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Health Service Support

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UNITED STATES MARINE CORPS

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FOREWORD

Marine Corps Tactical Publication (MCTP) 3-40A, *Health Service Support*, addresses the fundamental principles required for planning and executing Marine air-ground task force health service support activities.

This publication provides a broad doctrinal overview for commanders and their staffs regarding health service support tasks and functions related to Marine air-ground task force operations. Additionally, it provides readers with a conceptual understanding of health service support capabilities, planning considerations, command relationships, support requirements, and considerations for the successful execution of missions throughout the competition continuum.

This publication supersedes MCTP 3-40A, *Health Service Support Operations*, dated 10 December 2012; its Erratum, dated 2 May 2016; Change 1, dated 4 April 2018; Marine Corps Reference Publication 3-40A.5, *Health Service Support Field Reference Guide*, dated 8 October 2015; its erratum, dated 2 May 2016; and Change 1, dated 4 April 2018.

Reviewed and approved this date.

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Table of Contents

CHAPTER 1. FUNDAMENTALS OF HEALTH SERVICE SUPPORT

Mission 1-1
Principles 1-2
A Healthy and Fit Force 1-2
Threat to the Force 1-2
Casualty Care and Management 1-3
Roles of Care 1-3
    Point of Principal Treatment 1-4
    Role 1 Care 1-4
    Role 2 Care 1-5
    Role 3 Care 1-6
    Role 4 Care 1-7
Triage 1-7
    Immediate 1-8
    Delayed 1-8
    Minimal 1-8
    Expectant 1-9
Functional Areas 1-9
The Hague and Geneva Conventions 1-10
Planning 1-10
    Planning Considerations 1-11

CHAPTER 2. INTELLIGENCE

Medical Intelligence Sources 2-1
    Command Intelligence Sections 2-1
    Marine Corps Intelligence Activity 2-1
    Preventive Medicine Section 2-1
    National Center for Medical Intelligence 2-2

CHAPTER 3. OPERATIONS

Marine Air-Ground Task Force 3-1
Marine Corps Forces 3-1
    Marine Expeditionary Forces 3-2
    Marine Division 3-2
    Marine Aircraft Wing 3-2
    Marine Logistics Group 3-2

Dental Battalion 3-3
Medical Logistics Company 3-3
Medical Battalion 3-3
Headquarters and Service Company 3-4
Surgical Platoon 3-4
Surgical Company 3-4
Forward Resuscitative Surgery System 3-4
En Route Care System 3-5
Marine Expeditionary Unit 3-6
Phasing Support Ashore 3-6
Assault Echelon 3-7
Assault Follow-On Echelon 3-8
Follow-On Forces 3-8
Capabilities External to the MAGTF 3-8
Hospital Ships 3-8
Casualty Receiving and Treatment Ships 3-8
Fleet Surgical Teams 3-9
Forward Deployable Preventive Medicine Unit 3-9
Theater Hospitalization Capability 3-9

CHAPTER 4. LOGISTICS

Allowance and Source of Logistics 4-1
Table of Equipment 4-2
Authorized Medical and Authorized Dental Allowance Lists 4-2
Replenishment Supply Support 4-2
Individual Health Service Support Equipment 4-3
Routine Resupply 4-3
Combat Resupply 4-3
Patient Movement Items 4-3
Disposing Materials 4-3
Protection of Medical Supplies 4-4

CHAPTER 5. COMMAND AND CONTROL

Command and Control Organization 5-1
Communications and Information Systems 5-1
Data Preservation 5-2
MAGTF Command and Control Centers, Agencies, and Facilities 5-3

CHAPTER 6. PLANNING

Marine Corps Planning Process 6-1
Health Service Support Planning Responsibilities Unique To Amphibious Operations 6-2
Amphibious Task Force Surgeon 6-2
Landing Force Surgeon 6-2
Sequence of Command and Staff Planning for Health Service Support 6-3
Medical Estimate 6-3
Decisions and Recommendations 6-3
Health Service Support Concept of Operations 6-3
Medical Services Annex 6-4
Transition: Phases of Expeditionary Operations 6-5
Predeployment 6-5
Deployment 6-6
Entry 6-6
Enabling and Decisive Actions 6-7
Redeployment 6-8
Health Service Support Planning Considerations 6-8

CHAPTER 7. PREVENTIVE MEDICINE

Predeployment 7-1
Deployment 7-2
Marine Expeditionary Force Preventive Medicine Capabilities 7-2
Navy and Marine Corps Force Health Protection Command 7-2
Navy Entomology Center of Excellence 7-3
Naval Dosimetry Center 7-3
Drug Screening Laboratory 7-3
Field Activities— Navy Environmental Preventive Medicine Units 7-3
Additional Resources 7-3

CHAPTER 8. PATIENT MOVEMENT

Fundamental Principles 8-1
En Route Care Capability 8-2
Decision Making 8-2
Casualty Sorting (Triage) 8-2
Medical Management 8-2
Medical Evacuation Assets 8-2
Casualty and Medical Evacuation Request Procedures 8-3

CHAPTER 9. DENTAL SERVICE SUPPORT

Tenets 9-1
Prevention 9-1
Return to Duty 9-1
Scalable Dental Support 9-1
Enhanced Forward Care 9-1
Marine Corps Dentistry 9-2
Organization of Field Dental Support 9-2
Dental Platoon-Ground Unit 9-3
Dental Platoon-Air Unit 9-3
Dental Section 9-3
Field Dentistry 9-3
Evacuation 9-4
Referral 9-4
Field Dental Equipment 9-4
Patient Dental Care 9-5
Deployment Log 9-5
Patient Dental Record 9-6
Unit After Action Report 9-6
Preventive Dentistry 9-6
Field Oral Hygiene Instruction 9-6
Infection Control 9-7
Infectious and Medical Waste Management 9-7
Hazardous Waste 9-7
Alternate Dental Service Support Roles 9-7
Dental Support of Medical Treatment Facilities
During a Mass-Casualty Event 9-8
Shelter 9-8
Dental Equipment Sets 9-8
Planning and Coordination 9-8

CHAPTER 10. CHEMICAL, BIOLOGICAL, RADIOLOGICAL, AND NUCLEAR DEFENSE

Preparations Before a Chemical, Biological, Radiological, and Nuclear Attack 10-1
Shelter During a Chemical, Biological, Radiological, and Nuclear Attack 10-2
Response After a Chemical, Biological, Radiological, and Nuclear Attack 10-2
Nuclear Environment 10-2
Radiological Environment 10-3
Biological Environment 10-3
Chemical Environment 10-4

Medical Evacuation 10-4
Personnel Considerations 10-5

CHAPTER 11. COMBAT CASUALTY REPORTING

Tactical Combat Casualty Care Card 11-1
Identification Tags 11-5

CHAPTER 12. TRAINING

Health Service Support Goals 12-1
Increase Individual Readiness 12-1
Standardized Methods and Procedures 12-1
Training Courses 12-1
Field Medical Service Technician Course 12-2
Field Medical Service Officer Course 12-2
Combat Casualty Care Course 12-2
Tactical Combat Casualty Care Courses 12-2
Sick Call Screener Course 12-3
Joint EnRoute Care Course 12-3
Flight Medic Course 12-3
Plans, Operations, and Medical Intelligence Course 12-3
Medical Regulators Course 12-4
Joint Medical Operations Course (Basic and Advanced) 12-4
Joint Medical Planning Tool 12-4
Amphibious Warfare Staff Planning Course 12-4
Expeditionary Warfare School 12-4
Mountain Medicine and Cold-Weather Medicine 12-4
Commander's Responsibilities 12-5
Medical Department Officers and Senior Enlisted 12-5
Types of Training 12-5
Individual Training 12-5
Unit Training 12-5
Exercises 12-6
Chemical, Biological, Radiological, and Nuclear Defense Training 12-6
Preventive Medicine Training 12-6
Logistics and Supply Training 12-6
Non-Health Service Support Personnel 12-7

Appendices

A. Medical and Dental Allowance Lists

B. Blood Support

C. Operational Graphics

Glossary

References and Related Publications

CHAPTER 1.
FUNDAMENTALS OF HEALTH SERVICE SUPPORT

Health service support (HSS) medical forces provide the warfighter on-demand healthcare capabilities; ensure a healthy, fit, medically ready force; counter health threats to the deployed force; provide critical care; and manage combat casualties.

All HSS directly supports the national military strategy of forward presence and power projection. It strengthens the warfighting commander by providing essential in theater care and rapid medical evacuation (MEDEVAC) of casualties across the continuum of care to include medical treatment facilities (MTFs) in the continental United States (CONUS).

Health service support personnel often work with North Atlantic Treaty Organization (NATO) Allied Medical Publications, and Allied Joint Publications; American, British, Canadian, Australian, and New Zealand Armies' Program standards; and other coalition forces. The reference section of this publication lists numerous medical standards, agreements, and methods for interoperability that guide HSS personnel actions when working with US allies.

The Marine Corps' organic HSS assets provide prevention and protection, first responder, and forward resuscitative capabilities of the continuum of health care, as well as a surgical platoon or company. Within first responder and forward resuscitative capabilities, Marine Corps HSS units provide emergency fresh, whole-blood transfusion (EFWBT), damage control resuscitation, damage control surgery, prolonged casualty care, and patient holding. Enabling capabilities organic to some HSS units include ancillary services, en route care, operational planning, logistical sustainment, and unit-level command and control.

MISSION

The HSS mission is to minimize the effects that wounds, injuries, and disease have on unit effectiveness, readiness, and morale. The mission is accomplished with an aggressive and proactive preventive medicine (PVNTMED) program that safeguards personnel against potential health risks and an HSS system that provides appropriate care from the point of injury or illness to definitive care.

PRINCIPLES

The HSS principles guide planning, organizing, managing, and executing HSS. Seldom will all principles exert equal influence in a given situation, and HSS is most effective when it can identify the priority principles and apply them in support of the commander's mission. See Joint Publication (JP) 4-02, *Joint Health Services*, for more information on HSS principles. Each Service component must have an HSS system that encompasses—

- Conformity. The medical plan must integrate and comply with the commander's plan.
- Proximity. The medical plan must provide HSS as close to combat operations as the tactical situation permits.
- Flexibility. The medical plan must shift HSS resources to meet changing requirements.
- Mobility. The medical plan must anticipate rapid movement requirements in supporting combat forces during operations.
- Continuity. The medical plan must provide optimum, uninterrupted care and treatment to the wounded, injured, and sick.
- Coordination. The medical plan must ensure that HSS resources, typically in limited supply, are efficiently and effectively employed.

A HEALTHY AND FIT FORCE

Health service support promotes wellness and quality of life to strengthen the human component of military forces against disease and injury. A warfighting commander with a physically and mentally healthy force can deploy them anywhere in the world assures warfighting commanders physical and mental readiness. Wellness requires continuous attention before, during, and after deployment to sustain readiness and warfighting capabilities. Every effort should be made to incorporate all available medical specialties. Organic medical staff are employed to the greatest extent possible to align with force protection and conserve combat-power initiatives.

THREAT TO THE FORCE

The focus of HSS efforts remains on the health of the force and threats to it. The extent of an enemy threat lies in its intent and capability to inflict casualties. Other threats to a force's health are disease and nonbattle injuries (DNBIs). Although the level of threat to a forces' health depends on the enemy, a complex set of environmental, physiological, and operational factors when combined can result in DNBIs. Failure to counter threats jeopardizes mission accomplishment.

CASUALTY CARE AND MANAGEMENT

Marine Corps HSS deploys task-organized units to provide care through role 2 (see Roles of Care). The healthcare spectrum (see Figure 1-1) includes the following capabilities:

- Policy and resource acquisition.
- Prevention and protection.
- First responder.
- Damage control resuscitation.
- Damage control surgery.
- En route care.

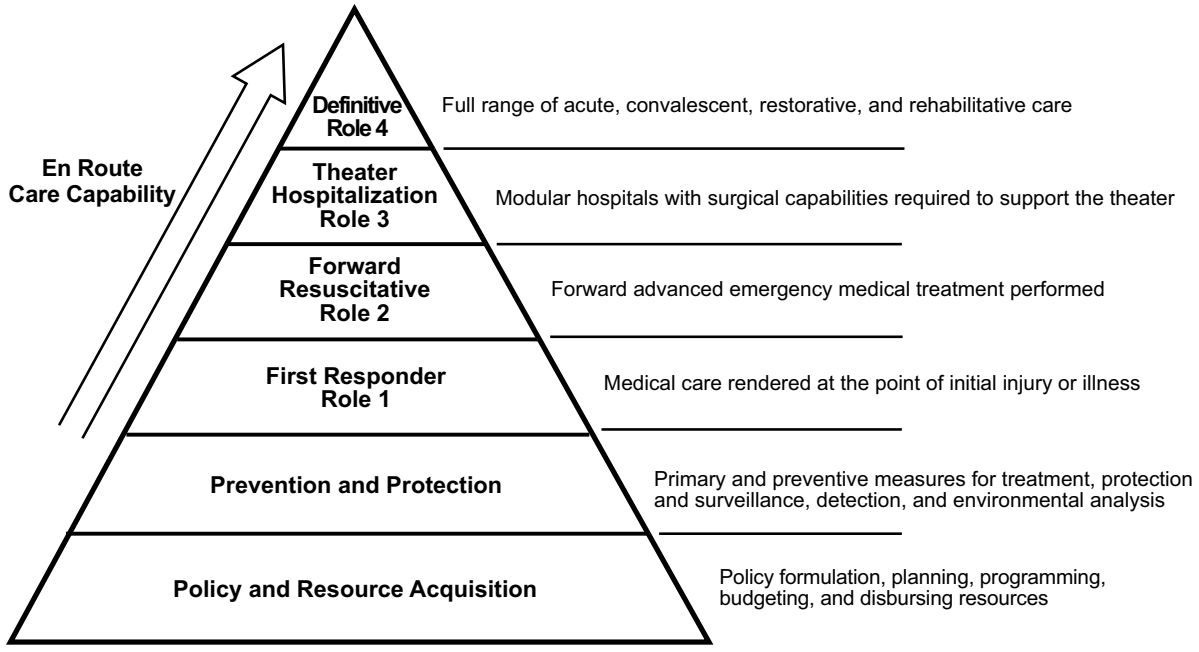


Figure 1-1. Health Care Spectrum.

ROLES OF CARE

Health services support within an area of operations is organized by medical capabilities into roles of care that extend from forward to the rear area of responsibility. Each role of medical care is designed to provide the required mobility and capability to meet the supported operational unit's basic health care needs, phased treatment, casualty holding, and preparation for evacuation of the sick, wounded, or injured.

Fleet Marine Forces' (FMF) HSS is flexible to meet mission demands despite enemy forces, terrain, and other tactical situations. Furthermore, at each stage of the role of care hierarchy, treatment capabilities and capacities increase. The five interacting factors that limit an HSS system are—

- Urgency of the patients' needs.
- Unit mobility.
- Tactical or operational situation.
- HSS personnel assigned, equipment capabilities, and supplies available
- Workload of each HSS unit relative to its treatment capacity.

Point of Principal Treatment

The HSS system provides care beginning at the point where medical care becomes necessary and ends at the appropriate treatment facility. Casualties are evacuated through the HSS system until they arrive at a facility with the capability, time, and bed capacity to begin definitive intervention. This intervention continues until the Service member is returned to duty or prepared for further evacuation. This is known as the point of principal treatment. The principal treatment site is determined according to the patient's diagnosis and the HSS unit's capabilities and workload.

