

---

## Session No. 16

---

**Course Title: Disaster Response Operations and Management**

**Session Title: Mass Fatality Management**

**Time: 50 minutes**

---

### **Objectives:**

- 16.1 Underscore the probability of mass fatalities in major disasters.
  - 16.2 Identify the significant management challenges that result from an excessive number of disaster-related deaths.
  - 16.3 Recognize the need to plan for mass fatality incidents.
  - 16.4 Identify the steps can be taken to manage the mass fatality incident effectively.
  - 16.5 Provide background information about DMORT teams, including their purpose and method of operation.
- 

### **Scope:**

This session starts off by discussing the deaths that result from natural and other types of disasters. The professor then discusses typical problems to be encountered in mass fatality incidents, as well as the need to plan for this important disaster function. The methods to manage these challenges effectively are then discussed. The session concludes with a review of the nature and operations of Disaster Mortuary Teams (DMORTs).

---

### **Session Requirements:**

- 1. Instructor Reading:

Department of Health and Human Services, National Disaster Medical System.  
2003. "What is a Disaster Mortuary Operational Response Team?"  
[http://www.ndms.dhhs.gov/NDMS/About\\_Teams/about\\_teams.html#dmort](http://www.ndms.dhhs.gov/NDMS/About_Teams/about_teams.html#dmort).

Federal Emergency Management Agency. 2002. Mass Fatalities Incident Response, Course G386 (March).

Gryzkewicz, Renee. 1996. "Preparation and Teamwork Key to Mass Fatality Situations." *The Director* (November): 57-59.

Hampson, Rick and Martha T. Moore. 2003. "Two Years After Sept. 11, NYC Couple to Bury Son." *USA Today*. Thursday, September 4, 1A-2A.

Hooft, Peter J., Eric K. Noji and Herman P. Van De Voorde. 1989. "Fatality Management in Mass Casualty Incidents." *Forensic Science International* 40: 3-14.

Murray, Leonard S. 1995. "Mass Fatality Management." *Street Skills* (March/April): 30-31.

Rice, Glenn E. and Bill Graham. 2001. "KC Teams to Assist in Disaster Response Efforts." *The Star*. <http://www.kestar.com/item/pages/home.pat,local/3accf...>

Scanlon, Joseph and Conrad McCullum. 1999. "Media Coverage of Mass Death: Not Always Unwelcome." *Australian Journal of Emergency Management* 14 (3): 55-59.

Scanlon, Joseph. 1998. "Dealing With Mass Death After a Community Catastrophe: Handling Bodies after the 1917 Halifax Explosion." *Disaster Prevention and Management* 7 (4): 288-304.

Stehr, Steven. 2002. "Victim Identification and Management Following the Collapse of the World Trade Center Towers." *Quick Response Report #148*. Natural Hazards Research and Applications Information Center. [Http://www.Colorado.EDU/hazards/qr/qr148/qr148.html](http://www.Colorado.EDU/hazards/qr/qr148/qr148.html).

2. Student Readings:

Hooft, Peter J., Eric K. Noji and Herman P. Van De Voorde. 1989. "Fatality Management in Mass Casualty Incidents." *Forensic Science International* 40: 3-14.

or

Scanlon, Joseph. 1998. "Dealing With Mass Death After a Community Catastrophe: Handling Bodies after the 1917 Halifax Explosion." *Disaster Prevention and Management* 7 (4): 288-304.

3. Overhead Transparencies:

Deadly Disasters  
Mass Fatality Management Problems  
Planning Considerations  
Steps for Effective Mass Fatality Management  
Facts About DMORTs

