LESSON ASSIGNMENT

LESSON 1
Triage and Evacuation Flow.

TEXT ASSIGNMENT
Paragraph 1-1 through 1-12.

LESSON OBJECTIVES
After completing this lesson, you should be able to:

1-1. Triage casualties on a conventional battlefield.

1-2. Triage casualties on an integrated battlefield.

SUGGESTION
After completing the assignment, complete the exercises at the end of this lesson. These exercises will help you to achieve the lesson objectives.
LESSON 1

TRIAGE AND EVACUATION FLOW

Section I. TRIAGE PROCEDURES

1-1. INTEGRATED BATTLEFIELD

Modern weapons are far more deadly and accurate than those used in past conflicts. The AirLand Battle doctrine, which is the Army’s basic operational concept, involves preparing for an integrated battlefield in which conventional air and land weapons, nuclear weapons, biological weapons, chemical weapons, and directed energy (laser) weapons may be used. Military commanders will rely upon medical resources to treat, evacuate, and (when possible) return soldiers to duty. In the initial phases of battle, the soldiers who are evacuated, treated, and returned to duty may provide the tactical commander with his only source of trained combat replacements.

1-2. TRIAGE

Triage means sorting. Triage is used to determine the sequence in which casualties are to be treated in order to maximize the number of survivors and to return to duty those soldiers with minor wounds. Triage is also used to determine the sequence in which casualties are to be evacuated. Triage is a continuous process that is performed at each medical treatment facility (MTF) through which the casualties pass. The goal of successful triage is to do the most good for the most people. Triage is usually performed by the most senior medical person available.

1-3. TRIAGE FOR TREATMENT (NONCHEMICAL ENVIRONMENT)

When a medic (or any other person) has more than one casualty, he must decide which casualty to treat first. Some injuries require immediate treatment if the casualty is to live while others can go for a fairly long time without treatment before the casualty’s condition deteriorates significantly. When chemical agents are not being used, casualties are triaged as being immediate, delayed, minimal, or expectant and are treated in that order. Triage assures that treatment is directed first toward casualties who have the best chance to survive based upon available medical personnel and supplies. Triage determines the order of treatment, not whether or not treatment is given.

a. Immediate. A casualty in the immediate category requires immediate care if he is to survive. Once a casualty in the immediate category has been treated and the life-threatening or limb-threatening condition controlled (airway obstruction expelled, tourniquet applied, and so forth), the treatment of the casualty’s other non-immediate injuries are delayed until the life/limb-threatening conditions of other casualties have been treated. Procedures used are short duration and use only essential medical resources. Examples of casualties in this category include casualties with:
(1) An obstruction of the airway or respiratory distress.

NOTE: A casualty with cardiopulmonary failure in a battlefield situation is categorized as expectant.

(2) Bilateral femur fractures.

(3) Massive external bleeding.

(4) Shock.

(5) Second and/or third degree burns of the face, neck, hands, feet, perineum, and/or genitalia, but with less than 85 percent of the body's surface burned.

NOTE: A casualty with second or third degree burns of the face or neck will usually be in shock and have respiratory distress.

(6) Penetrating chest injuries.

b. **Delayed.** A casualty in the delayed category has less risk of death or loss of limb if treatment is delayed than a casualty in the immediate category. Examples of casualties in this category include casualties with:

   (1) Extensive soft tissue wounds requiring debridement.

   (2) Maxillofacial wounds without airway compromise.

   (3) Vascular injuries with adequate distal circulation.

   (4) A vascular limb (damaged blood vessels in the limb resulting in the arm or leg having a poor blood supply or no blood supply).

   (5) Second and/or third degree burns on 20 to 85 percent of the casualty's body surface, but not including the face, neck, hands, feet, perineum, or genitalia.

   (6) Other open wounds, including an open head wound.

   (7) Fractures requiring operative manipulation, debridement, and fixation.

c. **Minimal.** Casualties in the minimal category generally do not require evacuation to a MTF. These casualties can usually be treated with self-aid (casualty treats himself) or buddy-aid (casualty treated by a nonmedical soldier, such as a combat lifesaver). Treatment by the medic, if needed, can usually be performed quickly. Some of these casualties can be returned to duty. Others can be used by the medic to assist in providing care, defending the immediate area, or evacuating casualties. Examples of casualties in this category include casualties with:
(1) Soft tissue wounds without profuse bleeding (minor lacerations and contusions).