Role 1 Care

Role 1 care is the first medical attention that military personnel receive and is referred to as unit-level medical care. This role of care includes immediate lifesaving measures, DNBI prevention and care, combat and operational stress preventive measures, and patient location and acquisition (i.e., collection).

First Responder. The first responder provides unit-level medical care. This is composed of personnel from a unit and its organic battalion aid stations (BASs) or squadron aid stations. In the case of organizations without organic medical elements, unit-level care is provided by medical elements at the regimental, group, or support squadron level or by other designated medical elements. Tactical combat casualty care (TCCC) has three phases, occurs during a combat mission, and is the military counterpart to prehospital emergency medical treatment.

Prehospital TCCC in the military is most commonly provided by enlisted personnel and includes first responder, trained as combat lifesaver (CLS), unit Corpsmen, independent duty Corpsmen, or treatment by other medical personnel. Tactical combat casualty care focuses on the most likely threats, injuries, and conditions encountered in combat and on a strictly limited range of interventions directed at the most serious wounds. The three phases of TCCC are: care under fire, tactical field care, and tactical evacuation.

- Care under fire. The first phase is care under fire, or in the case of a non-combat environment, care under threat. In this phase, the scene is not safe, and the priority is to establish safety with fire superiority or by controlling threats.
- Tactical field care. The second phase is tactical field care, which is provided when the responder and casualty are no longer under a direct threat from effective enemy fire. This allows time and relative safety for a more deliberate approach to casualty assessment and treatment.
- Tactical evacuation. Tactical evacuation starts with a systemic assessment and treatment, in a secure location, and ends with the evacuation of casualties to a higher role of care.

Combat Lifesaver. The CLS is a non-medical military personnel selected by their unit for additional training beyond basic first aid procedures. At least two Marines are trained to be a CLS for each Corpsman on the unit's table of organization. A CLS individual's primary duties are to provide enhanced first aid for injuries, based on training, before the Corpsman arrives and to assist the Corpsman if needed. The commander delegates the management of the CLS training program to the operations section (i.e., S-3).

Unit Hospital Corpsman. The company or squadron Corpsman represents the first point where a sick, injured, or wounded Marine receives care from trained medical personnel. In case of an emergency, before a Hospital Corpsman (HM) arrives, a primary assessment identifies life-threats and intervention requirements (i.e., lifesaving measures) to be performed by fellow Marines trained as a CLS, first responder self/buddy aid before an HM progresses to the secondary survey.

Usually, the unit HM provides primary (if responding first) and secondary assessments, then emergency or lifesaving measures (e.g., establishing and maintaining an airway, control of bleeding, cardiopulmonary resuscitation, treatment for shock, fracture stabilization). The HM's duties involve applying basic medical skills, using medical equipment and supplies, and initiating requests for assistance and evacuation.

The Aid Station. The aid station provides role 1 care for the Marine Corps. Treatment at the aid station is managed by more highly skilled personnel: a physician, physician assistant, and an independent duty Corpsman. Care provided at an aid station is based on a more comprehensive evaluation and treatment plan than offered by a first responder (i.e., HM or CLS), which could include restoring airways, administering intravenous fluids, antibiotics, and EFWBTs, and applying splints and bandages. These medical management elements prepare patients to return to duty or evacuation to the appropriate role of care.

Forward Resuscitative Care. Forward resuscitative care prioritizes non-surgical interventions, to include damage control resuscitation and efforts to save an individual's life, limb, or eyesight. This intervention can reduce the rates of morbidity and mortality stemming from trauma and hemorrhage. It provides a mobile capability within theater and as close to the battlefield as is tactically possible. This capability requires operational and logistical support when employed (e.g., EFWBT). Its location and accessibility are critical when evacuating casualties as is established communication with the next appropriate role of care.

Force level HSS is provided by HSS units and elements of the Marine logistics group (MLG). Long-term, in-theater health care support is difficult because of limited resources. External resources, such as casualty receiving treatment ships (CRTSs), can augment force-level support.

Role 2 Care

Role 2 care provides advanced trauma management, surgical capabilities, and emergency medical treatment that amplifies resuscitation actions started in role 1. If necessary, additional emergency measures are instituted (e.g., damage control surgery), but they do not go beyond the measures dictated by immediate necessities.

Surgical Platoon. Surgical platoon support includes collecting, clearing, and evacuating casualties from supported elements and medical units for resuscitative and surgical procedures. The surgical platoon provides advanced trauma life support capabilities and a connection among first responders, Corpsmen, and surgical companies. Also, the surgical platoon can be used to reinforce role 1 capabilities in the absence of the forward resuscitative surgery system (FRSS).

Surgical Company. A surgical company can provide direct or general HSS including surgical care, damage control resuscitation, stabilization, collecting and evacuating care, some en route care, radiology, laboratory, holding care capability, and dental. For planning considerations, a surgical company can support a regimental size force. Surgical companies provide the highest level of medical care organic to the Marine Corps.

The Forward Resuscitative Surgery System. The FRSS is a highly mobile, rapidly deployable, trauma surgical unit that provides emergency surgical interventions to stabilize casualties who might otherwise die or lose a limb or eyesight before receiving appropriate treatment. The FRSS has a small logistic footprint that supports early introduction into the operating area, rapid movement, formation, deployment, and redeployment in forward areas.

Casualty Receiving and Treatment Ships. Large-deck amphibious ships are designated for use as CRTSs. This capability is distinguished by a team of medical officers and technicians with advanced facilities and resources. The CRTS have general surgery, basic laboratory, pharmacy, X-ray, dental, and holding ward capabilities, and these ships provide physicians and operating space to perform emergency procedures. Patients who need a more comprehensive scope of treatment are evacuated to the role of care their condition requires.

Role 3 Care

Role 3 care provides treatment in an MTF or veterinary facility (i.e., working animals) that is staffed and equipped to provide resuscitation, surgery (some definitive surgery), and post-operative treatment. This level expands the support provided at role 2 care. Patients who are unable to tolerate or may not survive movement over long distances receive surgical care in a hospital as close to the supported unit as the tactical situation allows. This role includes provisions for evacuating patients from supported units, proper staffing and equipment for an MTF to provide care for all categories of patients, and area support to units without organic medical assets. Mobile role 3 assets should be located where it best provides the most expedient support to combat forces. Role 3 care includes the following:

Theater Hospitalization and Surgical-Clinical Specialties. The theater hospital ensures quality health care to combat forces. Theater hospitalization facilities are staffed and equipped to provide resuscitation, surgery (some definitive surgery), and postoperative treatment. This role of care is the first step toward restoration of functional health, as compared to the stabilization actions provided at role 2 care. The theater hospital should be employed in relation to the point of injury, taking into account the time-distance relationship and ability of the patient evacuation system.

Hospital Ships, Navy Expeditionary Medical Facilities. Hospital ships, Navy expeditionary medical facilities (EMFs) overseas hospitals, other Services' MTFs, and host-nation support (HNS) agreements provide theater-level HSS. Moving patients to and between theater facilities is coordinated through the United States Transportation Command patient movement requirements center (TPMRC).

Role 4 Care

Role 4 care is provided in US base hospitals and well-equipped overseas facilities. Mobilization requires expanding military hospital capacities in the National Disaster Medical System (including Department of Veterans Affairs and civilian hospital beds) to meet the potential increase in demand as in-theater patients are evacuated. These base hospitals represent the most definitive medical care available within the medical care system.

Definitive Health Care (Comprehensive Medical and Surgical). Definitive health care relies on all aspects of the military health system, to include comprehensive HSS throughout the Department of Defense (DoD), and it must be comparable to civilian standards. This role of care provides Service members and their dependents with professional clinical care that targets health, fitness, and optimal physical and emotional well-being. It requires evacuation and hospitalization strategies that can maintain the capability to provide a fit and healthy force, prevent casualties, and provide care and management to casualties in theater and in CONUS.

Continental United States (Full Convalescent, Restorative, Rehabilitative Care). Limited resources can impede long-term, in-theater health care efforts. Convalescent, restorative, and rehabilitative care are usually provided in CONUS. Convalescent care is provided in military hospitals, other Federal hospitals, and select civilian facilities that might be activated under the National Disaster Medical System. The Global Patient Movement Request Center coordinates patient movement to and between CONUS MTFs.

TRIAGE

Triage is the system that sorts and prioritizes casualties based on injury, tactical situation, mission, and available resources. It is conducted at each role of medical care. Triage is the most effective means for establishing order and is a method for providing the greatest benefit to the largest number of patients. Triage allocates resources within the limitations of time, distance, and capability. It is a constant process as casualties move within and through the roles of medical care. The decision to withhold medical care from any casualty is difficult to make but may be necessary.

Although decisions of this nature have been uncommon in recent conflicts, military medical personnel should be prepared to make these decisions in large-scale combat operations or where patient movement, or logistics are constrained. Nonetheless, the goal to provide the best care to as many casualties as possible must guide these difficult decisions. Deciding how resources should be used is first, based on mission and immediate tactical situation, and then by medical needs, irrespective of a casualty's nationality or combatant status. To maximize limited resources, triage or sorting of casualties is required. Triage requires individuals to use clinical judgment to evaluate, categorize, and prioritize casualties for medical treatment and evacuation.

The ultimate goals of military medicine are to sustain life, limb, and eyesight and return as many Service members as possible to duty. The triage categories include immediate, delayed, minimal, and expectant.

Immediate

The immediate category requires individuals to receive attention within minutes to two hours upon arrival to avoid death or major disability. The procedures in this category are focused on patients who have a good chance to survive with immediate intervention. Examples of injuries in this category include—

- Uncontrolled hemorrhage.
- Airway obstruction or potential compromise.
- Tension pneumothorax.
- Torso, neck, or pelvis injuries with shock.
- Head injury requiring emergent decompression.
- Threatened loss of limb.
- Retrobulbar hematoma.
- Multiple extremity amputations.
- Sepsis without source control.
- Hollow viscous injury with delay in evacuation to surgical capability.

Delayed

Injuries in the delayed category include patients who are wounded and require surgery but whose general condition permits delaying treatment without endangering a patient's life, limb, or eyesight. Sustaining treatment is required (e.g., fluid resuscitation, fracture stabilization, and antibiotics, bladder catheterization, gastric decompression, pain relief). Delayed category injury examples include—

- Blunt or penetrating torso injuries without signs of shock.
- Fractures.
- Soft-tissue injuries without significant bleeding.
- Facial fractures without airway compromise.
- Globe (i.e., eye) injuries.
- Survivable burns without immediate threat to life (airway, respiratory) or limb.

Minimal

Casualties in the minimal category have relatively minor injuries and can effectively care for themselves or be rendered minimal medical care. These casualties might require manpower resources to assist with movement and care. When a mass casualty incident occurs close to an MTF, it is likely that these casualties are the first to arrive, circumventing the casualty evacuation (CASEVAC) chain. Such casualties can inundate the treatment facility, leading to early commitment

and ineffective use of resources. To be effective stewards of resources, it is imperative to secure and strictly control access to the MTF immediately upon notification of a mass-casualty event. Examples of injuries within this category include—

- Minor lacerations.
- Abrasions.
- Small bone fractures.
- Minor burns.

Expectant

Casualties in the expectant category have injuries requiring treatment that could overwhelm medical resources at the expense of treatable patients. The expectant casualty should not be abandoned but should be separated from view of other casualties when feasible, receive comfort measures, and be intermittently reassessed and re-triaged if appropriate. These casualties require a staff that can monitor and provide comfort measures. Expectant category injury examples include—

- Any casualty arriving without vital signs or signs of life.
- Transcranial gunshot wound with coma.
- Open pelvic injuries with uncontrolled bleeding and shock due to fluid loss.
- Life-threatening burns that cannot be treated with available resources.
- High cervical spinal cord injuries affecting spontaneous respiration.
- Patients requiring cardiopulmonary resuscitation or ventilator support if ventilators are not available.
- Destructive cardiac injuries.
- Chemical, biological, radiological, and nuclear (CBRN) casualties with ionizing radiation exposures with an absorbed dose of eight grays (eight joules per kilogram).

For more information regarding expectant category injuries, see the *Emergency War Surgery Handbook* (NATO library).

FUNCTIONAL AREAS

Medical planners must address the following functions when developing the HSS concept of operations:

- Casualty management plans from the point of injury or illness throughout triage, treatment, and transport to the appropriate level of care, potentially outside Marine Corps capabilities. Patient movement is not necessarily a step progression and varies based on severity of the injury, available transportation, and potential obstructions stemming from the operating environment.
- Force health protection and injury prevention encompasses primary and preventive measures for treatment, protection and surveillance, detection, and environmental analysis.

- Medical logistics must be organized and provide life cycle management of specialized medical products and services to support health readiness requirements throughout the competition continuum.
- Medical command and control integrates with the tactical commander's C2 functions and enhances unit situational awareness while providing reliable medical support.
- Medical stabilization activities are critical to the force throughout the competition continuum, in combat and noncombat environments. This effort provides a healthy FMF that can execute its assigned missions.

THE HAGUE AND GENEVA CONVENTIONS

Conducting armed hostilities on land is regulated by the law of war, which is both written and unwritten. The law of land warfare is derived from two principal sources: customs and lawmaking treaties, such as The Hague and Geneva Conventions. Under the US Constitution, the rights and duties stated in these conventions are part of the Department of Defense Directive (DoDD) 2311.01, *DoD Law of War Program*, and violating any convention is a serious offense. Under these conventions, the signatories established the principle of disinterested aid to victims of war, including those who, through wounds, capture, or shipwreck, are no longer enemies but are merely suffering and defenseless human beings. Additional protocols to the Geneva Conventions establish standards of conduct for medical and religious personnel assigned to aid victims. The United States follows the Geneva Conventions of 1949 and directs its military forces to abide by its articles; however, asymmetrical theaters, especially non-state actors, might not abide by the Convention accepted by nation states. Refer to the following sources for international and domestic law principles and the status and protections for medical personnel under both Conventions:

- Marine Corps Tactical Publication (MCTP) 11-10B, *The Commander's Handbook on the Law of Naval Operations*.
- MCTP 11-10C, *The Commander's Handbook on the Law of Land Warfare.*
- Department of the Army Pamphlet 27-1, *Treaties Governing Land Warfare*.

PLANNING

Health service support planning is conducted at each level of command and in organizations throughout the competition continuum. Commanders have HSS staffs that plan from the tactical, through operational, to the strategic level of war. The JP 5-0, *Joint Planning* provides administrative instructions and directives to develop operation plans (OPLANs) for combatant commands, sub unified commands, joint task forces, and their subordinate component commands. Also, an OPLAN might be applied when significant forces from one Service are attached to forces of another.

Commanders prepare operation plans, concept plans, functional plans, and operation orders (OPORDs) to fulfill tasks assigned in the joint strategic capabilities plan or as directed by JP 5-0. To facilitate communications on operation planning among military headquarters, commanders standardize the format and content of other appropriate plans according to Chairman of the Joint Chief of Staff Manual (CJCSM) 3130.03A, *Adaptive Planning and Execution Planning Formats and Guidance*.