---

**Remarks:**

1. The professor may wish to recap the prior session on Emergency Medical Care and Triage. Discussing the medical needs disasters create is a logical segue into mass fatality issues.
  2. A video entitled, *The Halifax Explosion*, provides a great example of the deaths disasters can produce as well as the challenges of dealing with the bodies of the deceased. The video is part of A&E's *Sea Tales* series.
  3. A coroner/medical examiner would be an excellent guest speaker for this session as they will have a great deal of information about investigations, handling bodies, dealing with family members, etc. Morticians, DMORT members, paramedics, fire fighters or hospital staff may also have important knowledge to share about mass fatality incidents.
  4. The recent World Trade Center disaster is a very pertinent case to discuss in class. It illustrates the challenges of identifying the dead and recording death certificates among other things (see Hampson and Moore 2003). A fairly successful case that could be included as a discussion point is the response to the Oklahoma City bombing.
  5. The professor should underscore the fact that mass fatality disasters will produce strong emotions in the affected community. Students should show respect to the deceased and be sensitive to the feelings of the friends and family of the victims.
  6. Additional information for this course can be obtained in the FEMA G386 course, Mass Fatality Incident Response. This course includes additional instructional material, numerous case study examples, student exercises, and videos.
  7. Another excellent source of information on mass fatalities is the National Mass Fatality Institute. See <http://www.nmfi.org/>.
-

**Objective 16.1      Underscore the probability of mass fatalities in major disasters.**

**Requirements:**

**Present the following information as a lecture.**

- I. **Mass emergencies and disasters may generate large numbers of fatalities.**
  - A. It is true that **fatalities owing to disasters have decreased by 75% over the past 50 years** in developed nations (Mileti citing Mitchell 1999).
  - B. However, **hazards and disasters often result in mass fatalities** even in the United States.
    1. **Various hazards** (including winter storms, lightning, hail, etc.) **produce death**, although the **number of fatalities is relatively low** compared to other types of disasters.
    2. Nevertheless, Rosenfield's study (1996) of **traffic accidents** over a ten year period reports **6,804 deaths resulting from fog** (in Mileti 1999, 73). In some cases, **chain-reaction traffic accidents** on our nation's highways **may produce multiple deaths in an instant (as many as 30 or 40** at a time).
    3. **Hurricane Andrew killed at least 20 people in Florida.**
    4. **The Loma Prieta earthquake in California killed over 60 individuals.**
    5. **At a Rhode Island night club, 97 people died as a result of a fire, overcrowding and inadequate evacuation routes.**
    6. **The Hyatt skywalk collapse produced 113 deaths.**
    7. A study of weather indicates that **there were 295 deaths in 1980 in Missouri resulting from excessive heat** (Rackers 1996 as cited by Mileti 1999, 75).
    8. In 1995, a **heat wave killed 500 people** in the **Chicago** area.
- II. **The toll of major disasters can be staggering – almost beyond comprehension.**
  - A. **“From 1975 to 1994, natural hazards killed over 24,000 people”** in the United States (Mileti 1999, 4).

- B. **Some disasters are especially deadly:**
    - 1. The **9/11 terrorist attacks** killed about **3,000**.
    - 2. The 1995 **Kobe, Japan** earthquake resulted in **5,000** deaths.
    - 3. **Hurricane Mitch** left at least **10,000 dead in Central America**.
    - 4. It is believed that **25,000 people died** in the **Armenian Earthquake**.
    - 5. A **cyclone in Bangladesh** resulted in over **300,000** fatalities.
  
  - III. In some cases, these disasters show **disturbing patterns**.
    - A. **“Of the 148 deaths in the 1980 Midwest heat disaster, most were elderly and poor”** (Mileti 1999, 124).
    - B. **Women and children are frequently disproportionately numbered** among the dead in various disasters.
  
  - IV. **Disasters in the future** may be especially **problematic**.
    - A. **"Some future possible disasters could create victims in the high four or even five figures. Even handling relatively few bodies in most modern societies generates all kinds of problems . . . Future disasters with numerous dead bodies will sharply increase those kinds of disasters"** (Quarantelli 1996, 90).
    - B. **Emergency managers and others should be prepared** to deal with the **consequences of mass fatality incidents**.
  
