

OSAC 2022-N-0020 Standard for Mass Fatality Incident Management

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Medicolegal Death Investigation Subcommittee
Medicine Scientific Area Committee
Organization of Scientific Area Committees (OSAC) for Forensic Science*



OSAC Proposed Standard

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Standard for Mass Fatality Incident Management

Foreword

Mass fatality incidents are complex and may present commingled biological remains, personal effects, and other probative evidence distributed widely across the scene. The information presented herein is compatible with many of the standard principles used in crime scene and medicolegal death investigation; however, these practices are specifically designed to address the unique challenges faced by the high-volume victim identification operations commonly associated with mass fatality incidents. It is possible that the magnitude of the incident, the high numbers of fatalities, and the size of the scene may exceed local capabilities and resources for conducting an efficient, effective, and timely recovery and identification efforts. Such challenges demand a coordinated multidisciplinary response including law enforcement, fire-rescue, medicolegal and forensic practitioners, and other investigative assets.

Disaster victim identification practitioners are encouraged to develop, implement, exercise, and review their mass fatality incident response operating procedures in light of these standards, and to update their procedures as needed. It is anticipated that these standards will evolve as future technologies emerge.

This standard is put forth by the Disaster Victim Identification (DVI) Task Group within OSAC Medicolegal Death Investigation (MDI) Subcommittee. This document is intended to be the overarching standard in a series of standards and best practices^{1, 4, 5, 6, 9, 10 & 11} developed by the DVI Task Group. This document originated from the Scientific Working Group on Disaster Victim Identification (SWG DVI).

Keywords: *mass fatality incident, mass fatality management, disaster victim identification*



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1. Scope

This document provides a standard for the elements to address when planning for and implementing mass fatality management operations. The standard is intended for the medicolegal authority responsible for the overall management of a mass fatality incident. This standard lists the procedures and protocols that a forensic science service provider should have to successfully manage a mass fatality incident but does not fully specify the content that those procedures and protocols must have. This standard does not substitute for standards that will more specifically set forth minimum requirements or best practices for the procedures and protocols mentioned here.

2. Normative References

The following normative references are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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3. Terms and Definitions

For the purpose of this document, the following definitions and acronyms apply.

3.1.

Body Collection Point (BCP)

A location providing temporary refrigerated storage of remains (whole or fragmentary) and related evidence while decedent recovery operations are ongoing until transport to a morgue or other facility where the remains and evidence will be processed for identification and disposition.

3.2.

Disaster Victim Identification (DVI)

Processes and procedures for identifying and re-associating human remains via the application of scientific methods, as a component of mass fatality management.

3.3.

Family Assistance

The provision of services and information to the family members of those killed and to those injured or otherwise impacted by the incident.

3.4.

Family Assistance Center (FAC)

The focus of services for family members following an incident. FACs are designed to meet the immediate and short-term needs of family members: safety, security, physiological needs (food, sleep), information (about the victim recovery and identification process and the investigation), and crisis/grief counseling. FAC is defined in NTSB Federal Family Assistance Plan for Aviation Disasters 2008. The FAC is designed to provide information to families and friends of victims, decision-makers, the media, and the public, regarding the on-going operations. The role of the medicolegal authority at the FAC includes gathering antemortem data via the Victim Information Center and notifying the legal representative authorized to direct disposition regarding the deceased. FACs can be physically and/or virtually established sites.

3.5.

Grouped Remains

Biological tissue that is either not identifiable with current technology, or because of other constraints is not associated with a particular decedent (also referred to as common tissue).

3.6.

Incident Characterization

Provides an initial assessment of the incident, allowing leadership to make appropriate decisions regarding operational decisions.

3.7.

Incident Command System (ICS)

A management system designed to enable effective and efficient domestic incident management by integrating a combination of facilities, equipment, personnel, procedures and communications operating within a common organizational structure. ICS is defined in FEMA National Incident Management System, 3rd ed, 2017.

3.8.

Joint Information Center (JIC)

A facility in which personnel coordinate incident-related public information activities. The JIC serves as the central point of contact for all news media. Public information officials from all participating agencies co-locate at, or virtually coordinate through, the JIC. JIC is defined in FEMA National Incident Management System, 3rd ed, 2017.

3.9.

Manifest of unaccounted for persons

Working list of persons potentially involved in an incident which may include deceased, injured, and otherwise unaccounted for persons.