The concept of operations (CONOPS) for health services is in Annex Q (Medical Services) of the OPLAN and OPORD. The medical services annex contains information on HSS requirements during an operation, including deployment planning and external support requirements. Its purpose is to direct HSS efforts during an operation. The medical services annex compiles HSS requirements from sources external to the Marine air-ground task force (MAGTF) and addresses elements of support requiring close coordination with other Services, Joint Chiefs of Staff, DoD, or host nations. The medical services annex sets policy, specific tasks and responsibilities, and directs commanders to employ medical assets organic to the MAGTF, ground combat element (GCE), aviation combat element (ACE), and logistics combat element (LCE). Annex Q is typically prepared at the Marine expeditionary force (MEF), Marine expeditionary brigade (MEB), and Marine expeditionary unit (MEU) levels. Annex Q identifies requirements and provides guidance to subordinate commanders and their HSS planners. The following are HSS appendices to Annex Q:

- Appendix 1, Joint Patient Movement System.
- Appendix 2, Joint Blood Program.
- Appendix 3, Hospitalization.
- Appendix 4, Returns to Duty.
- Appendix 5, Medical Logistics (Class VIII) System.
- Appendix 6, Force Health Protection.
- Appendix 7, Medical Command, Control, Communications, and Computers.
- Appendix 8, Host-Nation Medical Support.
- Appendix 9, Medical Sustainability Assessment.
- Appendix 10, Medical Intelligence Support to Military Operations.
  - Tab A to Appendix 10, Disease Threat by Geographic Area and Country.
- Appendix 11, Medical Planning Responsibilities and Task Identification.

Planning Considerations

Mission requirements coupled with locations and end strength drives the planning process. There are common planning considerations that are universal to all missions. The following are some examples:

- Health service support plans can be effectively executed only if they are based on realistic HSS capabilities.
- Health care for a patient must be continuous from the onset of injury or disease through the roles of care to the facility that can provide final treatment and disposition.

- Casualty triage must occur at the point of injury and at each medical facility in the chain of evacuation; patients are triaged at a receiving medical facility and moved rearward only to the point the patients can receive the definitive care needed to manage their condition.
- Health service support units of the FMF must retain the ability for rapid movement, being dispersed for protection of assets, and to render the best service to the largest number of most patients possible.
- Plans must be flexible to a degree that will ensure the mission can be accomplished despite changes in the tactical situation.
- Most casualties will occur within the infantry regiment; medical treatment and evacuation facilities must be situated accordingly.
- An amphibious objective area (AOA) evacuation policy increases requirements for HSS and could reduce requirements for CASEVAC transportation and personnel replacements.
- When possible, prompt triage, stabilization, and CASEVACs results in many lives saved and wounded personnel returned to duty. Additionally, it decreases numbers of non-effective days for personnel and minimizes a medically degraded force.
- When a member cannot return to duty within the limits of the evacuation policy, they should be evacuated from theater as quickly as their condition and operational constraints permit.
- Maintaining a continuous awareness of current DNBI rates and trends, through disease surveillance at all levels, is critical to effective prevention programs.
- During operations from expeditionary advance bases, HSS functions may need to provide casualty care and holding for prolonged and uncertain durations. Considerations must be made when coordinating HSS equipment sets and personnel to support prolonged casualty holding, evacuation timelines, and medical logistics (MEDLOG).

CHAPTER 2.
INTELLIGENCE

The intelligence effort provides critical knowledge and understanding about the enemy and environment to help a commander plan and make decisions. Medical intelligence involves more than gathering information on potential diseases and environmental, physiological, or other operational hazards. Raw data must be analyzed and refined to a point where it can be useful in preventing an adverse operational impact. Medical intelligence from all sources—internal and external to the MAGTF—must be assimilated to give a commander a complete picture of the medical threat. Medical planners should refer to Marine Corps Reference Publication (MCRP) 2-10B.1, *Intelligence Preparation of the Battlespace,* to understand medical intelligence requirements as they pertain to plans and operations.

MEDICAL INTELLIGENCE SOURCES

Command Intelligence Sections

Medical intelligence is requested through the J-2, G-2, or S-2. Requests for intelligence are prioritized based on mission needs. Medical planners should be able to communicate medical intelligence and how it might affect operations. Requests for information (also referred to as RFIs), friendly forces information requirements (also referred to as FFIRs), and commander's critical information requirement (also referred to as CCIRs) can be triggered or changed based on the intelligence analysis. Additional information on intelligence support to medical activities can be found in the intelligence series of the Marine Corps doctrine publications, including MCTP 2-10B, *MAGTF Intelligence Production and Analysis*.

Marine Corps Intelligence Activity

The Marine Corps Intelligence Activity Enterprise Coordination Center is the Marine Corps' 24/7 single-point access for all-source reach-back support on intelligence and any medical concerns for the area of operations. The Marine Corps Intelligence Activity comprises the Service Intelligence Center, located at Marine Corps Base Quantico, Virginia, and the Marine Cryptologic Support Battalion located at Fort Meade, Maryland.

Preventive Medicine Section

Most PVNTMED assets, organic to a MEF, are located in the headquarters and service (H&S) company, medical battalion, combat logistics regiment, and MLG. The PVNTMED section provides general support to MEF major subordinate commands. General PVNTMED activities include—

- Identifying information related to actual and potential environmental health risks.
- Conducting health threat assessments.
- Performing occupational and environmental health surveillance (OEHS).

- Characterizing demographics and populations at risk.
- Assessing living conditions.
- Ensuring adequate water quality and supply.
- Recommending proper waste disposal methods.
- Evaluating food safety and food sanitation programs.
- Managing sight and hearing conservation programs.
- Assessing entomology issues such as insects, diseases, and vectors of military importance.

National Center for Medical Intelligence

The National Center for Medical Intelligence (NCMI) is a field production activity of the Defense Intelligence Agency; it is the sole producer of finished medical intelligence in the DoD. The NCMI provides all-source intelligence on—

- Worldwide infectious disease and environmental health risks.
- Foreign military and civilian health care systems and infrastructure.
- Scientific and technical developments in biotechnology and biomedical subjects of military significance.

The NCMI maintains extensive databases; monitors foreign research, development, production, and transitional flow of medical materiel for military interest; and provides intelligence liaison services to key customers. Additionally, it conducts in-house and mobile training (including a medical intelligence fellowship program), serves on numerous intelligence committees and working groups, and trains military reservists for mobilization assignments. The products NCMI produces provide direct support to US military customers for operational planning; developing policy, doctrine, and training priorities; and medical research and development. Queries for medical intelligence support are addressed via the HSS chain of command or directly from deploying units to:

- Defense Intelligence Agency, Attn: DI/NCMI/MA-OPS, 200 MacDill Blvd, Joint Base Anacostia-Bolling, Washington, DC 20340-5100.
- Voice: (301) 619-7574.
- Via e-mail to: NIPR: ~DIANCMIOPS@dodiis.mil or SIPR: ncmi_ops@dia.smil.mil.

CHAPTER 3.
OPERATIONS

The Marine Corps organization for combat is based on its unique assigned force structure. Health service support is common to every MAGTF, and definitive HSS planning is an integral part of any operation. The inherent flexibility and broad spectrum of potential MAGTF missions requires flexibility in HSS execution. The size, type, and configuration of HSS capabilities needed are determined by mission, enemy, terrain and weather, troops and support available-time available.

Evolving Marine Corps operations require enhanced force mobility; therefore, HSS personnel must evolve to meet these changes to be as capable and mobile as the forces they support. Therefore, HSS elements must provide enhanced medical and evacuation capabilities to meet the needs of a Marine Corps operation. These capabilities are concentrated in the MAGTF LCE and HSS battlefield facilities to establish, displace, and rapidly relocate as required.

In garrison and during routine deployments, Marine Corps units are not staffed with the full operational complement of HSS personnel. When increased medical and dental staffing levels are required, the medical personnel are sourced from medical or dental battalions within the MLG.

MARINE AIR-GROUND TASK FORCE

The MAGTF is the Marine Corps' principal warfighting organization for missions throughout the competition continuum. Each MAGTF, regardless of its size or mission, has the same basic structure with four core elements: a command element, GCE, ACE, and LCE with HSS in each.

MARINE CORPS FORCES

Although there are Marine Corps component commands for all combatant commanders (CCDRs) and the Special Operations Command, three organizations (i.e., Marine Forces Command, Marine Forces Pacific, and Marine Forces Reserve) have special medical staffs and could have an operational medical planning staff. The medical staffs advise the commander on matters relating to the health of the force, theater-MEDLOG, intratheater and intertheater patient movement, OEHS activities, sanitation, safety, disease surveillance, medical intelligence, health threats, medical personnel issues, as well as current and future HSS operational planning. Additional duties include serving as the liaison for the CCDRs and other component surgeons and monitoring HSS aspects of the time-phased force and deployment data flow.

Marine Expeditionary Forces

Marine expeditionary force commanders are responsible for coordinating and integrating HSS within the area of operations. The MEF surgeon, preventive medicine officer, director of mental health, medical planner, and HM are responsible for establishing HSS requirements and ensuring the HSS systems established by the MEF's major subordinate commands form an integrated and responsive support network. Also, the MEF surgeon and staff advise the MEF commander on matters relating to the health of the command, MEDLOG, patient movement, OEHS activities, health threat assessments, disease surveillance, medical intelligence, personnel issues, and current and future HSS planning at the MEF level.

Marine Division

The medical staff of the division headquarters has a division surgeon, medical planner, psychiatrist, mental health nurse practitioner, licensed clinical social worker, environmental health officer, and HM. Medical staff responsibilities are similar to the MEF's, but they are more specifically related to the GCE's activities. When units smaller than divisions deploy as the GCE, the regiment or battalion surgeon(s) assume much of the planning responsibility associated with HSS personnel and their clinical responsibilities. Planning is conducted at each level and the HM assists in planning.

Marine Aircraft Wing

A Marine aircraft wing headquarters medical staff consists of a flight surgeon, medical planner, environmental health officer, industrial hygienist, and HM. Medical staff responsibilities are similar to the MEF's but are more specifically related to the ACE activities. A Marine aircraft wing comprises Marine aircraft groups (MAGs) and squadrons. Each group and subordinate squadron has a flight surgeon and several HMs. Additionally, a Marine wing support squadron, subordinate to a MAG, medical staff has a physician, which can be a flight surgeon, and HM. The flight surgeon is the commander's special staff officer directly responsible for aeromedical safety and the command's HSS.

Marine Logistics Group

The MLG surgeon advises the commander on the health of the command and adequacy of its organic HSS. The surgeon has cognizance over the group aid station and is the health service support officer (HSSO) (i.e., group surgeon). The HSSO oversees the health service support element (HSSE) which has a vital role in planning operational medical support. The HSSO and HSSE develop HSS plans for the MLG and coordinates external HSS help for GCE and ACE units requiring medical and dental support that exceeds their organic capabilities. The HSSO serves as the officer in charge (OIC) of the medical section of the combat operations center (COC) during exercises or operations. The MLG has most of the MEF's medical capability: a medical battalion with three surgical companies and an H&S company. The MLG's HSS structure includes a medical planner, HM, supporting staff, and the Operational Stress Control and Readiness (also referred to as OSCAR) teams. These teams are designed to help leaders build individual and unit strength, resilience, and readiness. The team serves as a known, easily approachable, immediate point of contact that provides advice on stress-related issues and encourages Service members to get help when needed. The team provides early interventions or treatment as appropriate and helps affected Service members get back to full readiness as soon as possible.

Dental Battalion

The dental battalion within the MLG provides field dental services to the MEF and advises the commander on dental issues. By attaching task-organized dental sections and detachments to MAGTF HSS units, commanders ensure battalion personnel maintain dental readiness during exercises, deployments, and operations above and below the threshold of conflict. In an operational environment, the dental battalion's primary mission is to triage and to provide dental health maintenance with a focus on emergency care. Personnel from these detachments can provide postoperative, ward, central sterilization, supply room support, and other medical support as needed by the medical battalion and surgical company commanders. The dental battalion commander has additional special staff officer duties as the MEF and MLG dental officer. As a special staff officer, the dental officer advises the commanders on professional, administrative, and operational matters to optimize use of dental assets.

Medical Logistics Company

Medical supplies and equipment (i.e., Class VIII) for the MEF are managed through the medical logistics company, within the supply battalion, which issues the authorized medical allowance list (AMAL) and authorized dental allowance list (ADAL). When a medical logistics company or detachment does not deploy with the LCE, the supply detachment or inter-Service support agreement provides resupply support. The medical logistics company is a medical supply depot directly responsible to the supply battalion commanding officer supporting the medical battalion. See Appendix A for AMAL and ADAL lists. The medical logistics company—

- Maintains medical equipment.
- Maintains centralized acquisition, storing, and stock rotation.
- Constructs medical supply sets (i.e., AMAL and ADAL).
- Resupplies HSS units with AMAL, ADAL, and line items based on specific mission needs.
- The medical logistics platoon maintains blood equipment but does not maintain blood.

Medical Battalion

The medical battalion is a subordinate command of the MLG. It is organized to execute HSS functions in support of the MAGTF's mission. The medical battalion provides initial resuscitative HSS to MAGTF units above their organic medical capability. Its primary mission is to perform those emergency medical and surgical procedures that, if not performed, could lead to loss of life, limb, or eyesight.

The medical battalion's surgical companies each contain surgical platoons with a surgical and resuscitative capability, ward capacity for temporary casualty holding, and en route care systems (ERCSs) that can manage and move patients along the continuum of care. The H&S company provides the battalion C2 capabilities for patient processing and it has embedded additional surgical platoons to provide role 2 care, when required. Within the medical battalion is a PVNTMED section composed of an environmental health officer, entomologists, and PVNTMED technicians. The PVNTMED unit is a significant force enabler that can provide the full scope of PVNTMED and OEHS activities to ensure a healthy, deployable force.

NOTE: The structure of the medical battalions differ based on geographic location.

Headquarters and Service Company

Headquarters and service company can provide surgical care as a general support capability for the MLG. An H&S company consists of the battalion headquarters, S-1, S-2, S-3, S-4, S-6, chaplain section, and a preventive medicine section. The H&S company also includes two surgical platoons. A surgical platoon consists of an FRSS, a shock trauma platoon, an X-ray/radiologist, a lab, a holding ward, an ERCS, and an ambulance section for 24-hour operations.

Surgical Platoon

The surgical platoon is a mobile medical support platoon within the medical battalion. It can serve as a battalion evacuation station, reinforce a BAS when the casualty rate exceeds organic BAS staff capability, operate as an intermediate casualty collection and clearing point between forward medical elements and the surgical company, or serve as the forward element of an FRSS or surgical company preparing to relocate. A surgical platoon reinforced with PVNTMED, group aid station, and dental personnel can also provide HSS to a combat logistics battalion or MEU through a combat logistics regiment.

Surgical Company

The surgical company supports regimental-sized operations and receives casualties from units or individuals providing first response role 1 medical treatment. A surgical company provides surgical and resuscitative capabilities, medical treatment, and temporary holding of casualties from supported forces. They prepare and evacuate casualties whose medical requirements exceed the established theater evacuation policy. Base operating support is required from the assigned combat logistics battalion.

The surgical company plans, coordinates, and supervises assigned medical support functions for the battalion. It is structured to support task organization for operations the battalion conducts to support the MEF, MEB, or any combination of smaller MAGTFs. Surgical companies consist of a headquarters section and four surgical platoons. A surgical platoon consists of an FRSS team, a shock trauma platoon, an X-ray/radiologist, a lab, a holding ward, an ERCS, and an ambulance section (has two vehicles) for 24-hour operations. An attached dental platoon provides dental support and assists in the triage, care, and evacuation of casualties. Combat stress capabilities are available in the battalion and can be task-organized from the H&S company if assigned.