(2) Upper extremity fractures, fingers, dislocations, and sprains.

(3) Second and/or third degree burns under 20 percent of the casualty's body surface and not involving the face, neck, hands, feet, perineum, or genitalia.

(4) Combat stress (battle fatigue).

d. **Expectant.** Casualties in the expectant category have life-threatening conditions that are beyond the capability of the medic to treat and only complicated and prolonged treatment offers any hope of improving life expectancy. This category is used only if resources are limited. Examples of casualties in this category include casualties with:

   (1) Massive head injuries with signs of impending death (unresponsive with penetrating head wounds).

   (2) Burns, mostly third degree, covering more than 85 percent of the body's surface area.

   (3) Mutilating wounds involving multiple structures.

   (4) Agonal respirations (ineffective gasping breaths).

1-4. **TRIAGE FOR TREATMENT (CHEMICAL ENVIRONMENT)**

When a medic is triaging casualties in a chemical environment (chemical agents are being used), the triage categories change somewhat. In a chemical environment, casualties are triaged as being immediate, chemical immediate, delayed, minimal, or expectant and are treated in that order. Signs and symptoms of chemical agent poisoning are described in subcourse MD0534, Treating Chemical Agent Casualties in the Field.

**NOTE:** When a casualty has chemical agent poisoning and conventional injuries, you will usually treat the chemical agent poisoning before treating the conventional injuries. If a casualty has arterial bleeding and is not classified as expectant, however, take immediate action to control the bleeding prior to or simultaneously with treating the casualty for chemical agent poisoning.

a. **Immediate.** Casualties in the immediate category have a life-threatening condition (same as paragraph 1-3a) and do not have signs or symptoms of chemical agent poisoning.
b. **Chemical Immediate.** Casualties in the chemical immediate category have no conventional injury, but show signs and/or symptoms of severe chemical agent poisoning (vomiting, labored breathing, coughing, sweating through protective clothing, not being able to follow simple commands like holding up right arm, and so forth).

c. **Delayed.** Casualties in the delayed category have serious conventional injuries, which are not life threatening (paragraph 1-3b). The casualties may have signs and/or symptoms of mild chemical agent poisoning, but not severe chemical agent poisoning.

d. **Minimal.** Casualties in the minimal category have minor conventional injuries (paragraph 1-3c) and do not have signs or symptoms of chemical agent poisoning.

e. **Expectant.** Casualties in the expectant category have life-threatening conventional injuries that are beyond the capability of the medic to treat (paragraph 1-3d), have life-threatening conventional injuries with signs and/or symptoms of severe chemical agent poisoning, or have no respiration (not breathing) because of chemical agent poisoning.

1-5. **TRIAGE FOR EVACUATION**

Hopefully, the number of casualties requiring evacuation will not exceed evacuation capabilities. However, you may need to decide which casualties are to be moved first if the number of litter teams is limited or if the vehicle or vehicles available cannot transport all of the casualties at the same time. Casualties to be evacuated are classified as urgent, urgent surgical, priority, routine, or convenience. Casualties classified as urgent or urgent surgical are evacuated first. Casualties classified as priority are evacuated next. Casualties classified as routine are evacuated last. A fourth category, convenience, can also be used if appropriate. General rules for triaging casualties for evacuation are given below. Each casualty must be triaged for evacuation based upon his present condition. For example, a casualty who had an airway obstruction and was originally classified as immediate may only require medical examination at the MTF to ensure that his throat was not injured.

a. **Urgent.** Urgent category casualties usually consist of immediate and chemical immediate casualties. These casualties need to be evacuated (by air ambulance, if possible) as soon as possible (within 2 hours) in order to save life, limb, or eyesight. These casualties have treatable injuries that cannot be controlled by the medic. This includes:

   (1) Casualties whose condition(s) cannot be controlled and have the greatest opportunity for survival.

   (2) Cardio-respiratory distress.
(3) Shock not responding to intravenous (IV) therapy.

(4) Prolonged unconsciousness.

