortem Fingerprint Experience or Latent Print Analyst
Forensic Specialist	Assists DNA, pathology, anthropology, odontology, photography, or personal effects sections	Laboratory level Forensic Experience: Toxicology, Chemistry, Firearms, Anthropology etc.
DPMU Team	Equipment managers and logistics coordinators	Administrative and/or logistics experience
Evidence Specialist	Scene search and recovery; Assists photography, personal effects, pathology (as scribe), anthropology (as scribe), odontology (as scribe), or DNA sections	Crime scene technician experience
Photographer	Scene and morgue photography.	Death scene, morgue photography training/experience
Autopsy Technician	Assists pathology, anthropology, odontology, or DNA sections; May serve as section leader for radiography	Medical examiner morgue autopsy or radiography experience
Data Entry	Performs data entry; Helps in any other clerical capacity. Provide training to Data Entry candidates	Data entry, Windows, and MS office proficiency
VIC Specialist	Interviews families in Victim Information Center for gathering information on missing persons; Performs data entry of ante mortem information. Provide training to VIC Specialist candidates	Training in VIC
Administrative Specialist	Helps in any clerical capacity including data entry, records clerk, or morgue scribe. Provide training to Administrative Specialist candidates	Clerical/basic computer skills
Dental Assistant	Assist odontologists at table or in clerical capacity, or serve as body escort or scribe	Dental Hygienist or Assistant
Morgue Assistant	Human remains escort, scribe, storage inventory. Provide training to Morgue Assistant candidates	Pre-credentialed personnel with just-in-time training

SUMMARY

In summary, the State of Texas is in the process of developing a statewide mass fatality response system that is capable of providing operational assistance to local medicolegal authorities following incidents that overwhelm local resources. Much of what is required to build this system, including subject matter expertise, assets and equipment, already exists in Texas. This paper describes the medical examiners vision of how to connect these disjointed pieces and incorporate them into a structure that is simultaneously nimble enough to provide rapid deployable support, and robust enough to remain valuable to its sponsors between deployments. A university affiliation is particularly important to the latter. TMORT will require constant and varied training of its personnel to ensure its readiness and capabilities when needed, and it is this training that ensures the value of the system to its sponsoring agencies. In addition to being required of and available to TMORT membership, these trainings can benefit non-TMORT personnel including students and external agencies. In addition, scientific, rather than anecdotal research is needed to support future mass fatality preparedness initiatives, and a university environment is conducive to both. In summary, the Chief Medical Examiners in the state of Texas have expressed their vision for coordinated mass fatality response in Texas. This vision includes the development of the Texas Mass Fatality Operations Response System (TMORT) that is a permanent, university-affiliated entity with core personnel that leverages existing personnel and equipment.