The surgical company is a major link in the chain of evacuation, and it should be located close to an airfield that can provide CASEVAC by aircraft, when possible.

Forward Resuscitative Surgery System

The FRSS is a system of teams designed to provide a significant increase in the capacity and capability of any medical unit present. These teams can be transported using available vehicles (e.g., high mobility multi-purpose wheeled vehicles with trailers or medium tactical vehicle replacement), tactical aircraft, or by surface vessels. Equipment weighs approximately 6,300 pounds, excluding personal gear and environmental control units, and has a total volume of 640 cubic feet. The FRSS team comprises—

- Two surgeons.
- An anesthesiologist.
- A critical care nurse.

- An independent duty Corpsman (surgery or emergency room).
- A field medical technician.
- Two operating room technicians.

The team's equipment and personnel are selected to provide resuscitative trauma care, damage control resuscitation or damage control surgery. Specific capabilities for early trauma care and stabilization include—

- Airway management.
- Fluid and blood resuscitation.
- Advanced trauma life support skills that control hemorrhaging from any body cavity or from extremity wounds.
- Control of intra-abdominal contamination.
- Fracture stabilization.
- Major wound debridement.

The FRSS can be task-organized with a BAS or surgical platoon to deploy when the tactical situation precludes the use of a surgical company ashore or when rapid casualty transport to CRTS or land-based surgical facilities is unavailable. When a stabilized patient needs evacuation, the FRSS requires en route care teams to support moving patients to a higher-level of care. The tactical situation and number of casualties received usually influences the sustainment of an FRSS and other HSS capabilities.

Mobility and moderate airlift requirements allow the FRSS to deploy and rapidly begin caring for casualties soon after arrival on-site. The team's small size, modular construct, and relatively small logistical footprint allow mutual support into nearly any type of host medical unit in the joint or combined force. Although the FRSS can function well in triage and at initial resuscitation, the significant support of this role reduces the team's ability to perform surgical care. Because of this limitation, an attached surgical platoon or BAS can support the initial treatment and post-operative holding of casualties, freeing FRSS for surgical procedures.

Additional FRSS's attributes include the ability to deploy and redeploy rapidly, travel with small-to-moderate airlift requirements, and operate in a shelter of opportunity. These capabilities can extend to resuscitative surgical care where it cannot be provided by other units. Missions that FRSS can support include—

- Triage, therapy, damage control resuscitation and damage control surgery.
- Surge augmentation to an existing deployed surgical company or other MTF.
- Foreign humanitarian assistance or disaster response: augmentation of existing resources.
- Special operations support.

En Route Care System

The ERCS provides medical care during CASEVAC. The Marine Corps' ERCS is an essential follow-on for the FRSS, composed of one critical care nurse or emergency room or trauma nurse and one ERC-trained Corpsman. An ERCS requires a 647 AMAL and is employed when the tactical

situation requires transporting critically injured or ill patients from forward surgical and treatment elements to the shore- or sea-based treatment facilities. Less critically injured or ill patients are transported using standard CASEVAC protocols and policy. Planning considerations when employing an ERCS are distances, time of transport, mode of transport (e.g., surface, ground, air), estimated time of return, patient handoff requirements (e.g., information and equipment), tactical situation regarding surgical procedures, and anticipated MAGTF operations and maneuvers. Historically ERCS employments has shown that if careful consideration is not applied properly, personnel and ERCS equipment can be lost, damaged, or not properly sustained, increasing risk to the MAGTF commander and medical units.

MARINE EXPEDITIONARY UNIT

Each MEU element deploys with its own organic HSS capability. Any HSS above this organic level is provided by a health service support detachment (HSSD) task-organized from the headquarters and general support combat logistics regiment and attached to the MEU combat logistics battalion. The HSSD structure is primarily under the combat logistics battalion and includes an emergency physician, physician assistant, critical care nurse, medical planner, independent duty Corpsman, and HM. It could include adjunct medical staff such as industrial hygiene and entomology officers and staff. Medical specific staff includes—

- An H&S company, adjunct medical staff, and medical battalion elements.
- A surgical platoon.
- Medical logistics company detachments.
- Dental detachments.

The tactical situation dictates the size of the HSSD capability needed ashore. This capability could range from a beach or helicopter evacuation station staffed with a triage or evacuation surgical platoon section to a surgical platoon reinforced with sections from a surgical company. Typically, the elements of a surgical platoon are sufficient to manage most medical situations.

PHASING SUPPORT ASHORE

During the movement phase of an amphibious operation, the commander amphibious task force (CATF) and his or her principal medical advisor (i.e., CATF surgeon) have overall responsibility for HSS services to embarked personnel.

Landing force HSS personnel aboard an amphibious task force (ATF) augment and fully integrate with the ship's medical and dental departments to provide care to embarked personnel using ship's company medical facilities and supplies. Landing force Class VIII equipment and supplies are not to be used aboard ship unless authorized by the MAGTF commander in support of an emergency.

The senior medical officer of each ATF ship is responsible to the ship's commanding officer for providing HSS to all personnel.

The stages described in the following sections and shown in Figure 3-1, represent only notional phasing. Other variations and combinations could result from such factors as threat level, mission, terrain, geography, weather, risk to force, opposing force activities.

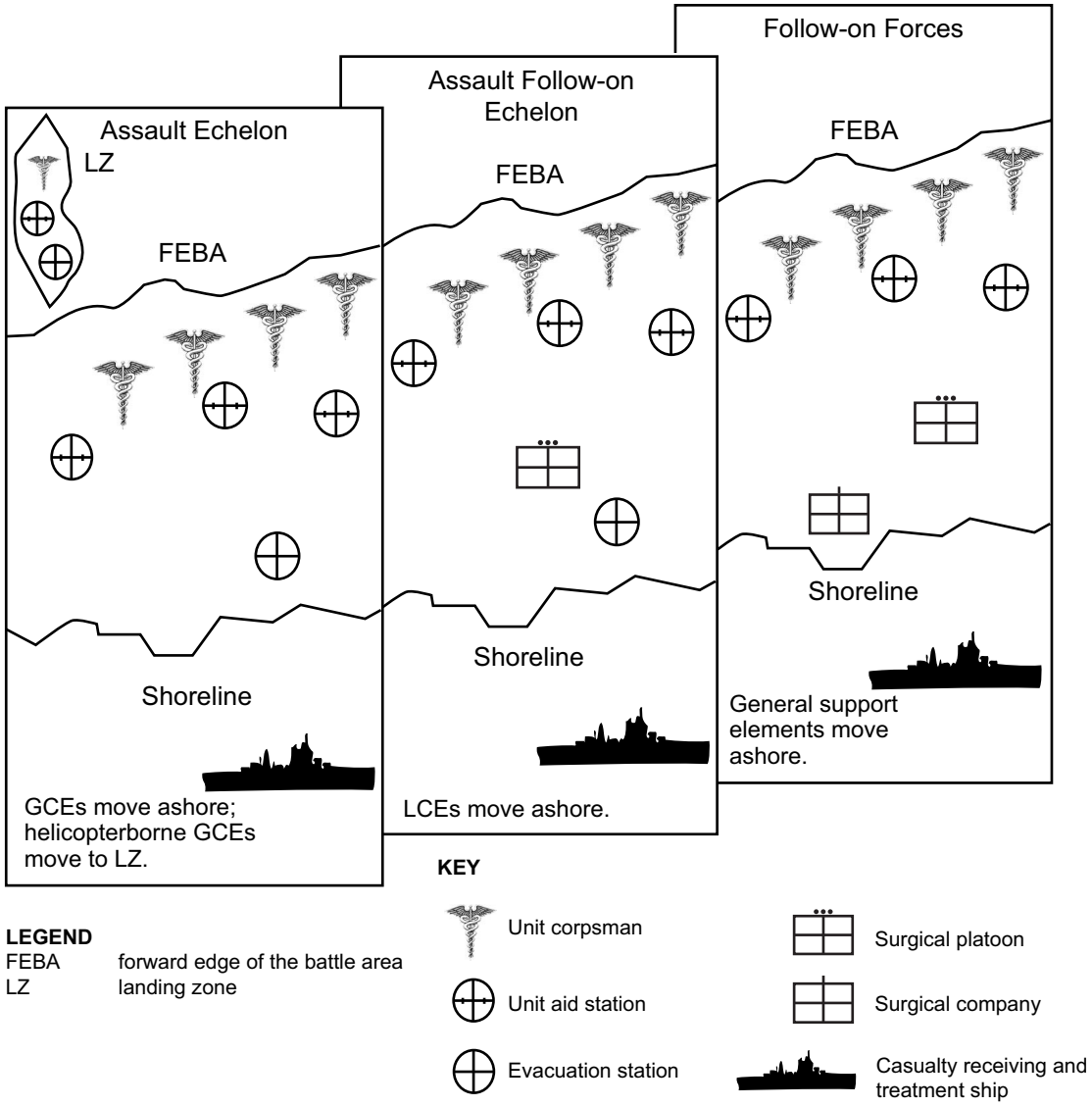


Figure 3-1. Stages of Medical Support in Amphibious Operations.

Assault Echelon

During the assault phase, HSS ashore is limited to the capabilities of medical sections organic to GCE units. First-response medical care for assault forces is provided by self-aid, buddy aid, and the HM of landed rifle platoons.

When the tactical situation permits, BASs are established, and care is delivered by a healthcare provider. Typically, a BAS is divided into two sections, with assigned battalion non-medical litter bearers divided between them. The first section lands with the battalion combat train and provides in-close support to the assault force. The second section lands with the field train and establishes interim evacuation stations until relieved by follow-on HSSEs.

Evacuation stations are then expanded and staffed by the supporting medical battalion, drawing assets from surgical companies. When established with the landing force support party (LFSP), the supporting medical battalion constitutes the beach evacuation section(s) of the LFSP. At this point in the landing operation, the BAS's primary role is to evacuate assault force casualties to designated CRTSs. When evacuation stations attached to the LFSP become operational ashore, established BASs are relieved to conduct primary support missions to parent battalions. Once supporting evacuation stations land, they begin expanding HSS facilities ashore. The HSS assets are typically established at logistical support areas or forward arming and refueling points.

Assault Follow-On Echelon

Although most logistics support capabilities, during the assault follow-on echelon, continue to be sea-based, projected HSS capabilities ashore expand as the LCE expands. Capabilities could include additional FRSS or surgical platoons with mobile combat logistics companies. When assault units progress and the beachhead becomes relatively secure, HSS is enhanced by follow-on forces.

Follow-On Forces

Health service support shifts its posture to achieve shore-based health care consistent with the expected combat intensity and duration of sustained operations ashore, independent of sea-based facilities. This phasing is achieved by upgrading and consolidating HSS capabilities ashore with those not yet landed. If a sustained land campaign is envisioned, theater hospitals usually can provide additional HSS.

CAPABILITIES EXTERNAL TO THE MAGTF

Health service support in the Marine Corps does not extend past role 2 care. Role 3 care and above is external to the MAGTF. Examples of higher levels of care and additional naval role 2 capabilities include hospital ships, CRTS, fleet surgical teams (FSTs), forward-deployable preventive medicine units (FDPMUs), outside the continental United States MTFs, and joint theater hospitalization capabilities.

Hospital Ships

Hospital ships (T-AHs) are floating surgical hospitals. Their mission is to provide acute medical care in support of combat operations at sea. Support can be provided to ATFs, joint task forces, and combined forces. The T-AH is designed to receive patients primarily by helicopter, and it has limited capacity for receiving patients by surface craft.

Casualty Receiving and Treatment Ships

The CRTS have the largest medical capability of any amphibious ship in the ATF. A fully manned and equipped CRTS medical capability includes four to six operating rooms, a 15-bed intensive care unit, a quiet room, 45 ward beds, and six isolation and overflow beds. Dental spaces include a general dental operating room. Navy medical department personnel augment CRTS to achieve full casualty treatment capability. The ATF amphibious assault ships that can be used as CRTSs are the multipurpose landing helicopter dock (LHD) ship and the general purpose landing helicopter assault (LHA) ship. The CATF's Annex Q (Planning Guidance, Medical Services) designates platforms to serve as CRTSs. For the medical support capabilities these vessels provide, and their potential roles as CRTSs, see Allied Tactical Publication ATP 08.1, *Amphibious Operations Interoperability Matrix*.

Fleet Surgical Teams

The FSTs are medical augmentation teams assigned to the amphibious squadron commander. A FST provides surgical capability to the LHAs and LHDs for deployment and inter-deployment surgical requirements. They are attached to amphibious readiness groups when deployed with a MEU. The OIC and medical regulation and control officer are part of the amphibious squadron staff, while the remaining team members are assigned to ships as needed throughout the amphibious ready group, integrating with the respective ship's medical department. The FST provides the surgical capability to the CRTS. The OIC of the fleet surgical team is the CATF surgeon, who is the senior medical authority afloat for the amphibious readiness group and the principal medical advisor to the commander or CATF.

Forward Deployable Preventive Medicine Unit

The FDPMU is a rapidly deployable, task-organized, specialized preventive medicine platform that meets the operational commander's force health protection (FHP) needs. It includes former forward-deployed laboratory capabilities and many expanded capabilities, including CBRN agent identification.

The FDPMU's mission is to expand FHP capabilities by identifying and evaluating environmental hazards, assessing the risk of adverse health outcomes, and monitoring the well-being of the deployed force. The FDPMU advises the operational commander on significant risks, recommended countermeasures, and other interventions that would affect FHP. The five major functional areas of FDPMU are PVNTMED, chemical, microbiology, disease vector, and occupational and environmental health site assessment (OEHSA).

Theater Hospitalization Capability

This capability delivers health support to medically sustain forces in a geographic combatant commander's area of responsibility or in a joint operating area. These capabilities involve hospitals purposefully positioned to provide in-theater support and deploy as modules or multiple individual capabilities that provide incrementally increasing medical services. The theater hospitalization capability offers essential care to either return patients to duty (within the theater-patient movement policy) or stabilize them for evacuation to a definitive care facility outside the joint operating area. In addition to skilled medical personnel, the hospitalization capability includes the facilities and materiel (equipment and consumable supplies) necessary to render significant preventive and curative health care. These robust services encompass primary inpatient and outpatient care; emergent care; and enhanced medical, surgical, and ancillary capabilities.

Theater hospitalization capabilities can vary according to the regional infrastructure and the tempo of an operation. A robust capability would contain the following services (which are not typically provided at the lower roles): advanced burn management, blood bank services, MEDLOG, optometry and ophthalmology, pediatrics, obstetrics, gynecology, internal medicine, cardiology, pathology, infectious disease, intensive or critical care beds and nursing, medical nutrition therapy, behavioral health, OEHS, physical and occupational therapies, dental, PVNTMED, veterinary, and other medical specialties. Additionally, surgical capabilities exist for eye, maxillofacial, neurosurgery and expanded radiology, pharmacy, and laboratory services.