  - V. Emergency managers and responders must therefore **know how to deal with a mass fatality incident**.
    - A. **A mass fatalities incident is any situation where there are more bodies than can be handled using local resources (FEMA 2002)**.
    - B. Mass fatality incidents are **characterized by**:
      - 1. **A large number of bodies** that **stretches** the community beyond its **capabilities**.
      - 2. The **need for** an impressive amount of **teamwork**.
-

**Objective 16.2** Identify the significant management challenges that result from an excessive number of disaster-related deaths.

**Requirements:**

**Present the following information as a lecture.**

- I. **Mass fatality incidents often create major management problems** for those involved in disaster response operations.
  - A. **Well-intentioned citizens may move bodies** to various locations, thereby **hindering investigation and identification. This creates problems for investigators.**
    1. **After a Flood in Rapid City, "Many of the 155 bodies recovered during this period were brought in by police and fire departments, as well as the local national guards, but often their actions were as much the result of individually decided courses of action as they were organizationally determined. Many of these bodies were brought in by family members or friends of the deceased as well as by people 'who just happened upon' a body" (Hershiser as cited by Scanlon 1998, 289).**
    2. **A funeral director commented after the flood, "When we arrived . . . they had already brought in three or four bodies to the garage of the funeral home. Within two hours there were over sixty bodies in that garage . . . . They were brought in by helicopter, by army truck, by station wagon, on the back seats of cars and anything that would move" (Catron as cited by Scanlon 1998, 289).**
    3. **"After the recent earthquake in Kobe [Japan], private citizens brought bodies to the police stations, temples, schools, gymnasias, health and community centers and private companies, where they were laid out on the floor" (Nishimura as cited by Scanlon 1998, 289).**
    4. **"The initial response to the handling of bodies was ad hoc and informal just as are most other aspects of initial response" (Scanlon 1998, 299).**
    5. **However, major but localized accidents may witness a very different pattern.**

- a. **"After the 12 December 1985, air crash in Gander, for example, the area where the crash occurred was quickly sealed off by Royal Canadian Mounted Police and once the fires were out and dangerous objects removed . . . all bodies and body parts were marked and tagged before they were moved"** (Scanlon 1998, 289).
- B. **Bodies can be obliterated** as witnessed by the 9/11 disaster in New York.
1. **At ground zero, "Fewer than 300 bodies were intact. Only 12 could be identified purely by sight"** (Hamson and Moore 2003, 1B).
  2. **"Searchers recovered 19,893 separate body parts, including a single tooth. One man [corpse] was found in about 200 pieces"** (Hamson and Moore 2003, 1B).
- C. There may be **disputes about the number of deaths**.
1. **"Even the final death toll at the Trade Center is unsettled, due mostly to duplication of names, fraud and honest but erroneous missing person reports. On the anniversary, the city counted 2,801 victims. A year later, the city now lists, 2,792 as lost. That figure still varies from databases assembled by the Associated Press (2,775) and USA TODAY (2,784). The exact number killed may never be certain, city officials acknowledge. Evidence could surface of a previously unknown victim - a homeless person, perhaps, or an illegal immigrant. Some DNA samples extracted from bones and tissue do not match any genetic profile submitted by victims' relatives. In the medical examiner's freezers may lie the remains of a victim who was never reported as missing"** (Hamson and Moore 2003, 1B).
- D. In some cases, **identification cannot take place without modern technology**.
1. In New York, as in other disasters, **"the key to identifying most of the dead lay in the DNA, the body's genetic code. Tiny bits of remains were frozen, ground up and dissolved. DNA was then extracted from the nucleus of individual cells and compared to DNA taken from victims' toothbrushes, clothing and other personal items"** (Hamson and Moore 2003, 1B).
- E. **The identification process can be very physically and emotionally disturbing** as noted by the following observations of the Halifax explosion in Canada.