(6) Head injuries with signs of increasing intracranial pressure.

b. **Urgent Surgical.** Evacuation is required for patients who must receive forward surgical intervention to save life and stabilize for further evacuation. This includes:

(1) Decreased circulation in the extremities.

(2) Open chest and/or abdominal wounds with decreased blood pressure

(3) Penetrating wounds (gunshots, shrapnel)

(4) Uncontrollable bleeding or open fractures with severe bleeding.

(5) Burns on hands, feet, face, genitalia or perineum, even if under 20 percent of total body surface area.

c. **Priority.** Priority category casualties usually consist of the more serious delayed casualties. These casualties need to be evacuated within four hours or their status will probably be upgraded to urgent. Examples of casualties in this category include casualties with:

(1) Chest injuries, such as rib fractures without a flail segment (three or more adjacent ribs broken in two or more places).

(2) Brief periods of unconsciousness.

(3) Abdominal injuries with no decreased blood pressure.

(4) Eye injuries that do not threaten eyesight.

(5) Spinal injuries.

(6) Soft tissue injuries and fractures (open or closed).

d. **Routine.** Routine category usually consists of the less serious delayed casualties and minimal casualties requiring additional medical treatment and/or evaluation. The evacuation of these casualties can be delayed for up to 24 hours without serious deterioration of their conditions. Casualties in the expectant category are also placed in this category when evacuation means are limited. Examples of casualties in this category include casualties with:
(1) Burns on 20 to 85 percent of body surface (but not on hands, face, feet, genitalia, and/or perineum) and casualty is responding to intravenous therapy.

(2) Uncomplicated fractures, with or without minor open wounds.

(3) Open wounds, including superficial chest wounds, without respiratory distress and without decreased blood pressure.

(4) Psychiatric problems (combat stress/battle fatigue).

e. **Convenience.** Evacuation of patients by medical vehicle is a matter of convenience rather than necessity. Examples are:

   (1) Minor open wounds.

   (2) Sprains and strains.

   (3) Minor burns under 20 percent of the total body surface area.

### Section II. EVACUATION FLOW

#### 1-6. EVACUATION SYSTEM

The Army's system for evacuating sick, wounded, and injured personnel has been developed through many years of experience. The forerunner of today's evacuation system was developed by Dr. Letterman during the American Civil War. Today's evacuation system provides a continuous system of evacuation beginning at the point of injury and extending all the way to military and nonmilitary hospitals within the United States. The evacuation system relies upon the use of manual and litter carries, ground and air ambulances, non-medical vehicles which can be used to transport casualties, United States Air Force (USAF) fixed wing aircraft, and US Navy vessels to transport casualties to facilities where they can receive the appropriate care.

a. **Combat Medic.** The first medical person to treat a casualty is usually the combat medic attached to the platoon or company.

**NOTE:** The casualty may receive care in the form of buddy-aid from a fellow soldier or first aid from a combat lifesaver before the medic arrives. However, this care is not delivered by a medical person and is not classified as medical care.

b. **Casualty Collection Point.** Casualties requiring additional medical treatment are usually taken to a collection point called a casualty collection point (CCP). Casualties usually reach the CCP by walking or by being carried (either manual carry or litter).
c. **Battalion Aid Station.** Ground ambulances (usually M113s in heavy divisions) from the battalion aid station (BAS) collect casualties from the CCP’s and transport the casualties to the battalion aid station. At the BAS, the casualties are treated by members of the treatment squad. Casualties requiring additional medical treatment (not returned to duty) are evacuated to the forward support medical company (FSMC) or forward surgical team (FST).

d. **Ambulance Exchange Point.** The forward support medical company (FSMC) is responsible for evacuating casualties who are not returned to duty from the BAS’s. Sometimes, both tracked (M113) and wheeled ambulances are used. The tracked ambulance evacuates casualties from the aid station and takes them to an ambulance exchange point (AXP). At the AXP, the casualties are transferred to a wheeled ambulance from the forward support medical company that completes the trip to the forward support medical company.

e. **Forward Support Medical Company.** Casualties are evacuated from the BAS’s by ground and/or air ambulances from the FSMC. Casualties who cannot be treated by the FSMC and returned to duty are evacuated by air and/or ground ambulances to division medical treatment facilities or combat support hospitals in the theater of operations.