CHAPTER 4.
LOGISTICS

Health service support logistics encompasses planning, procurement, initial issue, management, resupply, and disposition of materiel required to support medical and dental elements organic to FMF units. Requisitions for consumable Class VIII materiel follow the same channels as other classes of supply through the medical logistics company. Guidance for planning and procuring Class VIII (e.g., blood products, see Appendix B) is found in Navy/Marine Corps departmental publication (NAVMC) 4000.2A, *Marine Corps Class VIII Management Handbook*, and Department of Defense Instruction (DoDI) 6480.04, *Armed Services Blood Program.*

As with all classes of supply, careful consideration should be given to stock levels of Class VIII materiel. Commanders should not be burdened with moving and maintaining excess supplies, nor should support ever be delayed because of inadequate supplies or lack of resupply. When the medical planner is developing and planning for appropriate levels of Class VIII support, the following information is crucial to ensuring the HSS system can remain responsive to the commander:

- Concept of operation and scheme of maneuver.
- Combat intensity.
- Duration of the operation.
- Casualty estimates.
- Primary, alternate, contingent, emergent (PACE) communication plan.

ALLOWANCE AND SOURCE OF LOGISTICS

A MAGTF surgeon advises the MAGTF commander on medical or dental materiel support. Allocation of supplies is documented in the table of equipment, the AMALs, ADALs, and the 30-day replenishment supply support requirement. The table of equipment, AMALs, and ADALs are designed to support a specific number of days, of high intensity combat operations, for the following size MAGTFs: MEF—60 days, MEB—30 days, MPF—30 days, and MEU—15 days of supply. The AMAL and ADAL requirements to support a MEF are determined during mission analysis in support of aligned units to that force. The AMALs and ADALs are allocated to support specific requirements and can be reconfigured to be more expeditious for developing concepts. The authorizing commander is responsible for funding AMALs and ADALs as well as assuring access to program of record software such as Defense Medical Logistics Standard Support and enabling DoD Activity Address Code in allocating Class VIII supplies.

Table of Equipment

A unit's table of equipment includes basic support. A sample table of equipment might include—

- Tentage.
- Vehicles.
- Tools.
- Communications equipment.
- Chemical, biological, radiological, nuclear, and explosives gear.
- Specialized clothing.
- Personnel protective equipment.
- Office equipment.
- Other equipment and supplies, as required.

Authorized Medical and Authorized Dental Allowance Lists

Authorized medical allowance lists and ADALs are specialized equipment and supply assemblages for medical and dental elements to provide combat HSS. See Appendix A for a detailed description of AMALs and ADALs.

Replenishment Supply Support

An HSS detachment deploys with its initial issue and days of supply prescribed by the MAGTF commander. Class VIII supplies for the first 60 days of operations (beyond subordinate units' organic capability), is maintained by the LCE supply detachment and provided to supported units as required. For operations more than 60 days, medical resupply is generally provided to the MAGTF by the CCDR's designated theater lead agent for medical materiel (TLAMM) or single integrated medical logistics manager (SIMLM) via the respective component of the MLG. The TLAMM or SIMLM system oversees provision of medical supplies, repairs and maintenance to medical equipment, blood supplies, and optical fabrication to all joint forces within the theater of operations.

Typically, HSS logistics is a Service responsibility; however, in joint operations, SIMLM is the organization that provides central logistical support to all participating Services in the CCDR's area of responsibility. The TLAMM is the organization designated by SIMLM to accomplish this mission. As the executive agent, the Army has been formally tasked by DoD, to perform the peacetime TLAMM or SIMLM missions in the European, Pacific, Korean, and Middle Eastern theaters. Under wartime or crisis conditions, the Army is usually the dominant Class VIII user and must plan for the TLAMM or SIMLM mission. In extreme mass-casualty situations, HSS logistics can be provided to Navy hospital ships for common, demand-supported medical supplies in the later stages of theater development. Activating the SIMLM mission depends on the time-phased force deployment list supporting the contingency. Air delivery of emergency medical supplies can be used where and when tactically supportable. The LCE supply detachment, which can include portions of medical logistics company, provides Class VIII single-item resupply and limited medical repair capabilities to all HSS units of the MAGTF. The LCE support detachments provide medical resupply to medical units within the MAGTF elements.

INDIVIDUAL HEALTH SERVICE SUPPORT EQUIPMENT

The HM assigned to a MAGTF's combat support unit is given a complete Corpsman assault pack as part of their field gear. This pack could be held by the unit organic supply section and issued on an as needed basis. The Corpsman's parent-unit supply section is responsible for ensuring the contents in the pack are maintained in good condition and medications have not expired.

Routine Resupply

Health service support personnel needing resupply should submit a requisition to their unit's supply section. The supply section passes the requisition to their supported activities supply system management unit, or if deployed, the LCE supply section. The LCE orders, receives, and distributes the required materials. With regard to medicine, although HSS personnel can identify alternate doses or approved substitutes, care is required when using alternate supply sources to those already approved by the Defense Medical Materiel Program Office or Navy Medical Readiness Logistics Command. Also, HSS personnel can identify other US and host or partner nations' medical facilities where required approved items could be obtained.

Combat Resupply

During embarkation planning, HSS planners determine the number and type of AMALs and ADALs required to support the operation. Additional consumable Class VIII materiel is positioned for deployment with the LCE's supply section. After the consumable AMALs and ADALs are issued and expended, or when directed by a higher authority, resupply is accomplished by normal line-item requisition from the supporting LCE. When MAGTF Class VIII stockpiles are expended, Class VIII supplies are obtained through the designated SIMLM provider.

Patient Movement Items

Patient movement items (PMIs) are medical equipment and supplies required to support the patient during evacuation (e.g., ventilators, oxygen, vital sign monitors, blankets). Handling and returning PMI equipment to the aeromedical evacuation system requires a reliable supporting logistic infrastructure to ensure PMIs are available and can be serviced. Plan for a PMI exchange system and for returning aeromedical evacuation PMI equipment to the originating MTF in the OPLAN. When a patient requires evacuation, the originating MTF provides Transportation Command-approved PMIs. These items accompany a patient throughout the chain of evacuation from originating MTF to destination MTF, whether it is an intra- or inter-theater transfer. Services obtain and maintain initial quantities of PMIs in the appropriate medical assemblages.

DISPOSING MATERIALS

When disposing soiled, contaminated, or other unserviceable Class VIII items, HSS units must consider the safety of US forces and local civilian populations. Disposing any Class VIII items, units must comply with local and international laws, ordinances, and customs governing such disposal (whenever operations allow). When disposal takes place in the United States or its

territories, Class VIII disposal is coordinated with the local office of the Defense Logistics Agency Disposition Services. Peacetime disposal overseas is coordinated with the Defense Logistics Agency Disposition Services office or the supporting LCE's guidance.

During combat operations, and when the tactical situation permits, the safest method for field disposal is incineration, then deep burial (6 feet or more). The burial site must be located at a safe distance from watersheds and populated areas. The command's CBRN officer has the responsibility for neutralizing and disposing clothing, equipment, and dressings removed during CBRN decontamination processes.

Disposing body parts, tissues, and Class VIII blood and blood products obtained during operative or diagnostic procedures is preferably accomplished in accordance with procedures guiding local medical facilities. Incineration or deep burial disposal requires prior authorization and specific guidance of higher authority. Health service support units should coordinate such activities with local health authorities and religious leaders whenever possible.

PROTECTION OF MEDICAL SUPPLIES

Medical materials and supplies are protected under the law of war (see MCTP 11-10B) and the Geneva Conventions; however, when they are combined with combat supplies, they lose protection afforded by these covenants. Marking medical material and supply storage areas with the red cross of the Geneva Conventions is a tactical decision made by the CCDR. The Geneva Conventions and the law of war prohibit destroying medical materials and supplies abandoned in a retrograde movement caused by enemy action or other tactical situations.

CHAPTER 5.
COMMAND AND CONTROL

The complexities of an operational environment, myriad medical functions and assets, and the requirement to provide health care throughout the competition continuum to diverse populations (i.e., United States, joint, interagency, intergovernmental, multinational, host nation, and civilian) necessitates a medical command authority that uses scarce medical resources available to their full potential and capability. The medical C2 capability is flexible, versatile, and capable of providing medical support ashore and afloat to support current and future operations. The medical C2 capability integrates vertically and horizontally with the command and control unit commander to enhance situational awareness. These C2 capabilities develop, process, and disseminate orders and information to subordinate units and provide the means to receive and implement orders from higher authorities.

COMMAND AND CONTROL ORGANIZATION

Health service support is embedded in each MAGTF element. However, available communications assets vary and HSS shares these assets with other warfighting functions. In the Marine Corps, the same radios that carry fire support or command information also carry medical information, and commanders and HSS personnel use the same C2 systems. There is not a separate or dedicated medical network in the tactical Marine Corps communications architecture.

Units responsible for providing detachments C2 support, for HSS, operate under the staff cognizance of the G-6/S-6 of the supported unit. Marines assigned to these units, in concert with the personnel assigned to the G-6/S-6 sections and HSS organizations, ensure that an effective communications and information systems (CIS) network is planned, installed, operated, and maintained to assure a comprehensive communication PACE plan.

COMMUNICATIONS AND INFORMATION SYSTEMS

The CIS network provides management and decision support tools for the HSS commander and staff to collect, transport, process, disseminate, and protect voice, data, and information. A CIS network includes tactical, single-channel high frequency, very high frequency, super-high frequency, and ultrahigh frequency radios; tactical and commercial telephones; multichannel digital systems; satellite communications; cryptographic equipment; and data systems for classified and unclassified local area network or wide area network connectivity. All these systems are used by assigned units and are allocated in accordance with the commander's priorities.

To improve interoperability, increase efficiency, and reduce costs, the DoD has mandated that Services move to a common set of information systems and services. This is occurring with the fielding of the Global Command and Control System (GCCS) and implementation of the defense information infrastructure common operating environment.

The HSS uses the Joint Operation Planning and Execution System (also referred to as JOPES) for planning and execution under GCCS. This system combines joint policies, procedures, personnel, training, and a reporting structure supported by automated data processing on GCCS. The medical analysis tool is an HSS analyzing tool supported by GCCS at the Marine Corps component level for planning and execution of the HSS medical mission.

Communications and information systems support for HSS organizations is provided by MEF's communications battalion. The G-6/S-6 must plan for connectivity among the division, wing, and MLG, as well as external communications with organizations in the joint area to include the following:

- Division. CIS support for HSS personnel is provided by communications company, H&S battalion.
- Wing. CIS support for HSS personnel is provided by Marine wing communications squadron and MAG.
- Marine Logistics Group. CIS support for HSS personnel is provided by communications company, H&S battalion and communications platoon, medical battalion.

DATA PRESERVATION

The joint operational medicine information system (JOMIS) provides global, integrated automation to the theater medical environment. It links HSS information databases and integration centers in a way that is accessible to the warfighters. This connectivity is essential for aiding theater commanders in making time-sensitive decisions critical to the success of their operations. The JOMIS assists the HSS commander and theater surgeon with delivery of responsive combat medical care and establishes the means for combining existing, developing, and future medical information.

The JOMIS capabilities collect medical information about personnel, medical units, facilities, equipment, supplies, and training throughout mobilization, deployment, sustainment, and redeployment phases and can use this information to generate and publish plans and orders. Hence, JOMIS enables the assessment of personnel medical status, readiness, and unit capabilities. The program provides required information links to HSS organizations and enables rapid decision making regarding—

- Medical capabilities assessment and sustainability analysis.
- Medical threats and medical intelligence.
- Combat casualty care.
- Medical logistics.

- Blood management.
- Patient movement.
- Personnel information and training.

MAGTF Command and Control Centers, Agencies, and Facilities

Under a MAGTF, the C2 center, agency, or facility for HSS is the medical support operations center (MSOC). The HSSO manages the MSOC, which is part of the MLG COC. At the MLG, the COC is operated by the G-3/S-3. Within the ACE, these duties are performed by the logistic staff officer at the MAG, Marine aviation logistics squadron, and Marine wing support squadron levels. In smaller MAGTFs, the LCE can establish an MSOC within the COC that controls and coordinates day-to-day HSS operations.

Usually, COCs are centrally organized around combat service support functional areas of supply, health services, maintenance, engineering, transportation, and services. The COC controls radio networks and can have direct telephone lines to subordinate units, supported units, and higher headquarters.

CHAPTER 6.
PLANNING

Comprehensive planning is essential in any operation. The course of action analysis, based on the commander's intent, should include casualty estimates and risk mitigation strategies for MAGTF operational support. For planning purposes, Annexes K and Q should reflect intended coordination by and between HSS and the G-6/S-6.

Health service support planning must be continuously directed toward accomplishing missions and tasks and be flexible to accommodate changes. The HSS planning must include mitigating factors to FHP threats and provide medical capability according to anticipated wounded in action, DNBIs, and human remains within the HSS system. Commanders and their staffs develop an efficient plan for a MAGTF operation, which depends on a combined and coordinated effort of all involved. Because MAGTF operations are inherently complex, planning at every level must provide as complete, functional, and flexible support as possible with available resources. Having a clear understanding of staff planning is based on knowledge of characteristics, methods, and objectives of the overall operational planning process.

MARINE CORPS PLANNING PROCESS

The Marine Corps Planning Process establishes procedures for—

- Problem framing.
- Developing courses of action (COAs) against the threat.
- Wargaming COAs using the enemy's most likely, dangerous, and greatest advantage (against friendly forces) COAs.
- Comparison and decision on COA.
- Developing an OPORD or OPLAN based on commander's selection.
- Transitioning an OPORD or OPLAN for execution to those tasked.

The Marine Corps Planning Process organizes these procedures into six steps. Using these steps, the commander and supporting staff can organize their planning activities and transmit plans to subordinates and assigned commands, thereby sharing a common understanding of the mission and commander's intent. See Marine Corps Warfighting Publication (MCWP) 5-10, *Marine Corps Planning Process*, for more information on the Marine Corps Planning Process.

HEALTH SERVICE SUPPORT PLANNING RESPONSIBILITIES UNIQUE TO AMPHIBIOUS OPERATIONS

Because HSS plans are mutually supportive, detailed, and parallel, coordinated planning is required between the ATF and landing force surgeons. Landing force and ATF surgeons have specific HSS planning responsibilities (see JP 3-02, *Amphibious Operations*); these surgeons, and their staffs, should be familiar with these responsibilities.

Amphibious Task Force Surgeon

The ATF surgeon—

- Provides HSS for all embarked personnel between point of embarkation and objective area.
- Coordinates ship and air evacuations from the AOA to MTFs outside the objective area.
- Develops evacuation policies with the landing force commander.
- Maintains medical liaison with US and foreign MTFs ashore. This requires coordinating with US Department of State or US Office of Military Cooperation.
- Develops the medical regulating net with the G-6.
- Advises unit staff on HSSE status and capabilities to support the mission.
- Implements measures throughout the ATF.
- Provides oversight of the blood program.

Landing Force Surgeon

Landing force HSS plans support to complement the landing force's plans and policies. The landing force surgeon is responsible for—

- Providing HSS to the landing force before embarkation.
- Assisting ships' medical departments with medical care for embarked landing force personnel.
- Supporting casualty evacuation from the landing force area to the ATF during assault phase, and once established, to and from the beach evacuation stations.
- Providing HSS care for personnel ashore in the objective area.
- Making recommendations to ATF commander concerning evacuation policy for the operation.
- Identifying and requesting external medical support to fulfill requirements beyond the capability of landing force HSS units.
- Coordinating the establishment of emergency treatment and casualty holding facilities ashore.
- Ensuring continuity and interoperability of medical regulating net to coordinate the movement of casualties after control passes to the landing force commander.