3.10.

Mass fatality incident (MFI)

Any incident which produces fatalities of a sufficient number or complexity that special operations and organizations are required.

3.11.

Mass fatality management

The overarching operation involving processing a disaster incident. This includes communicating with victim families; search and recovery, processing and identification of the dead, and returning them to their families. Fatality management operations are split into distinct roles including scene operations, morgue operations and family assistance (aka victim information). The protocols for each are held within the individual medicolegal authority's mass fatality plans.

3.12.

Medicolegal Death Investigation Authority

The medical examiner, coroner or other office responsible for medicolegal death investigation in a given jurisdiction. The term medicolegal authority is an abbreviation for medicolegal death investigation authority, and when used in this document, shall be construed as though it were written out in full.

3.13.

Victim Information Center (VIC)

The Victim Information Center (VIC), formerly known as the Victim Identification Center, is a component of the Family Assistance Center (FAC) operation. The VIC is a controlled area within the FAC where the acquisition of antemortem data occurs to enable the identification of victims of a mass fatality incident (MFI). Establishment of the VIC is the responsibility of the local medicolegal authority.

4. Requirements

Medicolegal jurisdictions shall establish an organizational response framework to include an operational definition of a mass fatality incident and define objectives for successful operations. This should include a plan for operating within and alongside local, state, and federal government entities in addition to non-government organizations (NGO) and private industries.

4.1. Operational Definition of Mass Fatality Incidents (MFIs)

A mass fatality incident can generally be defined as any incident involving a number of fatalities which exceeds the resource capacity of a medicolegal authority to respond with internal resources, while maintaining day-to-day operations. Local jurisdictions shall develop a definition of a mass fatality incident which serves as an operational trigger, allowing for rapid and effective decision-making when minimal information is available. This definition shall consider incident characterization, analysis of hazards, and assessment of capacities (e.g. human, equipment, structural and financial resources).

Some factors in determining whether an incident should be classified as an MFI include:

- a) The number of potential fatalities based upon the preliminary incident characterization.
- b) The need for protracted or complex victim recovery operations.
- c) Complicating circumstances:
 - i) Scene hazards such as contamination by chemical, biological, radiological, nuclear or explosive agents or materials
 - ii) Factors complicating the recovery such as fragmentation of remains, fire damage, land vs. in-water; scene access and other physical / environmental challenges

- iii) The need for multi-agency response or cross-border political and diplomatic considerations.

4.2. Operational Objectives of MFI Management

Incident-specific objectives shall be established and allow for adaptation. Operational objectives shall include the following:

- 1) Establish medicolegal jurisdiction over the fatality management operation. The legal authority for conducting disaster victim recovery and identifications resides solely with the medicolegal authority in the jurisdiction where the disaster incident occurred.
- 2) Articulate roles and responsibilities. Incidents are multi-agency responses requiring a collaborative effort between local, state, and federal agencies, in addition to non-governmental organizations (NGO), tribal entities and private industry.
- 3) Establish a system for documentation of operations and accountability of resources.
- 4) Develop a health & safety plan to ensure that operations are conducted in a safe manner. The plan shall include a strategy for responder critical incident stress management, self-care, and situational awareness.
- 5) Establish a strategy for victim accounting which shall include a centralized mechanism for collecting and sharing data on those missing and potentially involved in the incident.
- 6) Document and preserve all remains, personal effects, and other physical evidence germane to disaster victim identification operations.
- 7) Recover, transport, and process remains and personal effects in a dignified manner.
- 8) Adhere to the standards of disaster victim identification.
- 9) Certify cause and manner of death.
- 10) Coordinate with local authorities to integrate into Family Assistance Center (FAC) operations. The medicolegal authority is responsible for establishing a Victim Information Center within the FAC.
- 11) Exchange factual and timely information with families in a compassionate manner and, where possible, in advance of public release of information.
- 12) Coordinate the release of the victims' remains to their legal representative, accounting for fragmentation and protracted identifications.
- 13) Demobilize operations and prepare an after action report. Incorporate lessons learned in future responses.

4.3. Policy Decisions and Considerations Prior to Commencing Operations

Policy decisions may be the sole responsibility of the medicolegal authority, or in part under the authority of the presiding jurisdiction(s) which may include stakeholders with overlapping responsibilities or functions within the incident operation.

