

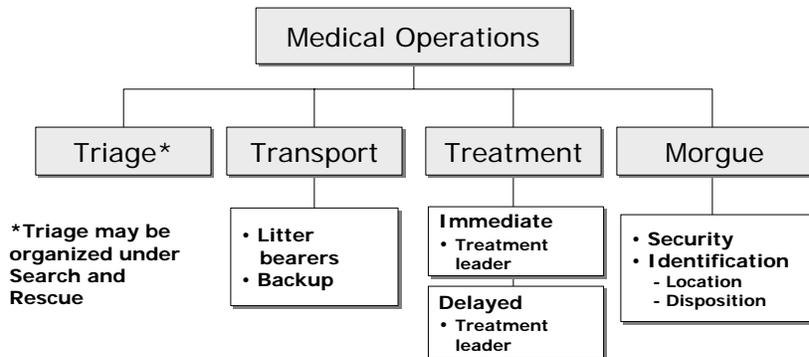
Lesson Overview

This lesson discusses important considerations in setting up, staffing, and running medical treatment areas. Disaster medical operations is divided into four major components.

- Triage.
- Transport.
- Treatment.
- Morgue.

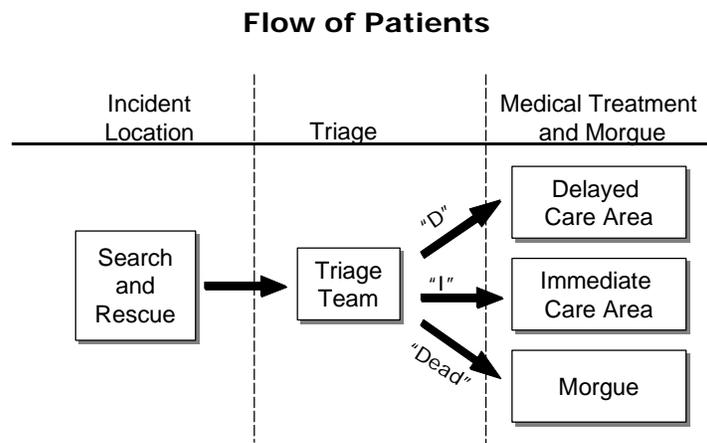
Organization

The chart below illustrates how the four medical operations components fit together organizationally.



Patient Flow

The diagram below illustrates how patients move through the medical operations components.



The Medical Treatment Area

The medical treatment area is the location where victims receive the most advanced medical care available at the scene.

If professional help is not available following a disaster, CERT medical operations personnel will establish the medical treatment area as soon as injured victims are confirmed. This includes:

- Selecting a site.
 - Setting up treatment areas.
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Selecting a Site

The medical treatment area site should be:

- In a safe area, free of hazards and debris.
 - Close to the hazard zone.
 - Upwind and uphill from the hazard zone.
 - Accessible by transportation vehicles such as ambulances, trucks, and helicopters.
 - Expandable.
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If Upwind Isn't Possible . . .

In an area near a large body of water, which is subject to onshore or offshore winds, it may not be possible to establish an upwind treatment site.

In this type of location, the treatment area should be established in an area close to the hazard zone and perpendicular to the wind direction.

Setting Up and Marking Areas

Three clearly marked medical operations areas should be established:

- Immediate care area ("I")
- Delayed care area ("D")
- Morgue ("Dead")

Each area should be marked with a sign, to match the tagging of victims: "I," "D," and "Dead." The entire area should also be protected and clearly delineated using a ground cover or tarp.

This marking system will make it easy for transporters to deliver tagged victims to the correct location.

Placement of Medical Treatment Areas

The immediate and delayed care areas should be relatively close to each other to allow:

- Verbal communication between workers in the two areas.
- Shared access to medical supplies, which should be stored in a central location.
- Easy transfer of patients whose status has changed.

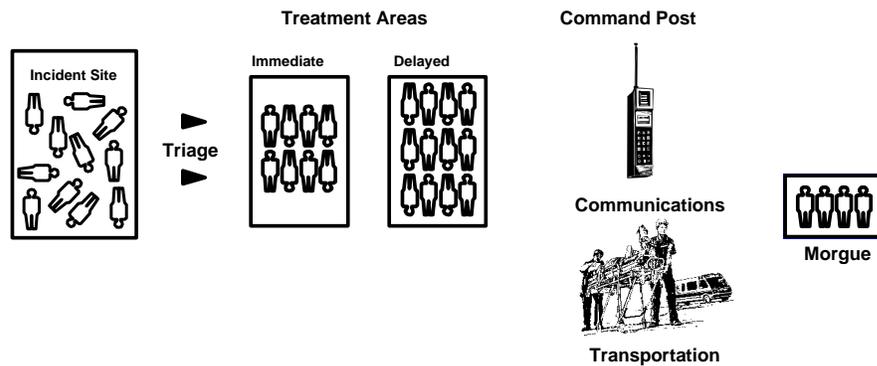
Placement of the Morgue

In locating the morgue, keep the following guidelines in mind:

- The morgue site should be located away from the treatment areas.
- The morgue should not be visible to patients in the treatment areas.
- The morgue must be kept secure.