SEQUENCE OF COMMAND AND STAFF PLANNING FOR HEALTH SERVICE SUPPORT

Health service support planning begins with the commander's planning guidance issuance to the supporting staff. The commander's guidance includes mission analysis, factors to consider, and COAs to analyze. The MAGTF surgeon's staff participates in COA development and wargaming each COA. Also, they prepare a comprehensive estimate regarding HSS factors affecting mission accomplishment in light of each proposed COA. The HSS estimate provides the commander with a portion of the information considered when deciding a COA. After considering and comparing each COA against established criteria and against each other, the commander selects a COA that best accomplishes the mission. Health service support planning continues in detail after the commander announces a decision and the CONOPS. Much of the material included in the HSS plan has been developed before preparing the medical estimate. This material should be reviewed, refined, and updated as necessary.

Medical Estimate

The medical estimate requires significant research along with concurrent, parallel, and detailed planning. Effective planning requires thorough analysis and research to support the decision-making process. The medical estimate—

- Assesses medical capabilities and limitations.
- Determines if medical capabilities are sufficient to support the proposed COAs.
- Determines which COA is most desirable from a medical standpoint.
- Determines what measures the commander and supporting staff must take to overcome limiting factors.

The actual format used is directed by the cognizant G-3/S-3 and is based on guidance from higher headquarters. It is imperative that staff estimates and estimates of supportability are reviewed throughout the planning process. Estimates include problem framing, COA development, COA war game, and COA comparison and decision. When possible, refer to the CCDR casualty estimates or use the Medical Planners' Toolkit (MPTk). See MCWP 5-10 for information on the planning process and sample staff estimate development.

Decisions and Recommendations

The MAGTF surgeon prepares an HSS estimate that provides analysis and identifies advantages and disadvantages, from a medical view, on each proposed COA. The MAGTF surgeon recommends a COA based on this analysis.

Health Service Support Concept of Operations

The commander considers the results of wargaming, examines staff estimates, and determines a desired COA. At this point, the MAGTF surgeon develops an HSS plan and a CONOPS to support the commander's decision. This plan contains information and instructions outlining HSS support requirements for the MAGTF operation.

MEDICAL SERVICES ANNEX

The CONOPS for HSS is in Annex Q (Medical Services) of the OPLAN and OPORD. The medical services annex contains information on HSS requirements during an operation, including deployment planning, and external support requirements. Its purpose is to direct HSS efforts during the operation. The medical services annex compiles HSS requirements from sources external to the MAGTF and addresses elements of support requiring close coordination with other Services, Joint Chiefs of Staff, DoD, or host nations. The medical services annex sets policy, specifies tasks and responsibilities, and directs the employment of medical assets organic to the MAGTF, GCE, ACE, and LCE from embarkation to D-day (i.e., "the unnamed day on which operations commence or are scheduled to commence" [*DoD Dictionary of Military and Associated Terms,* hereafter referred to as *DoD Dictionary*]). Annex Q is typically prepared at MEF, MEB, and MEU levels. The completed medical services annex—

- States the HSS situation.
- States evacuation policy.
- Delineates organization, responsibilities, and employment of HSS system elements. Emphasizing responsibilities that will shift during the operation and measures that will ensure the HSSE actions are coordinated to the task force.
- Projects time-phased bed requirements and includes locations of potential facilities available to provide support and casualty overload plans.
- Provides plans on accessing HSS available from sources external to the MAGTF.
- Establishes HSS plans for evacuation of casualties from AOA.
- Addresses HSS supplies, including prescribed load, replenishment, and exchange of equipment.
- Establishes procedures and responsibilities for recordkeeping and casualty reporting.
- Addresses provisions for HSS while afloat.
- Establishes procedures for obtaining medical intelligence.
- Identifies environmental health threats.
- Evaluates and plans applicable responses to environmental and occupational health stressors.
- Ensures necessary environmental health controls are planned for and carried out for food procurement, potable water, waste disposal, general field sanitation, personal hygiene, vector control, agricultural washdowns, and other necessary public health measures.
- Addresses PVNTMED, CBRN warfare medicine, dental, veterinary medicine, hygiene, and sanitation.
- Disseminates procedures for obtaining and distributing Class VIII blood supplies.
- Addresses responsibilities of US forces rendering medical care to multinational forces, enemy prisoners of war, and indigenous civilians.
- Identifies available HNS, types, and locations.

TRANSITION: PHASES OF EXPEDITIONARY OPERATIONS

Health service support planning for expeditionary operations can be divided into the following five phases:

- Predeployment.
- Deployment.
- Entry.
- Enabling and decisive actions.
- Redeployment.

Predeployment

Pre-deployment actions include organizing the deployment to ensure that forces arrive in the objective area in a logical sequence, at the right time, and with the correct equipment and sustainment to support CONOPS. Regardless of the deployment mode, pre-deployment preparation and deployment are complex undertakings that require accomplishing numerous tasks. In crisis response situations, the time available to accomplish these tasks is limited. Some HSS pre-deployment considerations are—

- Conducting pre-deployment health screening to ensure personnel are medically ready.
- Staffing and training HSS components supporting the CONOPS.
- Maintaining HSS equipment and supplies in sufficient condition and quantity for the mission.
- Ensuring responsive resupply mechanisms are in place.
- Establishing liaison with MAGTF, joint, and multinational components.
- Procuring and administering required immunizations and medicines for endemic diseases.
- Identifying HNS, nongovernmental organizations, and international organizations.
- Providing unit training in personal hygiene and field sanitation.
- Ensuring pre-deployment health threat briefs and health-screening questionnaires are completed.
- Assisting medical units in completing pre-deployment requirements, specifically immunizations, and making preparations for embarkation of PVNTMED equipment.
- Making sure HSS personnel organic to the MAGTF embark with their units.
- Verifying mobile loading of BAS, surgical platoon, and FRSS equipment and supplies is completed.
- Ensuring HSS personnel and Class VIII materiel are adequately allocated to the extent possible among ATF ships for amphibious operations. However, this should not be accomplished at the expense of separating personnel from equipment they will be using ashore. It is important that personnel from HSSEs embark on vessels carrying their equipment and supplies.
- Verifying all medical personnel, equipment, and supplies are registered on the Joint Operation Planning Execution System time-phased force and deployment data.

- Distributing medical personnel and supplies during deployment to ensure complete coverage.
- Disseminating military PVNTMED information to commanders and HSS units in theater.
- Conducting pre-site surveys and campsite selection recommendations.
- Maintaining technical oversight on food service operations and procurement.
- Providing oversight and testing at water points, bulk water storage areas, and ice manufacturing.
- Conducting pest surveillance and control.
- Maintaining environmental health and pest control equipment.
- Conducting weekly DNBI surveillance and reporting findings through the proper chain of command.
- Implementing necessary countermeasures to reduce or eliminate DNBI threats.
- Preparing and submitting medical situation reports as required.

Deployment

Deployment planning and execution are challenges for even the most experienced and skilled logisticians and HSS personnel. Transportation modes vary depending on the size, purpose, and duration of deployment. A MEF deployment uses various transportation modes to include—

- Military or commercial ground transportation.
- Amphibious or commercial ships.
- Air mobility command or commercial charter airlift for personnel, supplies, and equipment.

Entry

Entry refers to the initial introduction of forces onto foreign soil where no prior presence exists. During this phase, expeditionary forces are often at greatest risk and the introduction of forces is often a complicated military evolution. The most difficult type of entry is forcible entry, which does not have the established medical capabilities to render treatment necessary for expected casualties. The HSSE must remain flexible and responsive during this period of an expeditionary operation.

Amphibious Operations. An amphibious operation is, "a military operation launched from sea, by an amphibious task force to conduct landing force operations within the littorals" (*DoD Dictionary*). The five phases of an amphibious operation are planning, embarkation, rehearsal, movement, and action. Sound planning provides a basis for successful execution. The HSS personnel should—

- Test the adequacy of HSS plans.
- Test regulating networks and medical C2 networks.
- Check individual readiness.
- Ensure all HSS personnel are familiar with the OPLAN and Annex Q.

Maritime Pre-Positioning Force Operations. An MPF operation is, "the rapid deployment and assembly of a Marine expeditionary force in a secure area using a combination of intratheater airlift, and forward-deployed maritime pre-positioning ships" (*DoD Dictionary*). A maritime pre-positioning ship (MPS) operation is a strategic deployment option that is global in nature,

naval in character, and suitable for employment in various circumstances. The essential strategic contribution of MPF operations is the mobility and flexibility that allows the rapid concentration of forces in a designated area.

Amphibious and MPF operations have complementary activities. Amphibious operations provide the means for forcible entry, while MPF operations permit rapid deployment into permissive areas, where force introduction is essentially unopposed and is expected to remain so throughout the arrival and assembly phase. Amphibious operations can be used in the same environment as MPF operations, but the reverse is not true.

In an MPF operation, a MAGTF and Navy support element personnel are airlifted into a host-nation arrival and assembly area to join with equipment and supplies pre-positioned aboard MPSs. The MPF pre-positions materiel sustains a MEF for 30 days. Sustainment requirements change with the size and duration of the operation. For planning purposes, HSS considerations include the following:

- Preparing and distributing Class VIII supplies.
- Providing first-responder care upon landing.
- Obtaining host-nation and inter-Service support.
- Coordinating transportation of personnel, equipment, and supplies.
- Inventorying equipment and supplies for serviceability.
- Identifying resupply sources.

Air Contingency Force Operations. Air contingency force operations are task-organized, air-deployable forces. An air contingency MAGTF has lead elements ready to deploy within hours of notification; these elements deploy to a secure area for subsequent employment. Air contingency forces can be used as part of the fly-in echelon of an MPF, as reinforcement for an amphibious force, or as the lead MEF element. Organic HSS and its equipment are part of the air contingency force.

Enabling and Decisive Actions

Enabling actions refer to those preparatory actions taken by the expeditionary force after entry and mission establishment. Follow-on forces typically follow initial forces, which have undertaken enabling actions for the eventual decisive actions to take place. Enabling actions can include seizing a port, airfield, or other lodgment to facilitate the secure introduction of follow-on forces. In cases of disaster or disruption, enabling actions usually involve the initial restoration of order or stability. In open warfare situations, enabling actions can involve operations that halt or delay an enemy advance, attack certain enemy military capabilities, or to capture key terrain necessary for conducting decisive operations.

Decisive actions are actions units take to create favorable conditions for accomplishing the mission. In disasters, decisive actions include relief operations. In disruptions, they often include peacemaking and peacekeeping until local government control can be re-established. In conflict, they usually involve the military defeating the enemy's fighting forces. These enabling and decisive actions require HSS planning and support to varying degrees based on mission, conditions, and forces applied.

Redeployment

Expeditions are temporary by definition, and expeditionary operations involve a departure of the expeditionary force or a transition to a permanent presence. Redeployment could be required when the mission changes; there are additional missions within the theater or in another theater; or when forces return to the base of origin. The MAGTF's organic sustainment and its ability to quickly reorganize and reconstitute without having to first return to its home base or wait for a theater logistic infrastructure to be established make it unique. Redeployment requires additional HSS planning and resupply, so the medical capabilities are available for follow-on missions.

Sustainment. The MAGTF's versatility stems from its naval, expeditionary character, which enables it to respond quickly to contingencies and shift rapidly between missions in littoral regions around the world. A MAGTF has this capability even when there is no logistic infrastructure ashore and before resupply channels from CONUS have been established. The MAGTF's organic sustainment capability allows units to conduct independent operations for 60 days without resupply. Since the MAGTF is a lighter force, and it can operate with a small footprint within an austere environment, it is more easily sustained, places less demand on lift capabilities, and simplifies problems associated with redeployment.

Reconstitution. A MAGTF's endurance, is based on its accompanying sustainment and its ability to maneuver at sea, which makes it ideally suited for reconstitution and redeployment out of theater within the limits of accompanying supplies. Commanders must ensure that requisitions for replenishment are submitted commensurate with anticipated lead times for delivery. Reconstitution in theater requires resupply to rebuild baseline levels of sustainment.

HEALTH SERVICE SUPPORT PLANNING CONSIDERATIONS

Evaluations of data from World War II, Korea, Vietnam, Operation DESERT STORM, Operation IRAQI FREEDOM, and Operation ENDURING FREEDOM have led to development of the following guidelines concerning combat HSS:

- Commanders at all levels are responsible for providing adequate and proper health care to individuals.
- Medical support can be effectively executed only if they are based upon realistic HSS capabilities.
- Health care for patients must be continuous from the onset of injury or disease through the roles of care to the facility that can provide final treatment and disposition.
- Casualty triage must be conducted at the point of injury and at each medical facility in the chain of evacuation; patients are triaged at a receiving MTF and moved rearward only to the point patients can receive definitive care (based on their condition).
- Marine Corps HSS units must be prepared to move quickly.
- Health service support units must disperse, to protect assets, personnel, and to render the best medical service possible.
- Flexible plans ensure the mission can be accomplished despite changes in the tactical situation.

- Casualty estimates should drive planning for the appropriate medical capability and support locations, to include maritime CRTS.
- An AOA evacuation policy increases requirements for HSS but can reduce requirements for CASEVAC transportation and personnel replacements.
- Prompt triage, stabilization, and CASEVACs save lives and returns many wounded to duty. Also, it can decrease a patient's non-effective days and reduces functional disability.
- Conduct reverse triage to conserve supplies on patients not expected to survive their injuries.
- Evacuation needs decrease when medical facilities are located close to forces in contact with the enemy.
- When patients cannot be returned to duty, within the limits of the evacuation policy, they should be evacuated from theater as quickly as their condition permits.
- Maintaining continuous awareness of current DNBI rates and trends, through disease surveillance at all levels, is critical for an effective prevention program.
- Medical supplies and resupply is a priority for prolonged casualties or care in austere environments.
- Emergency fresh whole blood transfusion is a critical capability for a casualty in an austere remote operational environment. One foundational principle in TCCC, medical personnel should stop a massive hemorrhage before performing an EFWBT.
- Once TCCC interventions have been performed and verified, next step is to provide whole blood in resuscitation, restoring and maintaining adequate circulation, and ensuring vital organ perfusion to reduce the risk of further injury and death.
- Contested environments require well-informed PACE plans to assure continued multi-modal patient movement.

These guidelines can support personnel tasked with HSS planning. Medical planners must be included throughout the entire planning process to ensure developing plans generate effective and responsive HSS.

CHAPTER 7.
PREVENTIVE MEDICINE

Disease, nonbattle injuries, and occupational environmental health (OEH) hazards can have a rapid and widespread effect on a military organization's effectiveness. Preventive medicine efforts can dramatically reduce the incidence of these hazards during military operations. Proactive PVNTMED measures should be incorporated into all levels of care. Real-time disease surveillance data and results from OEH monitoring should be used to brief commanders on potential medical and environmental threats and on the effectiveness of PVNTMED measures. An HSSE's critical function is preventing DNBI. For more information on PVNTMED measures refer to Navy Medical (NAVMED) P-5010-9, *Manual of Naval Preventive Medicine*.

