

NATIONAL ASSOCIATION OF MEDICAL EXAMINERS MASS FATALITY PLAN

SECTION I - INTRODUCTION

I. Definition

Any situation in which there are more human bodies to be recovered and examined than can be handled by the usual local resources. Local teams should define the terms of disaster, personnel, equipment, and resources BEFORE the disaster hits.

II. Evaluation Team

- A. Should consist of at a minimum the CME/Coroner, the Operations Director, and the Chief Investigator who proceed together to the disaster site. The safety of the scene must be assessed and clearance issued by the appropriate agency before the evaluation team enters.
- B. Evaluate
 - 1. Potential or real number of fatalities
 - 2. Condition of the bodies
 - 3. Level of difficulty in recovery – types and numbers of personnel and equipment needed.
 - 4. Accessibility of the incident scene
 - 5. Possible biological, chemical, physical, or radiological hazards
- C. Begin the formulation of a plan for documentation, body recovery, and transportation
- D. Select a site for a Temporary Morgue – estimate personnel needs. This morgue can be used as a holding area until the examination center is prepared to receive additional bodies.
- E. Select a site for the Morgue Examination Center – estimate personnel needs
- F. Select a site for the Family Assistance Center- estimate personnel needs
- G. DMORT (Disaster Mortuary Operational Response Team) – If it appears advisable, DMORT can provide a Multidisciplinary Assistance Team to aid the evaluation of the need for additional personnel and equipment. The team should be available and on site in less than 24 hours. During an emergency response, DMORT works to support local authorities and provide technical assistance and personnel to recover, identify, and process deceased victims. The main unit may be preceded by a DMORT evaluation

team. A part of National Disaster Medical Services (NDMS), DMORT may be activated under several legal authorities including the Federal Response Plan (FRP), the Public Health Services Act, the Aviation Disaster Family Assistance Act, Presidential Mandate, and Federal and State existing agreements. DMORT is accessed by the local medical examiner/coroner through a request to their Emergency Management Agency. DMORT also has temporary portable morgue facilities available.

III. Sites of Operation Under the Direction of the ME/Coroner

- A. The Scene(s): Body and initial evidence recovery; site of a temporary morgue if indicated.
- B. The Morgue Examination Center: Body identification and processing
- C. The Family Assistance Center:
 - 1. Acquisition of antemortem information
 - 2. Care of the families
 - 3. Media information
 - 4. Positive identification notification
- D. The Long Term Examination Site: Processing biological specimens and evidence not originally accessed at the Scene or Morgue/Examination Center.

SECTION II – SCENE RESPONSIBILITIES

- I. Develop a plan in conjunction with police, fire, and rescue personnel. Incident Command System (ICS) will be instituted. This assures a unified command center with a specific individual in charge through which all activities are coordinated. It follows the standard military model.
- II. Equipment: Getting things organized before attempting to move bodies.
 - A. Designate an Equipment/Supply Officer(s)
 - B. Protective Clothing: gloves, boots, coats, hard hats, rain suits, and respirators (etc) as dictated by the situation.
 - C. Substantial Body Bags; number and type.
 - D. Refrigerated Trucks with metal floors which allow decontamination: 20 bodies per 40 foot trailer at 35 - 38°F

- E. Transportation: Personnel, equipment, and bodies (military, other government, contract services, funeral homes)
- F. Tents & Storage
- G. Paint for numbering (1,2,3; P1, P2, P3; E1, E2, E3...)
- H. Flags for marking locations
- I. Plastic toe tags; Sharpie permanent pens
- J. Biohazard bags & boxes
- K. Photography equipment
- L. Gridding, laser survey, GPS systems
- M. Critical incident stress debriefing
- N. Rest stations and food
- O. Worker Safety – health provisions in place (includes having appropriate immunizations – Tetanus, Hepatitis B – up to date)
- P. Communication devices: radio, cell phones
- Q. Writing or computer equipment for scene log maintenance

III. Body Recovery Teams – Evaluation

- A. ME/Coroner Investigator
- B. ME/Coroner Assistant(s) – Police, fire, military
- C. Scribe
- D. Photographer: Separately badged. Personal cameras are not allowed at the site or scene of mortuary operations.
- E. Physical Anthropologist
- F. Evidence Technician
- G. Scene Registrar

IV. Body Recovery Teams – Removal & Transfer

- A. Recovery Evaluation Teams
- B. Up to 4 transport personnel/body to move a deceased from the site to the temporary morgue