Medical Operations Layout

The diagram below depicts one possible layout of the Medical Operations area.



Treatment Area Layout

Within the immediate and delayed treatment areas, patients should be positioned:

- In rows.
- Head-to-toe.
- 2 or 3 feet apart.

This configuration will provide effective use of space and available personnel. A worker who finishes one head-to-toe assessment is in position—simply by turning—to begin at the next patient's head.

Organizational Issues

To ensure that medical operations run efficiently, it is important that organizational planning occurs before disaster strikes.

Planning should address:

- Personnel assignments.
 - Provision of area markings.
 - Documentation.
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Personnel Assignments

The CERT team will assign leaders to maintain control in each of the medical treatment areas.

In each treatment area, it is the responsibility of the treatment leader to:

- Ensure orderly victim placement.
 - Direct assistants in conducting patient assessments.
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Area Markings

The treatment areas and morgue must be clearly marked with:

- Signs to identify areas for victims tagged "I," "D," and "Dead." Then volunteer transporters can be told to take the "I" victims to the area with the "I" sign.
- Ground covers or tarps that clearly demarcate and protect the areas.

These materials must be prepared in advance so that they are available for immediate use.

Documentation

Thorough documentation of victims in the treatment areas and morgue is a must.

Documentation provides a valuable source of information for:

- Estimating the number of casualties by degree of severity.
 - Effective deployment of resources.
 - Tracking individual victims.
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Public Health Considerations

When disaster victims are grouped together for treatment, public health becomes a concern.

To protect the public health and avoid the spread of disease, the following measures must be taken:

- Hygiene
 - Sanitation
 - Water purification (if necessary)
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Maintaining Hygiene

Proper hygiene is crucial wherever medical operations take place—even under makeshift conditions.

Below are important measures that you can take to maintain hygiene. You should practice the following measures during every drill and exercise.

- Wash hands frequently.
 - Use soap and water.
 - Hand-washing should be thorough—at least 12 to 15 seconds.
 - Use an antibacterial scrub, if possible.
- Wear sterile gloves.
 - Change or disinfect gloves after examining and/or treating each patient.
 - Under field conditions, you can use rubber gloves that are sterilized between victims using diluted bleach (1 part bleach to 10 parts water).
- Wear a mask and goggles.
 - If possible, choose a dust mask that is rated "N95." This type of mask will filter particles as small as 3 microns.
 - Wear goggles to protect the eyes from splashed and airborne contaminants.

Maintaining Hygiene (Continued)

- Keep bandages and dressings sterile.
All open wounds must be covered to help prevent infection and the spread of disease.
 - Do not remove the overwrap from bandages and dressings until you are ready to use them.
 - After opening, use the entire bandage or dressing, if possible.
 - Avoid contact with body fluids.
 - Gloves, mask, and goggles provide an important barrier.
 - If you come in contact with body fluids, thoroughly wash contaminated areas as soon as possible with soap and water or diluted bleach.
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Maintaining Sanitation

Proper sanitation is a must in the medical treatment area—even during exercises. Proper sanitation helps prevent infection and the spread of disease.

To maintain sanitary conditions, medical personnel should:

- Put waste products such as latex gloves and dressings in plastic bags. Tie off the bags and label them "medical waste."
 - Keep medical waste separate from other trash, and dispose of it as hazardous waste.
 - Bury human waste.
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Using Purified Water

Rescuers should not put anything on wounds other than purified water. Using other solutions, such as hydrogen peroxide, on wounds must be the decision of trained medical personnel.

Because potable water supplies are often in short supply or unavailable in an extreme emergency, it may become necessary to purify water before using it.

Methods for Purifying Water

When potable water is unavailable, water for drinking, cooking, and medical use should be purified using one of the following methods.

- Heat Method
 - Heat water to a rolling boil.
 - Boil for 1 minute.
 - Water Purification Tablets
 - Iodine or chlorine tablets can be used to kill waterborne pathogens.
 - If using water purification tablets, follow the product directions provided with the tablets.
 - Bleach
 - Use unscented liquid bleach.
 - Add 6 drops or $\frac{1}{8}$ teaspoon of bleach for each gallon of water.
 - Let the bleach/water solution stand for 30 minutes.
 - If the solution does not smell or taste of bleach, add another 6 drops of bleach and let the solution stand for 15 minutes before using.
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Lesson Summary

In this lesson you learned that:

- Medical treatment areas should be close to, upwind, and uphill from the hazard zone; accessible by transportation vehicles; expandable; and clearly marked.
 - Personnel, equipment, and documentation should be carefully planned in advance.
 - Public health measures should include proper hygiene, sanitation, and water purification.
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