1. **"Eventually the whole floor was covered with bodies and a crew of professional morticians, most of them from other Canadian cities, took over the care of them. The soldiers had hated it. I remember one young soldier, serving his first turn at washing the gashed and awful faces, running outdoors to vomit"** (Raddall as cited by Scanlon 1998, 295).
2. **"Monday was spent at the morgue. A gruesome nauseating job, trying to identify those poor victims by arranging any little scrap of evidence that could be found on them, so the relatives and friends who continually filled the morgue would have a chance to to recognize their belonging . . . To witness those relatives and friends as they walked along the long lines of victims stretched out in rows, and eagerly awaiting those that were being constantly brought in, was a sad sight. There would be a scream here, a moan or a sob there, and then someone would have to be carried away from that horrible scene"** (a temporary mortician as cited by Scanlon 1998, 295).

F. **Remains can take years to identify, and they may never be identified.**

1. **Even two years after the World Trade Center attacks, families are still waiting to have their loved ones identified.**
2. **"No trace has been found of 45% of the nearly 2,800 people who died in the twin towers. That's 1,268 people"** (Hamson and Moore 2003, 1A).
3. **"The medical examiner's office has been unable to identify 62% of the body parts. They were so scorched, soaked or decomposed that no usable DNA could be extracted"** (Hamson and Moore 2003, 1B).
4. Regarding a different disaster, it has been noted, **"With so many dead and so few survivors to identify the dead, inevitably some bodies were never identified even though they were not disfigured"** (Scanlon 1998, 298).
5. Part of the problem is that **identification can be extremely expensive** (due to the technical requirements of this function), and there are only a **limited amount of resources** dedicated for this purpose.

G. **Record keeping can be problematic.**

1. **The Halifax disaster in Canada illustrated that "the soldiers were sometimes less than meticulous when recording information"** (Scanlon 1998, 297).
  2. **"Some information was copied incorrectly. Some records were damaged because of the cold and wet conditions in the basement. Often valuable information - like the man's tattoo - was missed"** (Scanlon 1998, 299).
- H. **Friends and family will desire to know the fate of their loved ones, and have a proper memorial service.**
1. **"As an Italian general observed of the Vaiont Dam disaster where digging by thousands of soldiers for over 1,800 bodies went on for a week, 'It's absurd to dig down ten feet of rocks and stones to find a body so we can rebury it in only five feet of dirt.' But the remark, of course, highlights the point that far more is involved than the simple matter of physically finding bodies to bury them again"** (Blanshan and Quarantelli as cited by Scanlon 1998, 290).
  2. **"In both the Iranian earthquake and the Italian dam disaster, the public authorities had to abandon plans for mass burials due to the strong public outcry when such a disposition of bodies was proposed"** (Blanshan and Quarantelli as cited by Scanlon 1998, 290).
- I. **Those mourning may become frustrated with the procedures of mass fatality incidents.**
1. **A Sociologist and funeral director noted after an air crash in New Hampshire " . . . there was absolutely no elective process, nor was there any selective process. This reduced the sufferers to a position of nearly complete dependence, and gave the experts total control. Everything was out of the hands of the grief sufferers, except the final funeral arrangements"** (Pine as cited by Scanlon 1998, 291).
  2. **Some bodies may be stacked up on one another and "de-personalized"** (Scanlon 1998, 299).
- J. **Mass fatality disasters may necessitate the cancellation of normal funeral arrangements.**
1. **" . . . After the Rapid City flood it was, 'regrettably necessary' to tell the families that normal religious services would not be**

**possible. Most bodies were buried after a graveside committal service"** (Catron as cited by Scanlon 1998, 291).

- K. There are often **misperceptions about** the dangers associated with **dead bodies**.
1. It is true that **those who handle the bodies** may be **exposed to fluids** and should therefore take **standard precautions** (e.g., use gloves).
  2. However, the **bodies of healthy humans** who are suddenly killed **do not pose a threat of contagion**.
  3. The only **exception to this rule** is a **disaster** that is **caused by an epidemic** (which depends on the type of microbe responsible for the epidemic and the mode of transmission).
- 