4.3.1. The medicolegal authority shall develop strategies to address **scene operations**⁹.

4.3.1.1. Assert jurisdiction for human remains management in scene operations.

4.3.1.2. Integrate a representative with decision-making authority in the on-scene command structure to ensure top-down integration is acknowledged, and MFI operational goals are considered in incident planning.

4.3.1.3. Assess the incident characteristics through early on-scene presence with consideration of:

- i) Site ingress and egress
- ii) Hazmat and safety concerns
- iii) Body collection points and transportation of remains
- iv) Equipment and personnel needs
- v) Factors complicating remains recovery

4.3.1.4. Develop a scene processing and victim recovery plan in coordination with other responding agencies.

4.3.2. The medicolegal authority shall develop strategies to address **disaster morgue operations**⁴.

4.3.2.1. Separate day-to-day operations from DVI operation, where necessary.

4.3.2.2. Establish the location of a disaster morgue.

4.3.2.3. Establish the workflow for disaster morgue operations.

4.3.2.4. Establish a morgue reference numbering system that is simple, intuitive and scalable.

4.3.2.5. Establish morgue protocols for processing and analyzing human remains.

4.3.2.6. Determine criteria for analyzing fragmented human remains.

4.3.2.7. Establish a data management system and document retention plan for all postmortem data collected.

4.3.3. The medicolegal authority shall develop strategies with other local agencies to address **family engagement** and **victim information center (VIC) operations**.

4.3.3.1. Participate in establishing the location of the VIC.

- i) Consideration should be given to separate staging areas for the media, access points for families, and rest areas for staff.

4.3.3.2. Initiate family communications via briefings and outreach.

4.3.3.3. Coordinate antemortem data collection, including DNA sampling.

4.3.3.4. Establish a data management system and document retention plan for all antemortem data collected.

4.3.3.5. Coordinate services with other response agencies within the Family Assistance Center.

4.3.4. The medicolegal authority shall develop strategies to address **victim accounting**.

4.3.4.1. Develop a centralized reporting process of unaccounted for persons.

4.3.4.2. Develop a manifest of unaccounted for persons potentially involved in the incident.

4.3.4.3. Coordinate with the Joint Information Center to provide media with current, accurate information regarding the numbers of missing persons, recovered human remains, and identified decedents.

4.3.5. The medicolegal authority shall develop strategies to address **disaster victim identification**.

4.3.5.1. Conduct a deliberate process of comparing antemortem data with postmortem data to yield tentative identifications for reconciliation.

- 4.3.5.2. Establish a reconciliation process to determine the criteria for an identification threshold in order to review and confirm or reject tentative identifications presented.
- 4.3.5.3. Establish a policy for re-associating and releasing all fragmentary remains associated with a single individual.

- 4.3.6. The presiding jurisdiction shall develop strategies to address **storage of remains and personal effects**.
 - 4.3.6.1. Establish a transportation plan for movement of remains and personal effects.
 - 4.3.6.2. Establish storage of remains.
 - i) A body collection point for on-scene collection of remains and evidence.
 - ii) Temporary storage for all remains undergoing processing at the morgue.
 - iii) Long term temporary storage of unclaimed and unidentified remains.
 - 4.3.6.3. Establish policy regarding future access to the remains for additional analysis or release to the legal representative.
 - 4.3.6.4. Establish a procedure for preservation, chain of custody, storage and release of personal effects.

- 4.3.7. The presiding jurisdiction shall develop strategies to address **communication with families and release of remains and personal effects**.
 - 4.3.7.1. Consider applicable state law governing data privacy.
 - 4.3.7.2. Consider applicable state law governing the right to control final disposition and release of personnel effects.
 - 4.3.7.3. Strategy should balance religious/cultural considerations with the medicolegal responsibility.
 - 4.3.7.4. Medicolegal jurisdictions should be forthcoming and transparent regarding the condition of remains and the potential for fragmented remains to be identified over an extended period of time.
 - 4.3.7.5. The medicolegal authority should establish a system to facilitate the wishes of the legal representative authorized to direct disposition regarding subsequent notifications, allowing for future modifications.
 - 4.3.7.6. Establish a consistent, direct and long-term contact for the legal representative with the medicolegal authority.
 - 4.3.7.7. Consult with the organized family groups to develop a final disposition strategy for unclaimed and grouped remains.

