Triage is a French word meaning to pick out or sort. It was first introduced into the English language during World War I as a military process of classifying casualties. The modern definition, according to Gunn, is “the selection and categorization of the casualties of a disaster with the view to appropriate treatment according to the degree of severity of illness or injury and the availability of medical and transport facilities.” Numerous studies and writings exist that address the methodology of triage. However, there is little attention provided to triage prior to transport, especially in regard to aeromedical evacuation (AE). This chapter addresses mass-casualty events (civilian or military) where triage is performed under circumstances in which the number of patients exceeds the normal capabilities and resources for a prolonged period of time. Triage becomes a critical aspect of AE in mass-casualty events requiring special skills and considerations.

Mass-Casualty Triage

Mass-casualty care has three principle elements: triage, basic field stabilization, and evacuation. The objective of mass-casualty triage is to accomplish the greatest good for the greatest number in the shortest time, and it is this type of triage we will discuss in this chapter. Civilian mass-casualty triage contrasts with that of military triage, where the stark realities of combat require that the first objective is to determine who can be quickly treated and returned to combat immediately following treatment. In such military triage, treatment and evacuation of the more seriously injured is an important, but secondary, objective.

Sophisticated mass-casualty triage principles were applied in the Korean War and improved upon in both the Vietnam and Persian Gulf Wars. Mortality rates were reduced from 4.7% in World War I to 1% in the Vietnam War. Rapid triage and stabilization treatment, together with immediate helicopter evacuation and well-equipped and staffed echelon-level hospitals, were major factors that contributed to the low mortality rate in Vietnam. In a medical echelon system, such as the military’s, retriage is required at every level in the chain of evacuation, and thus triage must be a dynamic process (Fig 6.1).

Triage Situations

A “triage situation” is any situation where the total patient requirement exceeds available resources, thus requiring temporary prioritization of critical care. An example of this most often occurs in rural hospital emergency departments when a limited number of providers are faced with two or more critically injured patients. A triage situation will exist until on-call assistance arrives or casualties are evacuated to an advanced-care facility. The few studies that address AE triage deal primarily with these casualty-limited events in remote or inaccessible areas. However, these studies still have some applicability to mass-casualty AE, especially as they relate to recognition of the appropriateness of aeromedical procedures,

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the impact of physiological and environmental factors, and skills required of aircraft and crew, as discussed later in this chapter.

Triage Criteria

Just as there are differences in the types of triage, ie, mass casualty and military, there are different criteria used to determine which patients are moved first. The two most common criteria are inclusion and exclusion.

Inclusion Criteria

The most common criteria used in the vast majority of civilian mass-casualty events are inclusion criteria. Civilian triage does not utilize the military echelons of care but does utilize the same decision-making factors, such as likelihood of medical success and conservation of scarce resources. In the United States, both military and civilian triage incorporate Advanced Trauma Life Support (ATLS), Advanced Cardiac Life Support (ACLS), and Advanced Pediatric Life Support (APLS) standards of care. These have also become the inclusion criteria expected for triage management in most developed countries where adequate resources and personnel exist. When there are an abundance of resources, inclusion criteria prescribe that all necessary resources be utilized first on the “sickest” patient. This approach to triage methodology and the decision-making process has been refined for the different locations at which it may be employed, including the scene of the disaster, the civilian or military hospital emergency department entrance, and x-ray and surgical suites. Unfortunately, the requirements for or influence of AE triage in this process have rarely been addressed.

Exclusion Criteria

Recent experiences during complex humanitarian emergencies (eg, Somalia, Rwanda, and the former Yugoslavia) have been remarkable both for the massive numbers of casualties (primarily civilian) and the extremely limited resources available. In these situations, definitive care is unavailable for most casualties. The result is that triage occurs at only one level, ie, the besieged hospital, where further evacuation (ground and air) is often impossible (Fig 6.2). Mass-casualty events during complex emergencies often require triage officers to make exclu-