**Objective 16.3      Recognize the need to plan for mass fatality incidents.**

**Requirements:**

**Present the following information as a lecture.**

- I.      Mass fatality incidents necessitate advanced planning.**
- A. This planning should include **a specific annex on mass fatality incident management** in the local emergency operations plan.
  - B. The plan should not only **discuss what will be done with bodies**, but **how the community will work with the victim's families**.
- II.     These mass fatality plans must be developed in consultation with numerous individuals and organizations.**
- A. **Planning should include:**
- **The emergency manager**
  - **Medical examiners**
  - **Coroners and forensic investigators**
  - **Morticians**
  - **Mental health personnel**

- **Funeral home directors**
- **And possibly hospitals and the clergy**

### **III. Mass fatality plans should be very comprehensive.**

#### **A. Issues to be included are:**

1. **Care for investigation/crime scenes.**
  - a. **Accidents, murders, other criminal events and terrorist attacks** leading to death **require special treatment of bodies** so as to **not tamper with evidence or hinder ongoing investigations.**
2. **Logistics.**
  - a. **Who will recover bodies (e.g., county coroner's office or DMORT)?**
  - b. **How will they be transported and stored (e.g., refrigerated trucks)?**
  - b. **Who will identify the remains (e.g., next of kin)?**
3. **Family assistance.**
  - a. **How will the next of kin be notified?**
  - b. **What questions, concerns, and needs might they have, and how can these be addressed?**
5. **Psychological issues.**
  - a. **How will people react to death** (both surviving relatives and emergency workers) and **what kind of support will they need?**
  - b. **What is the best way to communicate with tact and sensitivity?**
6. **Cultural and religious issues.**
  - a. **What are the burial customs** of different groups around the world?

---

**Objective 16.4**      **Identify the steps can be taken to manage the mass fatality incident effectively.**

**Requirements:**

**Present the following information as a lecture.**

- I.      A very **important article in *Forensic Science International*** identified **several steps** that can be taken to manage a mass fatality incident effectively:
- A.      **Every attempt should be made to avoid removing bodies immediately** except in special circumstances.
- **“If there is no danger of a further disintegration (e.g., by fire, collapsing buildings, water current) the bodies should not be moved from the scene prior to the arrival of the forensic expert in charge, but they should be handled with dignity, covering them with blankets”** (Hooft, Noji and Van de Voorde 1989, 4).
- B.      A **map can be drawn** to record the exact location of the deceased.
- **“If bodies are scattered over a substantial area, a grid with alfa-numerical coordinates should be used to enable the record-keeping of their location.”** (Hooft, Noji and Van de Voorde 1989, 4).
  - **“Each body, body-part, or personal belongings recovered should be tagged with a unique recovery number”** (Hooft, Noji and Van de Voorde 1989, 4).
  - Note: Such record keeping plays an important role in reconstructing the event and identifying the bodies and belongings. Belongings and body parts should be kept near the body at all times.
- C.      **After a preliminary investigation** has taken place, the deceased should be taken to a central morgue facility.
- **“Whenever possible, funeral cars, ambulances or closed vans should be used [for transportation]. For identification’s sake an uncontrolled scattering of the deceased over several morgues and funeraria, regardless of how well equipped they might be, should be avoided”** (Hooft, Noji and Van de Voorde 1989, 4-5).

- In other cases where bodies have been dispersed, efforts should be made to centralize the deceased or maintain meticulous records as to their whereabouts.
- D. This temporary morgue must be adequate to receive, store and process the bodies (Hooft, Noji and Van de Voorde 1989, 5). It should:
- Be large enough to store several bodies
  - Be well-ventilated and cold
  - Have adequate lighting
  - Have sufficient electrical outlets
  - Have running water and bath rooms
  - Have furniture for examinations
  - Have clerical, break, and waiting rooms
  - **Note: Refrigerated trailers can also be used to store bodies in major mass fatality incidents. However, these trucks should have no visible markings, logos, names, etc., to avoid bad publicity for that particular company.**
- E. Cause of death and victim identification will take place by collecting and analyzing postmortem data.
- “The bodies are described as they outwardly appear, recording all significant features, mud, clothing and belongings. The same happens for all loose body parts or belongings.” (Hooft, Noji and Van de Voorde 1989, 5).
  - “Fingerprints should be taken” (Hooft, Noji and Van de Voorde 1989, 6).
  - “Photographs should be taken of the clothed body and all relevant external items” (Hooft, Noji and Van de Voorde 1989, 6).
  - “The delicate procedures of examining a human body, even if it is dead, are medical act and should only be performed by a doctor” or by other qualified individuals (Hooft, Noji and Van de Voorde 1989, 6).