- 4.3.8. The presiding jurisdiction shall develop strategies to address **logistics support for all operations (scene, morgue and VIC)**.
 - 4.3.8.1. The medicolegal authority has the responsibility to manage the overall fatality management operation regardless of current resource capabilities. Utilization of the incident command structure (ICS) is highly recommended.
 - 4.3.8.2. Identify the positions and quantities of personnel required to support mass fatality management operations.
 - 4.3.8.3. Identify the types and quantity of equipment and supplies required to support mass fatality management operations.
 - 4.3.8.4. Develop site, infrastructure and security requirements for scene, morgue, VIC operations and support staff.
 - 4.3.8.5. Coordinate with local emergency management to submit and fill resource requests to support mass fatality management operations. Resource requests that cannot be sourced locally should be escalated to partnering jurisdictions, the state and federal governments.

- 4.3.8.6. Resource requests should include all support required to operate the equipment (e.g., personnel, fuel, maintenance).
- 4.3.9. The medicolegal authority shall develop strategies to address **quality assurance**.
- 4.3.9.1. Ensure qualified personnel have been provided the training necessary to perform those tasks assigned to them.
- 4.3.9.2. Establish a feedback mechanism between the scene, VIC and morgue operations specific to:
- i) Packaging, storing, labeling and transporting remains to mitigate damage and commingling.
 - ii) Packaging, storing, labeling and chain of custody for personal effects and evidence collected from antemortem interviews.
- 4.3.9.3. Perform an inventory of remains at regular intervals.
- 4.3.9.4. Conduct a morgue exit review prior to placing remains in long term storage to ensure all appropriate examinations have been completed and data filed.
- 4.3.9.5. Audit case files at regular intervals to ensure completeness, accuracy and legibility.
- 4.3.9.6. Establish procedures for regularly documenting, maintaining and calibrating morgue equipment.
- 4.3.9.7. Conduct an anthropological review when fragmentary remains are associated with the same individual to ensure anatomical integrity.
- 4.3.9.8. Unidentified remains should be re-examined periodically utilizing emerging and enhanced technologies to determine whether additional decedent identifications can be made.
- 4.3.9.9. Establish a process for reconciling the manifest of unaccounted for persons against the unidentified remains inventory.
- 4.3.9.10. Reconciling paper files against electronic files should be performed as a final quality assurance measure.
- 4.3.10. The presiding jurisdiction shall develop strategies to address **demobilizing operations**.
- 4.3.10.1. Develop a demobilization plan to include:
- iii) Criteria and proposed date for ending the incident specific mass fatality management operations.
 - iv) Communication strategies for notifying the decedent's legal representatives, local government officials, emergency management, and other response agencies.
 - v) Criteria for re-establishing mass fatality operations.
 - vi) Policy for handling remains recovered after operations have demobilized.
- 4.3.10.2. Plans should allow for phased demobilization of operations.
- 4.3.10.3. Plans should address inventory, maintenance, and reconstitution of the equipment and supply cache.
- 4.3.10.4. Establish procedures for returning acquired resources to the appropriate agency or authorized representative.
- 4.3.10.5. Documentation should be finalized and distributed to authorized personnel/agencies.
- 4.3.10.6. Personnel should be debriefed to gain lessons learned from the operation.
- 4.3.10.7. The medicolegal authority should prepare an after-action report (AAR) for their mass fatality management operations and provide input into the overall incident AAR.

Annex A
(informative)

Foundational Principles

1. The established medicolegal authority is responsible for fatality management operations following a mass fatality incident. Jurisdictional authorities should articulate their roles and responsibilities in a mass fatality incident.
2. Identifications should be made through generally accepted scientific modalities.
3. Reasonable efforts should be made to identify, or account for, all the persons deceased or unaccounted for in the mass fatality incident.
4. Operations and communications must be conducted respectfully and with sensitivity to the victims and their families' religious and emotional needs.
5. The medicolegal authority is responsible for determining cause and manner of death, documentation, recovery and preservation of all human remains, and associated personal effects.

Annex B

(informative)

Bibliography

The following bibliography is not intended to be an all-inclusive list, review, or endorsement of literature on this topic. The medicolegal death investigation authority shall develop a list tailored to its specific needs. The goal of the bibliography is to provide examples of publications addressed in the standard.

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