f. **Main Support Medical Company.** Casualties are evacuated from the FSMC’s by ground and/or air ambulances from the division MTF. Casualties who cannot be treated by the division medical facility and returned to duty are evacuated by air and/or ground ambulances to an appropriate MTF in the Corps support area.

g. **Corps Medical Treatment Facilities.** Corps level MTF’s evacuate casualties from the division MTFs. Corps level facilities include the mobile Army surgical hospital (MASH), the combat support hospital (CSH), and the evacuation (Evac) hospital. Casualties that cannot be treated by corps level facilities and returned to duty are evacuated to a MTF in the communications zone (COMMZ).

h. **Communications Zone Medical Treatment Facilities.** Communications zone level MTF's evacuate casualties from corps MTF's. The primary MTF of the COMMZ is the general hospital. Field hospitals and station hospitals are also located in the COMMZ.

**NOTE:** The station hospital may eventually be eliminated.

i. **Zone of the Interior Medical Treatment Facilities.** Casualties who require further medical treatment or who will not be returned to duty are evacuated from the general hospital in the COMMZ to a MTF in the zone of the interior (ZI). This is usually a military hospital [medical center (MEDCEN) or Army medical department activity (MEDDAC)], other federal hospital, or CMCHS (civilian/military contingency hospitalization system) hospital inside the United States (CONUS).
**NOTE:** Figures 1-1 and 1-2 illustrate the US Army Medical Department's evacuation chain.

![Diagram](image)

**Figure 1-1.** Medical facilities in a theater of operations.
Figure 1-2. Normal evacuation chain.
1-7. MEDICAL PLATOON (ECHELON I)

Initial medical treatment and evacuation rely primarily upon the medical platoon (figure 1-3) organic to the combat maneuver battalion.

![Diagram of Medical Platoon Structure]

Figure 1-3. Example of a medical platoon.

a. **Medical Platoon Mission.** The medical platoon organic to the headquarters and headquarters company (HHC) of the combat maneuver battalion provides medical evacuation support for the battalion. The platoon's mission is to provide this support for the subordinate elements of the battalion and also provide support to other elements that do not have organic medical evacuation resources in the sector providing combat support to their unit.

b. **Headquarters Section.** Headquarters section consists of a platoon leader and a platoon sergeant. The platoon leader is a physician (medical corps) who serves as the battalion surgeon and is also part of the treatment squad section. The platoon sergeant is a medical noncommissioned officer (NCO). He can also act as the leader of a treatment team if necessary.

c. **Treatment Squad.** The treatment squad consists of two treatment team modules. One treatment team module consists of a physician (platoon commander) and three medical specialists. The other treatment team consists of a physician assistant (PA) and three medical specialists. Each treatment team has its own vehicle (an M577 in heavy divisions) that serves as a mobile BAS. Both treatment teams may be located at the same site or the teams can separate and establish separate treatment sites.
d. **Ambulance Squads.** An ambulance squad module consists of four medical specialists and two ground ambulances. Two medical specialists are assigned to each vehicle. One medical specialist serves as the driver while the other medical specialist (assistant driver) provides medical care to casualties en route. The type of ground ambulances used depends upon the type of unit that the medical platoon supports. Examples of ground ambulances are given in Lesson 4. A medical platoon usually has two ambulance squad modules. Medical units with mechanized infantry and armor units have four ambulance squad modules.

e. **Combat Medic Section.** The combat medic section consists of medical specialists attached to the companies/platoons of the unit. These combat medics provide initial medical care to wounded soldiers. Each combat medic attached to a combat unit is considered as a separate module.

   (1) Echelon I care emphasizes care needed to resuscitate and stabilize the casualty (such as maintaining an airway, stopping bleeding, and controlling shock) and to prepare the casualty for evacuation. Echelon I care includes emergency care provided by nonmedical soldiers and by medical platoon personnel.

   (2) Nonmedical soldiers provide basic self-aid and buddy-aid care. Some nonmedical soldiers, called combat lifesavers, have received additional training and can provide more advanced procedures (including initiating intravenous infusions to control shock) as a secondary mission when the military situation permits.

   (3) Medical treatment includes the treatment provided by the combat medics (aidmen), ambulance crews, and aid station personnel.