- **“All relevant marks and signs on the body should be marked on the protocol, including Tanner scores, state of virginity and breast circumference in females, circumcision in males, tattoos, and all scars and signs of surgical treatment”** (Hooft, Noji and Van de Voorde 1989, 6).
- **“If the clothes or any other object are essential for a further investigation or as evidence in court, they should be dried before packing, as wet materials become mouldy, change color and disintegrate rapidly, especially in plastic bags”** (Hooft, Noji and Van de Voorde 1989, 6).
- **“Blood and urine samples or muscle biopsies should be collected for alcohol dosage, blood grouping, and toxicological analysis”** (Hooft, Noji and Van de Voorde 1989, 6).
- **“In fire accidents additional airtight blood samples should be taken for the concentration of carboxyhemoglobin and cyanide”** (Hooft, Noji and Van de Voorde 1989, 6).
- **“As odontological findings often contribute most to the identification, attention should be given to get complete dental records”** (Hooft, Noji and Van de Voorde 1989, 6).
- **Family members can be brought in to confirm the identification of the deceased.** Note: there are a number of related issues that must be considered: Will one or multiple families be brought in at a time? Is an escort needed? Will children be allowed to participate? Will the family be required to show personal identification (e.g., drivers license) before they can be allowed in?
- **“Unidentifiable bodies can be embalmed and stored awaiting further investigation”** (Hooft, Noji and Van de Voorde 1989, 6-7).

F. **Final disposition** must also be performed under **strict guidelines**.

- **“The deceased should be given back to their relatives for disposal as soon as possible”** (Hooft, Noji and Van de Voorde 1989, 6).
- **“Before release of a dead body from the morgue, a thorough check should be run as to the completeness of the postmortem record, the identify of the deceased, and the cause of death. The funeral director’s address and the final destination of the body should be noted on the protocol”** (Hooft, Noji and Van de Voorde 1989, 7).

- **“Unidentifiable bodies should be buried in separate graves after full examination, keeping record of their location”** (Hooft, Noji and Van de Voorde 1989, 7).
- **Note: “The dead do not in general pose a public health threat, and there is no need for a hasty disposition using mass graves or, for forensic aspects even worse, cremation . . . . As data collection in disaster situations often is completed only after the disposal of the dead, and a need for further investigation might rise, no cremation authorization should be given”** (Hooft, Noji and Van de Voorde 1989, 7).

**II. Other steps to successfully respond to a mass fatality incident include:**

- A. **Ensuring that those responding to a mass fatality incident know where to report, the best route to get to the scene, what type of equipment they will need, where the staging areas are.**
- B. **Open family assistance centers to address survivor needs and answer questions about lost loved ones and the mass fatality management process.**
- C. **Recognizing that the public is watching how bodies are being handled.**
- D. **Flagging or otherwise marking the location of the deceased.**
- E. **Using grids or pictures for documentation purposes.**
- F. **Ensuring that the trucks that haul remains have metal floors (as wood may retain odors) and have no visible markings (e.g., company names).**
- G. **Managing personal belongings and identification records in a careful manner.**
- H. **Communicating effectively with the next of kin and help them cope with the loss of a loved one.**
- I. **Having a plan to deal with the media to prevent the release of sensational photos of the deceased.**

---

**Objective 16.5**      **Provide background information about DMORT teams, including their purpose and method of operation.**