PREDEPLOYMENT

Specific PVNTMED tasks and efforts units should conduct before deployment are as follows:

- Collect and disseminate entomology, environmental, occupational, and epidemiological information, on the theater of operations, to the supported commander, HSS units, and MAGTF elements that might be affected for planning and potential action as changes occur.
- Conduct pre-deployment OEHSA, including preliminary health hazard site survey during pre-deployment site survey, to identify potential OEH threats to deployed personnel.
- Recommend personnel augmentation requirements to support the OPLAN.
- Recommend immunizations and other PVNTMED measures to counter medical threats within theater and in-transit staging points.
- Train individuals (i.e., via unit training) in personal hygiene, personal protective measures, protection equipment, and field sanitation practices.
- Assist medical units in completing pre-deployment requirements (e.g., immunization, PVNTMED threat briefings, permethrin) and in preparing to embark PVNTMED equipment.
- Conduct health threat briefings when threats are identified and when countermeasures are required.
- Conduct food and water vulnerability assessments.

DEPLOYMENT

Specific PREVMED taskings and efforts conducted by the HSS staff, while deployed, are as follows:

- Disseminate militarily significant PVNTMED information to commanders and HSS units in theater.
- Provide technical oversight on food service operations and procurement.
- Provide oversight and testing at water points and bulk water storage areas.
- Conduct disease vector and pest surveillance and control when feasible.
- Maintain environmental health and pest control equipment.
- Conduct weekly disease and injury surveillance at all battalions and squadrons.
- Validate health risk assessments performed during pre-deployment activities.
- Conduct OEHS and OEHSA activities to detect environmental health hazards.

MARINE EXPEDITIONARY FORCE PREVENTIVE MEDICINE CAPABILITIES

The MEF surgeon's staff includes a physician who is board-certified in PVNTMED and has expertise in occupational health, PNTVMED, or public health. This physician is responsible to the MEF commander and MEF surgeon for coordinating PVNTMED efforts among the division, wing, and MLG.

Most PVNTMED assets organic to a MEF are found in the MLG's PVNTMED section of the medical battalion's H&S company. This section is responsible for providing general support to all MEF commands. Support includes identifying information regarding environmental health factors, real and potential OEH risks, conducting OEHSA; performing OEHS, characterizing demographics and populations at risk; assessing living conditions; ensuring adequate water quality and supply; recommending proper waste disposal methods; evaluating food safety and food sanitation programs; managing sight and hearing conservation programs; and evaluating entomology issues such as insects and diseases that affect the military in the region.

NAVY AND MARINE CORPS FORCE HEALTH PROTECTION COMMAND

The Navy and Marine Corps Force Health Protection Command supports operational units. It conducts—

- Risk screening and mitigation.
- Data evaluation.
- Exposure assessments.
- Toxicity assessments.

- Health risk evaluations.
- Health and safety planning.
- Environmental risk communication workshops and seminars.

The Navy and Marine Corps Public Health Center and its supporting activities establish and disseminate PVNTMED and environmental protection policy recommendations to ensure mission readiness through disease prevention and health promotion. Field activities in direct support of the Center include the Navy Entomology Center, Naval Dosimetry Center, and Drug Screening Laboratory.

Navy Entomology Center of Excellence

The Navy Entomology Center of Excellence provides technical and specialized services in the field of disease vector surveillance and control, as well as providing vector control training to various agencies within the Federal Government. These centers test and evaluate vector control equipment and techniques and collect, analyze, and disseminate disease vector and health threat information. This diverse mission includes a special emphasis on contingency response in the event of armed conflict, crises, military operations conducted throughout the competition continuum, and operational support to both fleet and shore activities.

Naval Dosimetry Center

The Naval Dosimetry Center provides a centralized, accredited radiation dosimetry and spectroscopy service, an occupational radiation exposure registry, and radiation health consultation.

Drug Screening Laboratory

The Drug Screening Laboratory provides drug testing using state-of-the-art testing procedures. The laboratory ensures personnel readiness by deterring illegal drug use through forensic drug testing, expert testimony, technical consultation, drug abuse education, and developing drug testing methods.

Field Activities—Navy Environmental Preventive Medicine Units

The Navy Environmental Preventive Medicine Units (i.e., 2,5,6, and 7) operations and support is critical because activities focus primarily in operational theaters, to include ashore, afloat and expeditionary environments in several areas of responsibility (i.e., Atlantic, Pacific, African, and European theaters).

ADDITIONAL RESOURCES

The Naval Medical Research and Development Command, located in Bethesda, Maryland, conducts basic clinical and applied field research directly related to military requirements and operational needs.

Located in Bethesda, Maryland, the Naval Medical Research Institute provides research related to immediate operational problems, which include heat stress research that leads to exposure limits for hot-humid shipboard environments; safety equipment, including protective clothing, flight goggles, safety belts, and repellents for insect vectors of disease; and sharks.

CHAPTER 8.
PATIENT MOVEMENT

FUNDAMENTAL PRINCIPLES

The primary mission of the DoD patient movement system is to transport US military casualties to the appropriate level of care within the combat zone or out of theater as required. Timely patient movement serves an important role in HSS and supports the joint task force's CONOPS. Patient movement is a system that provides a continuum of care and coordinates the movement of patients from the site of injury or onset of disease, through successive levels of care, to meet the needs of the patient. Each Service component has an organic patient movement capability and is responsible for patient evacuation from point of injury to initial treatment at a health care facility. See MCRP 3-40A.7, *Patient Movement*, for more information.

Casualty evacuation is, "the unregulated movement of casualties aboard any vehicle" (*DoD Dictionary*). Medical evacuation traditionally refers to Army, Navy, Marine Corps, and Coast Guard patient movement using dedicated or pre-designated tactical or logistic aircraft, boats, ships, and other watercraft temporarily equipped and staffed with medical personnel for en route care; however, the Army has historically employed dedicated air and ground evacuation assets. Aeromedical evacuation specifically refers to Air Force fixed-wing movement of regulated casualties using organic and contracted mobility airframes with aeromedical evacuation aircrews trained explicitly for the mission. In addition, the civil reserve air fleet can be used for aeromedical evacuation missions.

Dedicated medical evacuation assets are configured for patient movement, externally marked with a red cross, and specifically reserved to support the MEDEVAC mission. Dedicated MEDEVAC provides a specific level of en route care capability to prevent degradation of patient conditions during transport. All dedicated MEDEVAC assets are authorized protection under the Geneva Conventions and ground ambulances are the only dedicated MEDEVAC assets in the Marine Corps.

Designated CASEVAC assets are non-medical patient movement assets, not externally marked with a red cross, but configured and allocated for patient movement. Similar to dedicated MEDEVAC, designated CASEVAC provides a specific level of en route care capability to prevent degradation of patient conditions during transport and are not afforded protection under the Geneva Conventions.

More information on the HSS system and specific tactics, techniques, and procedures for naval expeditionary force medical regulating for joint operations is provided in MCRP 3-40A.7. It also addresses Navy and Marine Corps patient movement capabilities available to an operational commander and gives patient movement recommendations for theater operations, mission planning, and training.

EN ROUTE CARE CAPABILITY

En route care ensures the continuation of care during patient movement within the HSS continuum of care without clinically compromising the patient's condition. Patient movement involves transitory medical care, patient holding, and staging capabilities during transport from the site of injury or onset of disease to a level of care to meet the patient's needs. Each Service component has an organic patient movement capability for evacuation from point of injury to initial treatment at an MTF.

Both CASEVAC and MEDEVAC are accomplished through litter carries, manual carries, ground transportation, and limited air (i.e., fixed- or rotary-wing) transport. The Army generally employs dedicated patient evacuation assets, such as ground and air ambulances. The Navy typically relies on lifts of opportunity. The Marine Corps has some dedicated ground evacuation and relies on opportune lift for air transport.

DECISION MAKING

The level of care provided to sick and wounded in any area of combat is greatly influenced by prevailing tactical situations. Conditions are seldom static and success in combat must remain the primary goal of combat, combat support, and combat service support units. This calls for a dynamic casualty management and decision-making process that must be applied at all levels within the patient movement system.

Casualty Sorting (Triage)

Triage is an effective casualty priority sorting process and is essential to any successful patient movement system. Rapid evaluations are made to identify which patients need immediate resuscitation and which patients can tolerate delay in treatment. Deciding which patients should be moved after initial treatment to a higher-level of care is equally important. Additionally, reverse triage (identifying terminal patients) is necessary to free up resources, preserving critical supplies for patients who have treatable injuries.

Medical Management

Under combat conditions, the flow of sick and wounded patients puts varying pressures on the capabilities of medical facilities. Medical personnel responsible for decisions on moving individual casualties work closely with logistics officers charged with implementing patient evacuation.

MEDICAL EVACUATION ASSETS

The Marine Corps' assigned mission dictates the number and types of aircraft required to accomplish all tasks. Assault support tasks are typically the priority. All Marine Corps tilt-rotor, rotary-wing, and utility aircraft have the capability to perform CASEVAC missions. The limited number of aircraft in the Marine Corps inventory precludes, in most cases, assigning dedicated CASEVAC and MEDEVAC aircraft. Allocating aircraft to perform the CASEVAC mission would be the MAGTAF commander's decision. Assets are designated to perform CASEVAC missions through implied mission tasking or by assuming a standby posture.

Prior planning is essential to ensure proper allocation of aircraft to support CASEVAC and MEDEVAC missions. The MAGTF deployment and distribution center plans for MEDEVAC aircraft within the MLG of the MEF. The MAGTF deployment and distribution center air liaison officer is the direct link to the Marine aircraft wing for identifying MEDEVAC missions in the air-tasking order. When there is not a dedicated CASEVAC or MEDEVAC capability, evacuation is accomplished using any available surface transportation (e.g., commercial vehicle, 7-ton truck, small boat, and landing craft air cushion).

CASUALTY AND MEDICAL EVACUATION REQUEST PROCEDURES

When control is sea-based, units typically request CASEVAC or MEDEVAC by radio to the amphibious air traffic control center using the helicopter direction net. When command or net control has been passed ashore, units request CASEVAC or MEDEVAC from the direct air support center using the tactical air request or helicopter request net. The air officer then consults with either the ATF medical regulating control officer (when sea-based) or the landing force patient evacuation team officer (when ashore) for a recommendation of the best MTF to care for the patient. In operations where designated CASEVAC or MEDEVAC assets are assigned, the direct air support center liaisons with units responsible for providing evacuation. The CASEVAC or MEDEVAC missions are classified as pre-planned or immediate. Both types of support are delivered in response to specific requests via the assault support request. The CASEVAC or MEDEVAC missions from Marine Corps surgical companies to theater hospitals are coordinated by the patient evacuation or patient movement section of the MLG COC (see Table 8-1).

Table 8-1. Applicable Information Needed for a MEDEVAC.

Line	Item	Explanation	Where and How Obtained	Who Typically Provides	Reason
1	Location of pickup site	Grid coordinates of the pickup site should be sent by secure communication. To prevent confusion the grid zone letters are included in the message.	From map or navigational device determine the military grid reference system six-digit grid coordinates of the pickup site.	Unit leader(s)	Required so evacuation vehicle knows where to pick up the patient or casualty. Also, so that the unit coordinating the evacuation mission can plan the route for the evacuation vehicle (If the evacuation vehicle must pick up from more than one location).
2	Radio frequency, call sign, and suffix	Radio frequency at the pickup site, it is not a a relay frequency. The call sign (and suffix if used) of the person to be contacted at the pickup site may be transmitted in the clear.	From the automated net control device or other approved means.	Radio transmission operator	Required so that evacuation vehicle can contact requesting unit while en route (obtain additional information or changes in situation or directions).
3[1]	Number of patients by precedence	If two or more categories must be reported in the same request, insert the word “BREAK” between each category.	From patient evaluations.	Medic or senior present.	Required by unit controlling vehicles to assist in prioritizing missions.

Table 8-1. Applicable Information Needed for a MEDEVAC. (Continued).

Line	Item	Explanation	Where and How Obtained	Who Typically Provides	Reason
4[1,2]	Special equipment required.	Report only applicable information.	From patient or situation evaluation.	Medic or senior present.	Required so that the unit has the appropriate number of evacuation vehicles before the mission starts.
5[1]	Number of patients by type.	Report only applicable information, if requesting medical evacuation for both types, insert the word "BREAK" between each type.	From evaluation of patients.	Medic or senior person present.	Required so that the appropriate number of evacuation vehicles may be dispatched to the pickup site. They should be configured to carry the required patients.
6[1]	Security of pickup site (wartime)	Report only applicable information using brevity codes.	From evaluation of situation.	Unit leader	Required to assist the evacuation crew in assessing the situation and determining if assistance is required. More definitive guidance can be provided to the evacuation vehicle while it is en route (specific location of enemy to assist an aircraft in planning its approach).
	Number and type of wound, injury, or illness (peacetime)	Specific information regarding patient wounds by type (gunshot or shrapnel). Report serious bleeding, along with patient's blood type, if known.	From evaluation of patients	Medic or senior person present	Required to assist the evacuation personnel in determining treatment and special equipment needed.
7[1]	Method of marking pickup site	Report only applicable information using brevity codes	Based on situation and availability of materials	Medic or senior person present.	Required to assist the evacuation crew in identifying the specific location of the pickup. The color of the panel or smoke should not be transmitted until evacuation vehicles contact the unit (just before its arrival). For security, the crew should identify the color and the unit verifies it.
8[1]	Patient nationality and status	Report only applicable information using brevity codes.	From evacuation platform	Medic or senior person present	Required to assist in planning for destination facilities and need for guards. Unit requesting support should ensure that there is an English-speaking representative at the pickup site.
9[1, 3]	CBRN contamination (wartime)	Report only applicable information using brevity codes.	From situation.	Medic or senior person present.	Required to assist in planning for the mission. (Determine which evacuation vehicle best accomplishes the mission and the time it takes to accomplish the mission.
	Terrain description (peacetime)	Includes details of terrain features in and around the proposed landing site. If possible, describe relationship of site to prominent terrain feature.	From area survey	Personnel present	Required to allow evacuation personnel to assess route or avenue of approach into area. Of particular importance if hoist operation is required.

NOTE
1. Use brevity codes for lines 3, 4, 5, 6, 7, 8, and 9 that are found on graphic training aid 08-01-004
2. Additional supplies can be requested in line 4, such as a replacement combat lifesaver bag or other medical supplies
3. MEDEVAC request line 9, "Chemical, Biological, Radiological, and Nuclear" is only included when contamination exists

CHAPTER 9.
DENTAL SERVICE SUPPORT

The dental battalion, within the MLG, is organized and equipped to provide a range of dental support to the MEF. In garrison, the dental battalion provides comprehensive care for the operating forces to assist the MTF in maintaining optimal dental readiness and health for deployable units. While deployed, dental service support detachments return dental casualties to duty, and sustaining dental readiness for operational forces. Based on mission requirements, dental service support uses flexible, lightweight, and expeditionary dental equipment and task-organized dental detachments to support deployed unit dental care requirements.

TENETS

Dental service support offers substantial operational dental support with particular attention to prevention, return to duty, scalability, and forward care.

Prevention

Taking preventive measures to reduce disease and injury is the most resource-efficient means individuals can use to maintain good dental health. Dental emergencies are reduced when individuals receive appropriate treatment and continue good individual oral hygiene.

Return to Duty

The primary objective of operational dentistry is to rapidly treat dental needs and return personnel to their unit without degrading mission performance.

Scalable Dental Support

Dental battalion has command and control of all dental personnel in garrison and deploys scalable task-organized components providing dental support to any size MAGTF.