- C. Scene Log required in addition to individual case records and paperwork
- V. Search and Body Recovery (document, document, document)
- A. Appoint a Body Recovery Team supervisor
 - B. Assure overall security of the area
 - C. Establish and execute an adequate search pattern
 - D. Grid and consider the use of aids such as global positioning devices for each body or body part discovered EARLY in the discovery process.
 - E. Utilize engineering/surveying consultants as indicated
 - F. Document, process, and recover bodies, fragments and associated evidence (Scribe and photographer)
 - G. Transport to and storage in temporary morgue and refrigerated truck pending transportation to the Examination Center
- VI. Role of the Scene Registrar
- A. Arrange for scene data entry into the total record system
 1. Have a system in place to electronically track used supplies throughout your system
 2. Assure replenishment and billing information.
 3. NDMS can have acquisition programs rapidly in place to assist.

SECTION III - MORGUE/EXAMINATION CENTER

This material applies in part to both the Temporary Morgue and the Morgue/Examination Center. The DMORT web site (www.DMORT.org) contains suggestions for equipment and supplies.

- I. Equipment: Early considerations
- A. Site selection based on the findings of the Evaluation Team
 - B. Security/ID badges; different colors reference function and access.
 - C. Unique numbering system separate from your usual case numeric system.
 - D. Refrigerated trucks with ramps to allow access and egress

- E. Protective clothing - gloves, scrubs, aprons, shoes, shoe covers, masks, coveralls, headwear, respirators
 - F. Communications - telephones, radios, fax, PA (paging systems); local cell operators may designate a specific reserved air wave.
 - G. Computers – programs and operators – all electronic files (including WIN ID, supplies, tracking, etc.) should be backed up daily.
 - H. Records
 - 1. Personnel log including name, agency, SSN & in and out time.
 - 2. Morgue/Examination Center Registrar
 - 3. Antemortem and postmortem formats and forms
 - 4. Entry operators/Data analysts
 - I. Office equipment and supplies – copiers, typewriters, log books, etc...
 - J. Disaster Victim Packet – should contain all forms and paperwork necessary for every examination station
 - K. Station Processing Plan – flexible to fit the situation
 - L. Worker Safety and Comfort Supplies
 - 1. Healthcare provisions in place
 - 2. Immunization records
 - 3. Rest areas including toilet facilities
 - 4. Nutrition needs
 - 5. Critical Incident Stress Debriefing
- II. Station System and Personnel (suggested procedure – local adaptation will be necessary)
- A. Registration in Body Receiving Area
 - 1. Receipt of DMORT Transportation Log or like document completed at the Temporary Morgue
 - 2. Log in documentation from Temporary Morgue: date, time, and numbering (from the scene)
 - 3. Assignment of permanent body tracker
 - 4. Transfer of chart and all required documentation (Disaster Victim Packet) to the individual tracker.
 - B. Screening Station: Personal effects and clothing documentation/anatomic charting/further evidence collection. This is the point at which a decision can be made for a specimen (body part, fragmentary

remains, partial body) to take a long path through all subsequent stations or a shorter path with an examination at the morphology station and DNA only retrieved. Criteria for long or short path need to be established before the disaster.

1. Medical Examiner/Coroner's officer
2. Medical Examiner/Coroner's officer assistant
3. Scribe
4. Photographer and assistant
5. Personal Effects Technician
6. Evidence Technician
7. Anthropology consultant
8. Bomb Tech or other specialist as indicated
9. Complete necessary forms and return to tracker

N.B.: All paperwork generated at this station (Disaster Victim Packet) must be placed in the case file to go with the tracker and body to the next station. This procedure is repeated at every station.

10. Option of DNA or other convenient specimen procurement (requires lab tech for transmission)

C. Print Station (finger, palm, foot)

1. Print Specialist – Local Law Enforcement, FBI Disaster Squad
2. Print all bodies
3. Complete proper documentary form
4. Fingers or hands removed only at the discretion of the Chief Medical Examiner/Coroner. If removed – place in a properly identified container and place them back with the body after processing.

D. Radiology/X-ray Station

1. Radiologist
2. X-ray technician/assistant
3. Portable x-ray units, film and developers
4. Full body x-rays are mandatory
5. Dental x-rays may be a part of this operation or are often a part of the Dental Station operation as

dictated the Chief Odontologist. A bomb technician or other specialist as indicated may be needed here.