1-8. **BRIGADE AND DIVISION EVACUATION (ECHELON II)**

Six modules provide unit- and division-level (including separate brigades and ACR's) health care throughout the theater. The modules are the combat medic, treatment squad, ambulance squad, patient-holding squad, area support squad, and the forward surgical team (FST). The FST is organic to the airborne/air assault divisions and the ACR (light) and functions as an Echelon II asset. These health care modules form medical platoons, companies, and battalions. The modular design of Echelons I and II medical treatment assets allows for the rapid tailoring of agile, mobile emergency medical treatment (EMT), advanced trauma management (ATM), sick call, emergency and sustaining dental support, essential laboratory and x-ray services, and holding for patients awaiting evacuation or return to duty (RTD) within 72 hours.

a. **Area Support Squad.** The area support squad consists of one dental officer (Dental Corps), a dental specialist, an X-ray specialist, and a medical laboratory specialist. Area support squads do not function independently.
b. **Patient Holding Squad.** The patient holding squad consists of two practical nurses and two medical specialists. It is capable of holding and providing minimal care for up to 40 patients who will be returned to duty.

c. **Forward Surgical Team.** The forward surgical team (FST) is designed to perform urgent initial surgery. When this modular-designed surgical capability is deemed necessary, the FST may augment other medical treatment units during stability operations and support operations.

1-9. **ECHELON III HOSPITALIZATION**

Echelon III hospitalization includes the 296-bed combat support hospital (CSH) with attached FST's. The CSH manages all types of patients and is normally employed in the corps forward and rear areas. The corps FST is usually attached to a corps hospital unless it is operationally deployed forward. The FST provides urgent, initial surgery and continued postoperative care of patients for approximately 6 hours. The FST provides additional surgical capability when attached to a CSH; however, its primary function is to provide Echelon II CHS within a division.

1-10. **ECHELON IV HOSPITALIZATION**

Echelon IV hospitalization includes the 476-bed general hospital (GH) and the 504-bed field hospital (FH). The GH provides additional specialty care and surgical treatment for patients who require further stabilization prior to evacuation out of the theater. The GH is employed at echelons above corps (EAC). The FH provides reconditioning and rehabilitation for those patients who can return to duty within the time frame specified by the theater evacuation policy. The FH can be employed at EAC or in the combat zone (CZ). Echelon IV hospitalization also includes the medical company, holding (MCH). The MCH provides 1,200 convalescent care cots for reconditioning and rehabilitation. The MCH is employed at EAC in support of the FH; it may be employed in the CZ in direct support of the CSH.

1-11. **ECHELON V HOSPITALIZATION**

Echelon V hospitalization includes the continental US (CONUS) or outside continental US (OCONUS) based DOD medical centers, Department of Veterans Affairs hospitals, and the National Defense Medical System (NDMS), which is composed of civilian hospitals. The Echelon V hospitalization system completes the definitive medical treatment and surgical care, and provides rehabilitation and convalescence for those patients from the theater.
1-12. LEVELS OF MEDICAL CARE

As a casualty is evacuated farther rearward in the evacuation chain, the primary medical treatment facilities become larger and capable of providing more extensive medical care. No casualty should be evacuated any farther to the rear than his physical condition or the military situation requires. The types of care available are usually classified as echelons I-V. Facilities that offer higher levels are also capable of performing the lower levels. For example, a facility which offers echelon III care can also perform echelon I and echelon II level care.

a. **Echelon I.** Echelon I care emphasizes care needed to resuscitate and stabilize the casualty (such as maintaining an airway, stopping bleeding, and controlling shock) and to prepare the casualty for evacuation. Echelon I care includes emergency care provided by nonmedical soldiers and by medical platoon personnel.

(1) Nonmedical soldiers provide basic self-aid and buddy-aid care. Some nonmedical soldiers, called combat lifesavers, have received additional training and can provide more advanced procedures (including initiating intravenous infusions to control shock) as a secondary mission when the military situation permits.

