15-1. Mass Casualties

The term mass casualties means that a large number of casualties has been produced simultaneously or within a relatively short period of time. It also means that the number of patients requiring medical care exceeds the medical capability to provide treatment in a timely manner. (See FM 8-10.) Mass casualties may occur in conventional warfare; however, under NBC/DE conditions, additional problems are superimposed.

a. In nuclear attacks, many more burns, low-velocity missile wounds, and ionizing radiation injuries can be expected as compared to a predominance of high-velocity missile wounds associated with conventional warfare. Casualties will be produced faster, and locally available means for early resuscitative care may quickly prove inadequate. At the time of triage, it will not be possible to predict which patients with thermal or blast injuries will develop radiation sickness. It will not always be possible to determine the dosage of irradiation which a patient has received. In these cases, reliance must be placed on clinical symptoms which may suggest that the patient has received a significant dose of irradiation.

b. Under biological conditions, the control of epidemics will be of paramount importance. Because of the large numbers of patients expected following a biological attack, it is probable that—

- Evacuation facilities will be unable to support the additional requirements.
- Units will have to stay on location and look after themselves.

If required, however, medical personnel and equipment could be moved into the area to assist. Keeping affected units on location will prevent the spread of infection to unaffected areas.

c. In a chemical environment, there will be a need to consider the individual protection of medical personnel and of patients. There will also be a need for decontamination of patients. Decontamination will be time-consuming and will make heavy demands on manpower for which medically trained personnel cannot be spared. Disposal of contaminated clothing and supply of clean clothing and decontaminants will pose a logistic problem.

d. Directed-energy weapons are likely to cause large numbers of casualties and equipment disruptions if countermeasures are not in place. Health service support units have adequate organization, doctrine (FM 8-50), and resources to address low-level lasers already fielded.

e. Civilian casualties may be a significant problem in populated areas, and HSS may be required to assist in treating civilian patients when civil medicine cannot handle the problem.

15-2. Categorization

In a MASCAL situation, the conventional treatment priorities must be abandoned. This means a radical departure from the traditional practice of providing early complete definitive treatment to each patient on the basis of his individual needs. Field Manual 8-10 discusses triage (sorting) which is the means for evaluating and categorizing casualties for priority of treatment.
15-3. Commanders' Planning Responsibilities in a Nuclear, Biological, Chemical, and Directed-Energy Environment

a. In planning for support following enemy nuclear or NBC/DE attack, combat, CS, and CSS commanders at every echelon must ensure that self-aid, buddy aid, combat lifesaver, and unit NBC defensive procedures are adequately trained. Command emphasis is required to ensure that—

- Nonmedical personnel are trained to perform search and rescue, immediate first aid, and initial NBC decontamination.
- The soldier's skills to perform self-aid and buddy aid are current.
- The combat lifesaver is trained and proficient in combat lifesaver skills.

b. Extremely limited medical assets require that support unit commanders establish unit teams to decontaminate patients at the MTF. These unit teams will function under medical supervision while decontaminating patients.

c. Based on medical recommendations, commanders establish procedures for the strict regulation, control, and administration of convulsant antidote for nerve agent (CANA) and Nerve Agent Antidote Kit (MARK I). (See FM 8-285.)

d. Based on tactical and intelligence information, commanders establish safety measures for DE.


a. The command surgeon's role in preparing for a MASCAL situation includes the development of a MASCAL plan. In addition to providing support to the normal mission, the command surgeon recommends protective measures against other forms of warfare which could result in the generation of MASCAL. When a MASCAL situation occurs, the surgeon is responsible for the management of patients.

b. The command surgeon must develop a MASCAL plan that is clearly defined and which is sufficiently detailed for understanding at all levels. It must be practiced at regular intervals and executable at the appropriate level.

c. The command surgeon must address in the plan such items as—

- The medical situation.
- The evacuation policy (including alternate plans) and responsibilities for patient evacuation and medical regulation.
- Alternate treatment locations and evacuation routes.
- Nuclear, biological, and chemical considerations. (For example, should patients with NBC injuries or contamination be regulated to certain hospitals; or will all hospitals have to receive NBC contaminated or injured patients? [In World War I, separate hospitals were designated for chemical casualties.] Other issues include casualty estimates, additional medical resource requirements, reallocation of medical resources after attack, categorization of combined injury casualties/patients, and treatment management of soldiers exposed to biological warfare agents.)
- Directed-energy considerations. (For example, what are the requirements for ballistic/laser protective spectacles, protective filters, magnifying optics, and vision blocks?)
Protection of patients and HSS resources to include medical personnel from contamination. (Planning provisions must include collective protection shelters for MTFs, if available.)

- Emergency resupply for Class VIII including blood.
- Nonmedical resources (especially personnel and transportation).
- Assistance including evacuation support from other arms and services.
- The types of additional non-organic medical assets needed.
- Priority of support and communications between evacuation assets and treatment assets.
- A clear delineation of medical responsibilities throughout the operational, technical, and administrative channels.
- Procedures for keeping necessary records and reports of the flow of patients.
- Procedures to cover situations where an unusual number of blinded patients seek medical attention.
- Required liaison with civilian authorities, where and when applicable.

The command surgeon working with the command dental surgeon determines the best use of dental resources in their alternate wartime roles during MASCAL situations. The dental surgeon, in turn, alerts dental resources through the technical chain as to the surgeon's guidance. He ensures that those concerned are able to perform their established role when required.

e. Mass casualty operations should be considered as part of an area damage control (ADC) mission, coordinated through and approved by the tactical commander and his principal staff, and incorporated into the overall tactical plan. The MASCAL plan must be coordinated with echelons above and below. It must also be adaptable to day and night operations.

f. Directives from higher echelons should provide the guidance and support to permit effective execution of the MASCAL plan.

15-5. Reference Information for the Modern Battlefield

Currently, there are many sources on NBC medical issues; however, to date there is not a consolidated medical reference concerning medical planning factors for NBC operations. There are still too many uncertainties concerning virtually all aspects of combat operations employing NBC and/or DE weapons. The following references may be useful in presenting medical aspects of each of these weapon types: Field Manuals 3-3, 3-4, 3-5, 3-100, 8-9, 8-10, 8-10-4, 8-10-7, 8-50, 8-285, 21-11; TM 3-216; and DA PAM 50-3. Joint Pub 3-11 and STANAGs 2873 and 2874 may be useful in joint or NATO operations.