6. Log all films

- Morgue ID #
- Date/time
- Radiograph #
- # of films taken
- Initials or signature of technician

E. Dental Station

1. Odontologist
2. Dental assistant
3. Photographer
4. Evidence technician
5. Scribe
6. X-rays – if not previously performed
7. Charting – The universal numbering system, 1-32 with the upper right 3rd molar as #1, upper central incisors as #8 & #9, upper left 3rd molar as #16, lower left 3rd molar as #17 and lower right 3rd molar as #32 is usually preferred. There is also a FDI numbering system available.
8. Immediately enter data into WIN ID II (2002)
9. Jaws are only removed on non-viewable bodies (the funeral director is an excellent consultant) at the discretion of the CME/Coroner at the request of the Chief Odontologist. If removed – place in a properly identified container and place them back with the body after processing. Many medical examiners feel that jaw removal is antiquated and unnecessary with modern dental technology.

F. Autopsy Station

1. The decision to do complete or partial autopsies resides with the Medical Examiner/Coroner authority locally responsible for body processing and death certification. Some reasons for complete autopsies:
 - Homicides – terrorism

- Indeterminate manner of death
 - Flight crews – the same pathologist should do all members
 - Unidentified remains
 - Federal request
 - Local ME/Coroner request
2. Forensic pathologist
 3. Autopsy assistant
 4. Evidence technician
 5. Bomb tech or other specialist as indicated
 6. Scribe
 7. Photographer
 8. Lab technician
 9. DNA (4 mL blood in a purple top tube; 5 – 10 gm skeletal muscle, spleen, liver, bone, and/or teeth), toxicology and other specimen procurement. Some may have already be obtained at the initial screening station in some operations – requires lab tech for proper documentation and transmission.
 10. Evidence collection continues
 11. Completion of form designating preliminary autopsy findings Victim Identification Profile (VIP)/DMORT Program, Pathology examination of partial or complete remains)
 12. Documentary forms to the tracker
 13. Histology specimens to the lab tech
 14. Toxicology specimens to lab tech for transmission
- G. Anthropology/Morphology Station
1. Personnel needed:
 - Anthropologist
 - Anthropology assistant
 - Scribe

- Evidence Technician
 - Photographer
 - Radiographer
 - Forensic pathologist
2. Fragmented, incomplete, charred, commingled remains
 3. Documentation to the tracker with the remains
 4. If a bone section or the like is retained, place in a properly identified container and place it back with the body after processing. If it is a specimen for DNA, for example, it is to be properly documented and transmitted to a laboratory technician.

H. Body Storage

1. Individual tracker returns the body to the receiving area.
2. The body or part, with the direction of the receiving registrar is transferred to the appropriate secure designated “processed” refrigerated area and documented. The refrigerated area must be fully staffed with receivers and security.
3. The Examination Center Registrar receives the Victim Disaster Packet from the tracker and assures proper transfer to the Records Management Team.
4. Special storage sites should be designated for specimens such as DNA & Toxicology.

I. Records Management Team

1. Personnel needed:
 - Supervisor/Registrar
 - Computer entry clerks
 - Data clerks
 - File clerks
 - Security
 - Communication clerks – telephone, e-mail and fax (one member made an entry here – I was unable to read) from other sites (scene, family assistance center, command post)
2. Establish tracking procedures for files

3. Establish back-up protocols for computer files

SECTION IV - LONG TERM EXAMINATION/"SIFTING" SITE

In any mass fatality event in which there is extensive property destruction, the need for a long term off-site examination center will exist.

I. Site Selection

The site should be secure, accessible, and well away from the other sites of operation.

II. Equipment

- A. Storage for evidence
- B. Refrigeration
- C. Communication
- D. Protective gear
- E. Worker safety and comfort supplies
 1. Health care
 2. Rest areas including toilet facilities
 3. Nutrition needs
 4. Critical incident stress debriefing
 5. Tent
- F. Heavy duty equipment for debris removal and disposition
- G. Transportation services for body parts and evidence (to the examination center)
- H. Transportation services for personnel
- I. Sifting grids, tools, wheelbarrows, etc...

III. Personnel

- A. Anthropologist

- B. Anthropology assistant
 - C. Evidence technicians
 - D. Scribe
 - E. Registrar – proper transmission and overall entry of data
 - F. Photographer
 - G. Bomb tech or other specialist as indicated
 - H. Supply officer
 - I. Pathology, radiology and odontology services remain available at the Examination Center and , if needed, at any long term sifting site.
 - J. Security – 24 hour for as long as operational
 - K. Workers capable of assisting with significant physical labor demands
- IV. This site will likely remain functional well after the scene, Examination Center, and Family Assistance Center are closed. It is the responsibility of the ME/Coroner to assure proper support and operation of this site as long as it is required.