**Requirements:**

**Present the following information as a lecture.**

- I. In major disasters, **local coroners, morticians and funeral directors will be overwhelmed**, unable to meet the large numbers of dead. For this reason, it may be necessary to call in **Disaster Mortuary Operational Response Teams (DMORT)**.
  - A. **A DMORT is a group of private citizens that is activated under Emergency Support Function #8 of the Federal Response Plan.**
    1. **A DMORT can be activated in circumstances that do not require utilization of the Federal Response Plan. State emergency management agencies may request a DMORT through the NDMS section of FEMA in the Department of Homeland Security.**
    2. It is, in many ways, **similar to a DMAT** (see session 15).
    3. However, **a DMORT is in charge of providing victim identification and mortuary services** (whereas a DMAT is in charge of increasing the medical capabilities in times of disaster).
  - B. **DMORTs are comprised of several licensed and certified experts:**
    1. **Funeral Directors**
    2. **Medical Examiners**
    3. **Coroners**
    4. **Pathologists**
    5. **Forensic Anthropologists**
    6. **Medical Records Technicians and Transcribers**
    7. **Finger Print Specialists**
    8. **Forensic Odontologists**
    9. **Dental Assistants**
    10. **X-ray Technicians**
    11. **Mental Health Specialists**

12. **Computer Professionals**
  13. **Administrative Support Staff**
  14. **And Security and Investigative Personnel.**
- C. After notification and mobilization, **DMORT members become federal employees** under the Department of Homeland Security.
1. They **work with local authorities to process deceased disaster victims.**
  2. Some of their **responsibilities include:**
    - a. **Recovering bodies, body parts and belongings of the dead**
    - b. **Setting up temporary morgues**
    - c. **Identifying disaster victims**
    - d. **Answering questions from the family of the deceased and providing comfort as needed**
    - e. **Facilitating death certificate issuance**
    - f. **Preparing and disposing of remains**
- D. **DMORTs can be sent to any location and are intended to be relatively self-sufficient.**
1. Some have **Disaster Portable Morgue Units (DPMU)**, which is a **complete and mobile morgue with workstations and prepackaged equipment.**
  2. **DMORTs provide necessary services after mass fatality incidents, and operate in a very professional manner.**

---

**Questions to be asked:**

1. Why do disasters produce so many deaths?
2. What challenges confront emergency responders and others in a mass fatality incident?
3. Why is planning for mass fatality incidents necessary?
4. Why should care and tact be shown when dealing with the dead and their relatives?
5. Should bodies be immediately removed from their original location?

6. What can coroners and others do to improve investigation, autopsies and the issuance of death certificates?
  7. How can mass fatality disasters be managed effectively?
  8. Why are DMORTs needed and how do they operate?
-

---

## Deadly Disasters

---

<u>Event</u>	<u>Deaths</u>
9/11 terrorist attacks	3,000
Kobe Japan earthquake	5,000
Hurricane Mitch	10,000
Armenian earthquake	25,000
Bangladesh cyclone	300,000

---

## **Mass Fatality Management Problems**

---

- Unauthorized movement of bodies
- "Disappearance" of corpses
- Disputes on the number of deaths
- Necessity for technology and expertise
- Disturbing process of identification
- Length and improbability of identification
- Improper record keeping
- Desire of friends and family to know fate of victims
- Frustration with the fatality management process
- Cancellation of normal funeral ceremonies
- Misperceptions about the dangers of corpses

---

## **Planning Considerations**

---

- A specified annex for mass fatality incidents (covering how to deal with remains, the victims' relatives and the media).
- Involvement of the emergency manager, medical examiners, coroners, morticians, funeral homes, and hospitals in the planning process
- Inclusion of various subjects such as crime scenes, logistics, family assistance, psychological issues and cultural and religious burial practices

---

## **Facts About DMORTs**

---

- Organized similar to DMATs
- Composed of certified experts
- Become federal (or state) employees
- Can operate independently

---

## **Steps for Effective Management**

---

- Do not move bodies until authorized
- Draw a map of the disaster scene
- Take bodies to a central morgue (if possible)
- Ensure adequate facilities
- Determine cause of death and identify body
- Dispose of body (with consultation of friends and family)