(2) Medical treatment includes the treatment provided by the combat medics, ambulance crews, and aid station personnel.

b. **Echelon II.** Echelon II care includes resuscitation and additional emergency measures as needed, but does not go beyond the measures dictated by the immediate necessities. The FST’s can provide echelon II care at the brigade level.

c. **Echelon III.** Echelon III care is provided by a medical facility staffed and equipped to provide care for all categories of patients. The combat support hospital, mobile Army surgical hospital, and field hospital are examples of facilities providing echelon III care.

d. **Echelon IV/V.** Echelon IV and echelon V care is provided by hospitals that are staffed and equipped for general and specialized medical and surgical care and for reconditioning and rehabilitation for return to duty. The general hospital in the communications zone and ZI (CONUS) hospitals are examples of facilities providing echelons IV-V care.

*Continue with Exercises*

*Return to Table of Contents*
EXERCISES, LESSON 1

INSTRUCTIONS: Answer the following exercises by marking the lettered response that best answers the question or best completes the incomplete statement or by writing the answer in the space provided at the end of the exercise.

After you have completed all the exercises, turn to "Solutions to Exercises" at the end of the lesson and check your answers. For each exercise answered incorrectly, reread the material referenced with the solution.

In exercises 1 through 6, match the casualty description in Column I with the appropriate treatment category from column II. Categories in Column II may be used more than once.

<table>
<thead>
<tr>
<th>COLUMN I (Casualty Description)</th>
<th>COLUMN II (Category)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Casualty has a deep cut on his thigh with severe bleeding from the wound. There are no indications of chemical agent poisoning.</td>
<td>a. Immediate.</td>
</tr>
<tr>
<td>2. Casualty has an open head wound with lacerated brain tissue visible. Casualty is not breathing.</td>
<td>b. Chemical Immediate.</td>
</tr>
<tr>
<td>3. Casualty has an amputation of part of the hand, including the loss of two fingers. Bleeding is being controlled by a dressing applied by a nonmedical soldier and by manual pressure being applied by the casualty. Chemical agents are not being used.</td>
<td>c. Delayed.</td>
</tr>
<tr>
<td>4. Casualty has signs of severe chemical agent poisoning, but no other injuries.</td>
<td>d. Minimal.</td>
</tr>
<tr>
<td>5. A casualty has a fractured leg (no open wound) due to a fall. The casualty was briefly exposed to nerve agents, but is now wearing full protective gear and is responding to the nerve agent antidote which the casualty administered to himself.</td>
<td>e. Expectant.</td>
</tr>
<tr>
<td>6. A casualty has first and second degree burns on his back and buttocks (estimated at 12 percent of body surface) with no other injuries.</td>
<td></td>
</tr>
</tbody>
</table>
7. A casualty who is classified as expectant would normally be classified as ____ for purposes of evacuation when evacuations means are limited.
   a. Urgent.
   b. Priority.
   c. Routine.

8. A casualty has an open “sucking” chest wound with respiratory distress and shock. His classification for evacuation is:
   a. Urgent.
   b. Priority.
   c. Routine.

9. A casualty can wait for over 2 hours for evacuation without endangering his life, limb, or eyesight. Delaying his evacuation for more than 4 hours, however, will probably endanger his life. His classification for evacuation is:
   a. Urgent.
   b. Priority.
   c. Routine.

10. A physician assistant (PA) in a medical platoon organic to a combat battalion will be part of a(n):
    a. Ambulance squad.
    b. Area support squad.
    c. Surgical squad.
    d. Treatment squad.
11. Casualties requiring additional medical treatment are being evacuated from a battalion aid station to a forward support medical company. The evacuation vehicle used to transport the casualties is normally provided by the:

   a. Battalion aid station.
   b. Forward support medical company.
   c. Combat support hospital.
   d. Evacuation hospital.

12. Which of the following offers the highest level of medical care?

   a. Battalion aid station.
   b. Area treatment squad.
   c. Combat support hospital.
   d. General hospital.

   Check Your Answers on Next Page
SOLUTIONS TO EXERCISES, LESSON 1

1. a (paras 1-3a(3), 1-4a)
2. e (paras 1-3d(1), 1-4e)
3. c (paras 1-3b, b(6))
4. b (para 1-4b)
5. c (paras 1-3b(7), 1-4c)
6. d (paras 1-3c(3), 1-4d)
7. c (para 1-5d)
8. a (paras 1-3a(1), 1-5a, a(1))
9. b (paras 1-5a, c)
10. d (para 1-7c)
11. b (paras 1-6d, e)
12. d (paras 1-10, 1-12, 1-12d)

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