SECTION V - FAMILY ASSISTANCE CENTER

A representative of the Medical Examiner’s office should be in charge during the initial setting up of the Family Assistance Center (FAC). Personnel may be recruited from the local Funeral Directors Association. The Family Assistance Center is a multi-agency organization and can not be handled by the Medical Examiner alone. In the case of aviation disasters, the National Transportation Safety Board (NTSB) requires the airline involved to set up the FAC. DMORT has members assigned to this “go team”.

- I. Site Selection
 - A. Functional for the specific incident.
 - B. Close to the actual scene.
 - C. Easily accessible for families.
 - D. Adequate parking.
- II. Security

- A. Sheltering families from possible media intrusion.
- B. Secure parking lot, inside, and outside the FAC.
- C. Use of military personnel as well as police.

III. Transportation Services

- A. Secure, sensitive, and professional.
- B. Knowledgeable of the area.
- C. Serve family, friends, and staff needs.

IV. Administrative Staff

A. Family Assistance Center Team Leader/Coordinator

1. Overall operation supervisor
2. Establishes antemortem data acquisition and entry plan
3. Coordinates operation with Registrar/Records Supervisor
4. Conducts daily briefings with families _before media briefings.
5. Conducts daily briefings with media in a secure area away from friends & family.
6. Establishes and supervises death notification procedures with medical, psychological, and religious personnel
7. Coordinates Center transportation and security plans
8. Coordinates roles of family assistance team members
9. Coordinates relations with outside agencies
10. Serves as a member of the death notification team
11. Provide for critical incident stress debriefing

B. Medical Examiner/Coroner Representatives

Function in liaison and general inquiry needs. Outside staff such as funeral directors familiar with ME/Coroner operations are desirable.

C. Family interview personnel for antemortem data acquisition

D. Computer specialists for antemortem data entry and transfer to the Morgue/Examination Center

E. Communication Specialists

1. Telephone services for the Center
2. Referring media inquiries to the FAC Team Leader from addressing at the daily briefings

F. Support Services

1. Red Cross/Salvation Army/other service organizations
2. Communication companies
3. Food services
4. Religious services
5. Mental health support
6. Physical health support
7. Massage therapy/chiropractic
8. Therapy animals
9. Site support – Janitorial/Plumbing/Electrical
10. Translators and Embassy and Consulate representatives when international victims are involved.

G. Death Notification Procedure/Release of Body, Identified Parts, and Effects

1. All families should be counseled with regard to their wishes for disposal should additional body parts be identified. Their decision must be recorded on an appropriate form.
2. After positive identification has been established by the ID Team and approved by the CME/Coroner.
3. Conducted preferably by the staff of the Family Assistance Center according to an established protocol.
4. A release authorization form should be completed and placed in the Victim Disaster Packet.
5. Associated personal effects not deemed to be evidence should be released with the body and documented according to the standard operating procedure of the ME/Coroner jurisdiction involved.
6. Unassociated personal effects will be handled through a contract with a recovered property company (i.e. Kenyon International)
7. Unidentified body parts will be documented and stored as “common tissue”. Subsequent disposal will be the responsibility of the ME/Coroner. This procedure will likely be established through consultation with victims groups and establishing a group consensus consistent with local regulations

and resources.

8. A death certificate should be released to the funeral home with any remains. (See also Section VII – Death Certificates)
9. A release log will be kept separately to document the overall process.

SECTION VI - LOGISTICS

I. Logistics Team

Responsible for the operation of the logistics section, including the acquisition, storage, issue, and accountability of all supplies and equipment necessary to support the operation. NDMS has supplemental programs which can be put in place.

A. Team Leader

- Will monitor the status of all procurement actions.
- Will hand-carry, as necessary, all high-priority supply actions.
- Will maintain expense data, accountability documents, procurement documents, and other information pertaining to the logistics operation.
- Will insure that the logistics section is staffed at all times during operating hours.
- Will insure that personnel logs including name, agency, SSN and in and out times are maintained at all sites of operation.

B. Supply Clerks

- Will perform duties assigned by the team leader to include, but not limited to, staffing the logistics section of the morgue, making supply runs, preparing supply documents, issuing supplies and equipment etc.

SECTION VII - IDENTIFICATION/DEATH CERTIFICATION

- I. The final determination of body or body parts positive identification is the sole responsibility of the local ME/Coroner in which the disaster occurs.

II. I.D. Team

- A. Composition: Pathologist, dentist, anthropologist, radiologist, print technician, investigative staff, and family counselor.
- B. Must meet at the end of each working day.
- C. Review all proposed positive identifications.
- D. Make recommendations daily to the ME/Coroner.

III. Positive identifications should be transferred to the Family Assistance Center for action by the Death Notification Team.

IV. All notification procedures are the responsibility of the ME/Coroner.

V. Possible identification methods may include:

- A. DNA
- B. Prints
- C. Dental
- D. Medical radiography
- E. Distinctive physical characteristics
- F. Serial numbers on permanently installed medical devices
- G. Visual in some cases (N.B. – personal effects do not constitute a true means of identification).

VI. Death Certificates

- A. Issued according to procedures normally in place and as directed by the local ME/Coroner jurisdiction.
- B. The administrative or judicial issuance of death certificates in situations in which there is an absence of positive physical forensic scientific identification is a responsibility solely of the local ME/Coroner in conjunction with local legal and public health authorities.

SECTION VIII – MASS FATALITIES RESOURCE LIST

It is recommended that 24/7 contact methods be available and kept up to date by quarterly review for local and

federal resources necessary for the successful management of a mass fatality incident. This is a major planning responsibility for the local ME/Coroner.

Although any consultants such as DMORT or USAR are ultimately under the supervision of the local medicolegal authority, it is the responsibility of that authority to see that all necessary logistical support services for them are put in place.

- Adjutant General
- Airlines
- Ambulance
- American Red Cross
- Architects
- Attorney General
- Automobile rental
- Barriers
- Batteries
- Biohazard disposal and supplies
- Body bags
- Body handlers
 - Local police and fire auxiliary
 - National Guard
 - Funeral Directors Association
- Boots and Footwear – steel toe/shank
- CDC
 - Bioterrorism
 - www.bt.cd.gov
 - 770-488-7100
- Chairs
- Chiropractic
- Cleaning supplies
- Clergy/Religious resources
- Coats
- Contractors
 - Commercial
 - Kenyon International – Personal effects
- Communications
- Computers and software programs
- Copiers
- Dental technicians
- Dentist (Odontologist)
- Disaster Mortuary Team (DMORT)
 - State Emergency Management
 - 1-800-USA-NDMS
- Day Care
- Dogs, cadaver
- Domestic Preparedness
 - Hotline 1-800-424-8802
 - Helpline 1-800-368-6498
- Electrician
- Emergency management
- Engineers

- Environmental Protection Agency
1-201-321-6765
- Fax machines
- Film
- Fingerprint technicians
 - FBI Disaster Squad
 - Local and State Law Enforcement
- FAA 1-718-553-1919
- Fire service
- Flags and stakes
- Flashlights
- Food and beverage
 - Restaurant Association
- Funeral Directors Association
- Generators
- Governor
- Gridding and laser surveying equipment
- Hard hats
- Hazmat
- Health and Human Services
- Health Department
- Helicopters
- Hotels and motels
- ID badges
- Insurance, State Dept of
- Laundry service
- Maintenance supplies
- Maps
- Massage therapy
- Media
- Medical supplies
- Medical societies
- Mental health
- Military
- Mobile morgue 1-800-USA-NDMS
- Morgue supplies
- NTSB 1-202-314-6100
- National Guard
- Osteopathic society
- Office supplies
- Pathologists
 - AFIP 1-301-319-0000
- Portable x-ray services
- Photographers
- Police services
- Protective clothing
- Radiation health
- Radiologist
- Radiologic technicians
- Rain gear
- Refrigerated trucks

- Secret Service 1-315-448-0304
- Salvation Army
- Security
- Search dogs
- Signs
- Spray paint
- Tables
- Telecommunication
- Tents
- Toe tags
 - Plastic (Kinko's for examples)
- Trackers
 - DMORT
 - Funeral Directors
 - National Guard
- Trailers (supply storage)
- Translation Services
- Transportation
 - Body
 - Personnel
- Transportation workers
 - Motor Pool
 - Signs
 - Barriers
- Turnpike Authority
- Travel services
- Typewriters
- Urban Search & Rescue
 - 1-800-USA-NDMS
 - 1-703-222-6277
- Volunteer organizations
- Weather services
- Websites
- X-ray supplies and equipment

SECTION IX – APPENDIX (FORMS AND REFERENCES)