Enhanced Forward Care

Enhanced forward care reduces time and resources required to evacuate an individual for dental care. Dental section detachments provide support as far forward as required. Each ADAL contains a subassembly dental unit that has two portable, dental lightweight load-carrying equipment backpacks to provide emergency dental care. Refer to Appendix A for information on ADAL.

MARINE CORPS DENTISTRY

The primary mission is to provide dental support and optimize dental health of Marine forces in an operational environment. Dental detachments provide emergency dental care, early treatment of severe oral and maxillofacial injuries, and, when the mission allows, provide essential non-emergency care to include—

- Providing dental treatment as far forward as required to eliminate or reduce the effects of dental disease and injury on mission accomplishment.
- Preventing oral disease.
- Promoting dental health.

The secondary mission is to augment medical personnel. Dental officers assist in planning and deploying—

- Dental assets.
- Triage.
- Patient stabilization.
- Wound care.
- Forensic identification.

Corpsmen assist with—

- Triage.
- Patient stabilization.
- Wound care.
- Patient care.
- Dental forensic identification.
- Central sterilization and other ancillary duties relating to their Navy enlisted classifications.

ORGANIZATION OF FIELD DENTAL SUPPORT

Each dental battalion commander has additional duties as the MEF and MLG dental officer. As special staff officers, they advise the MEF and MLG commanders on all professional, administrative, and personnel matters relating to dental support. Also, they review OPORDs and OPLANs making recommendations on employing available dental assets, ensuring optimum use.

The field dental care system maintains dental readiness for deployed forces by preventing and treating dental disease and injury. Dental support is based on a task-organized and flexible structure that responds to rapidly changing conditions. This task-organized support is based on—

- Size of unit supported.
- Deployment duration.
- Mission type (e.g., stabilization activities, humanitarian assistance, armed conflict).
- Other dental support requirements.

Consistent with the tactical situation, the spectrum of dental care provided ranges from expedient emergency care to the full range of essential nonemergency care.

Dental Platoon-Ground Unit

The dental platoon-ground unit consists of six dental officers, nine Corpsmen, and six ADALs. This unit is the dental component of the LCE within a MEB. Typically, assigned to a surgical company, the dental platoon-ground unit can effectively function attached to another unit organic to the LCE. The LCE exercises operational control (OPCON) over the dental platoon-ground unit, and it is responsible for logistics and security support.

Dental Platoon-Air Unit

The dental platoon-air unit consists of four wing detachments. Each wing detachment has one dental officer, two Corpsmen, and one ADAL. This unit is attached to the MWSS and provides dental support to personnel assigned to the ACE. The ACE exercises OPCON over the dental platoon-air and is responsible for logistics and security support.

One dental platoon-ground unit combined with one dental platoon-air unit supports a MEB-level force and provides emergency and essential non-emergency dental support to approximately 8,000 to 12,000 personnel using ADALs, with enough supplies to support a defined stream of patients for one month (estimated at 1,700 dental casualties).

Dental Section

The smallest dental support module is a dental section, which consists of one dental officer, one Corpsman, and one ADAL. The dental section is the dental component of the LCE within a MAGTF. The LCE exercises OPCON over the dental section and is responsible for all logistics and security support. The dental section provides emergency and essential non-emergency dental support to approximately 2,200 personnel using the ADAL to support a defined stream of patients for one month (estimated at 175 dental casualties).

Field Dentistry

The primary objective of field dentistry is to provide dental treatment to an individual within the limitations of the tactical situation and rapidly return them to duty. Treatment can range from temporary symptomatic relief to more definitive dental care. In all cases, the dentist should use the

most effective treatment in a single sitting to reduce chances of return visits and lost duty time. This requirement places a great emphasis on the professional judgment of the practitioner and a need to reconcile patient needs with the tactical situation.

Field dentistry employment requires the same fundamental skill-set and standards of practice as a garrison clinic. Field dentistry has limitations, such as equipment shortages and tactical events that require flexibility, innovation, and expediency from the dentist and technician.

Dental patients sometimes require evacuation to higher levels of care. An individual can require emergency treatment and expeditious return to duty with subsequent referral to a higher-level of care when the tactical situation permits. The patient's condition and clinical judgment dictate when to evacuate, return to duty, or when a referral is needed.

Evacuation

Evacuation is the emergency transfer of a patient from a lower to a higher role of care using available assets and established evacuation procedures. This assumes a patient cannot perform their mission. Individuals designated not fit for duty or who require pharmaceutical regimens that impair performance should not be returned to duty.

Referral

A referral is the nonemergency transfer of a patient from an MTF or dental treatment facility (DTF) for follow-up treatment when the tactical situation permits.

FIELD DENTAL EQUIPMENT

Marine Corps expeditionary dental systems are materiel sets designated by ADAL 662 (see Appendix A). This ADAL consists of dental expeditionary field equipment, instruments, consumables, and a dental unit 2 (emergency equipment kit).

Every dental officer assigned to a deployed platform is assigned ADAL 662. This equipment represents the latest in dental technology and is lightweight, compact, highly mobile, rugged, and has limited power demand. In addition to emergency dental care, it provides essential non-emergency restorative endodontic, periodontal, surgical, and preventive care capabilities. The ADAL 662 is the main equipment block that has—

- An operating and treatment unit.
- A field dental chair.
- Dental hand pieces.
- Operator and assistant stools.
- Assorted hand instruments and equipment.
- An x-ray unit.
- A sterilizer.

The ADAL provides a highly mobile capability to deliver limited emergency dental care and contains an initial supply of consumables to treat 34 patients for 30 days.

Dental unit 2 is a subassembly of the ADAL that contains basic equipment and consumables to provide emergency dental care for a limited number of dental conditions and patients. This emergency dental kit is contained in two bags and contains the minimum instruments and materials required for simple extractions and expedient temporary restorations resulting from trauma or acute dental disease. The dental unit 2 is intended for use when the tactical situation precludes employing the complete ADAL. For planning purposes, the dental unit 2 is configured to provide emergency care to 20 patients for seven days.

Dental materiel sets are configured to the level of dental care they are expected to support. Logistic concerns (i.e., weight, cube, power requirements, and lift support) are important configuration considerations in forward battlespace patient care, and a lesser consideration for units employed farther back in the rear. Standardization of dental materiel sets is consistent with Marine Corps policy and Class VIII resupply requirements.

PATIENT DENTAL CARE

Once the field DTF is established, patient care operations are accomplished in a manner similar to that of garrison DTFs; however, environmental and tactical situations could influence whether definitive or temporary emergency treatment can be provided. The objective is to return patients to duty.

Dental treatment facilities use standing operating procedures that have been developed by Defense Health Agency (DHA), parent MTF, and other cognizant higher authority. These procedures establish policy on such matters as streaming systems for patients, dental care responsibilities, equipment operation and maintenance, and safety directives.

Deployment Log

A deployment log provides valuable information for use in unit after action reports and can help validate manning, ADAL configuration, and training requirements. Deployed dental service support detachments record pertinent deployment information to include the following:

- Deployment start and end dates.
- Name of deployed unit.
- Number of personnel in the unit.
- Number of patient evacuations or days lost due to dental disease or injury.
- Patient information, including name and rank.
- Date and time of visits.
- Reason for the visits to include—
  - Diagnosis.
  - Treatment rendered.

  - Whether it was emergency or nonemergency care.
  - Whether the treatment was for DNBI or battle injury.

- Daily non-emergency information to include—
  - Equipment or supply problems.
  - Medical combat skills data (e.g., triage, wound management, forensics, combat stress).
  - Other data deemed important for that deployment.

Patient Dental Record

Patient dental records are deployed with the unit when circumstances permit and are maintained by the dental service support detachment. Extensive operations can make records control difficult and can result in many lost records. For such operations, if time and resources permit, dental battalions can deploy summary dental records instead of complete dental treatment records.

A summary dental record consists of duplicates of the most recent health questionnaire, dental treatment entries from the last dental exam, and the most recent bitewing and pantographic radiographs. The types and number of summary dental records used is determined by the dental battalion commander.

If a patient without a dental treatment record is treated, a temporary record is created and maintained by the dental service support detachment. This temporary record consists of a health questionnaire, consent form, and a Standard Form EZ 603-A, *Dental Continuation*. The temporary record is incorporated into the patient's permanent dental treatment record when it becomes available.

Unit After Action Report

When the exercise or deployment is complete, a unit after action report is prepared using the DTF pertinent patient treatment and deployment log information. The report is submitted through the chain of command and serves as the primary source of information on the dental care provided to the supported unit. Additionally, information from this report can lead to improvements in dental care delivery to deployed units.

PREVENTIVE DENTISTRY

Oral health, as evident in the absence of dental disease, is the ultimate goal in dentistry. Dental disease increases under deployment conditions: stress, exhaustion, inadequate nutrition, and poor oral hygiene measures. Dental healthcare providers use a range of treatment and preventive programs to eliminate oral conditions that decrease performance and increase absence from duty. Before deployment, deploying personnel are provided with priority appointments to treat urgent dental conditions. Dental prophylaxis and individual oral hygiene instruction are provided to ensure every Marine has the knowledge and skills to maintain oral health. During deployment, dental service support provides ongoing dental treatment and preventive dentistry programs to identify and treat personnel who might be at risk for dental disease.

Field Oral Hygiene Instruction

Deployable personnel should receive additional oral hygiene instruction specific to a field environment. Field oral hygiene information includes the following:

- Importance of oral hygiene to combat fitness.
- Use of fluoridated toothpaste.
- Alternative dental-hygiene methods when there are no garrison-type facilities.
- Procedures on how to seek dental services while deployed.

Infection Control

Infection control is a critical requirement in a field environment. The demands for proper infection control are often greater than in garrison due to undesirable environmental conditions. Specific guidance found in DHA-PM 6025.13, Volume 2, *Patient Safety-Infection Prevention & Control,* can be adapted to field environment.

Infectious and Medical Waste Management

Proper handling and disposal of waste is required to protect the force, environment, and to fulfill agreements with the host nation. The unit generating waste ensures proper collection and disposal. Assistance is available through the supporting engineer unit, preventive medicine team, or local MTF. Medical waste, such as blood, blood products, and surgical waste, are produced during dental procedures. Medical waste can be sterilized and disposed of along with general waste. Fluid wastes collected through oral evacuation apparatus should be disposed of along with human wastes. Contaminated needles and other sharp items requiring special handling should be stored in clearly marked, puncture-proof containers with a tight-fitting lid until disposal. Large quantities of medical waste should be collected in impervious containers if available, or double plastic bags as an alternative. Containers must be clearly marked with a universal biological hazard symbol or labeled consistent with the unit standing operating procedure.

Hazardous Waste

Dental service support typically generates small quantities of hazardous waste in a field environment and should be disposed of in a manner that minimizes environmental impact. Engineer personnel and PVNTMED can advise dental service support on proper waste disposal.

ALTERNATE DENTAL SERVICE SUPPORT ROLES

In addition to providing dental services to deployed units, dental service support can provide services to support an OPLAN. Dental care is provided to operating forces and other designated beneficiaries (e.g., civilian, indigenous population, detainee, enemy prisoner of war) in theater. Priority for treatment is based on command directives, patient's dental condition, available resources, negotiated agreements, and applicable laws and conventions.

Dental civic action projects are generally associated with host-nation assistance, but they can support more conventional conflicts, such as a civil affairs operation.

Dental augments can assist HSS personnel in triage, care, and evacuation of casualties during mass-casualty situations. Postmortem and forensic identification of casualty remains is not doctrinally an HSS mission; however, dental personnel are uniquely qualified to support such tasks in the identification process.

Military animals, particularly working dogs used in theater, could have dental injuries (i.e., fractured teeth). Dental officers can assist in treating these injuries.

DENTAL SUPPORT OF MEDICAL TREATMENT FACILITIES DURING A MASS-CASUALTY EVENT

Collective use of dental service support in mass-casualty situations can be advantageous if a dental unit is collocated with a surgical company or surgical platoon. Limited medical resources require judicious use of dental assets when preparing for mass-casualty situations. If additional treatment space is required, use of adjacent field DTF is incorporated. The dental service support table of equipment supports medical augmentation roles, particularly when treatment provided in the field DTF is limited to minimal-category casualties.

Shelter

The field DTF provides a climate-controlled shelter suitable for patient treatment. This benefit significantly increases when the field DTF is collocated with the surgical company or platoon.

Dental Equipment Sets

The ADAL contains materiel and instruments (e.g., anesthetic, scalpels, forceps, hemostats, suture material, wire ligature), which are used to perform minor surgical procedures. A field DTFs is equipped with simple medical and resuscitative equipment that provides basic cardiopulmonary resuscitation and treatment for other common medical emergencies.

Planning and Coordination

Upon collocating with an MTF, the field DTF commander should coordinate with the surgical company commander on a plan to use the field DTF's resources should the surgical company become overwhelmed. Once a plan is established, it should be rehearsed at the earliest opportunity.

CHAPTER 10.
CHEMICAL, BIOLOGICAL, RADIOLOGICAL, AND NUCLEAR DEFENSE

Military personnel must be prepared to operate in a contaminated environment. Additionally, HSS personnel must be prepared to provide patient care in a CBRN environment. Decontaminating patients and transportation assets causes evacuation delays, making first aid and patient care even more critical. Because staffing HSS units is based on conventional warfare requirements, these units are challenged to provide effective HSS in CBRN environments. All CBRN actions cause high casualty rates, materiel losses, obstacles to maneuver, and contamination. Mission-oriented protective posture (referred to as MOPP) levels 3 and 4 result in body heat buildup, reduced mobility, and degraded senses (e.g., sight, touch, hearing), ultimately reducing unit effectiveness.

Contamination is a major problem in providing HSS in a CBRN environment. To decrease potential for CBRN contamination, commanders can use alarm and detection equipment, unit dispersion, overhead shelters, shielding materials, protective covers, collective protection shelters, and chemical agent resistant coatings. On a contaminated battlefield, the focus is on keeping Service members mission capable. Effective and efficient triage, emergency treatment, decontamination, and contamination control save lives, assures prompt evacuation, and increases the return-to-duty rate. See MCRP 3-40A.6, *Multi-Service Tactics, Techniques, and Procedures for Health Service Support in a Chemical, Biological, Radiological, and Nuclear Environment.*

PREPARATIONS BEFORE A CHEMICAL, BIOLOGICAL, RADIOLOGICAL, AND NUCLEAR ATTACK

Before a CBRN attack, HSS personnel must train to survive the attack, function in the environment, and to effectively care for CBRN casualties. Health service support personnel must keep their immunizations current, use available preventive treatment against suspected agents, pretreat for suspected agents, and have antidotes and essential Class VIII supplies readily available for potential chemical or biological agents.

The best defense for HSS personnel is protecting themselves, their patients, Class VIII supplies, and equipment by following procedures to avoid contamination. Also, HSS personnel must ensure that stored Class VIII supplies and equipment are in protected areas or storage containers with covers secured. One method to protect supplies and equipment is to keep them in their shipping containers until needed. When time permits, upon receiving warnings that a CBRN attack is imminent or downwind hazard exists, HSS personnel should seek protected areas such as basements, culverts, and ravines for themselves and their patients.

SHELTER DURING A CHEMICAL, BIOLOGICAL, RADIOLOGICAL, AND NUCLEAR ATTACK

During a CBRN attack HSS personnel and their patients should remain in the best available protected areas and take positions within a shelter, away from windows and other openings, and move out of these positions only when notified it is safe to do so. When there is no higher authority, HSS personnel should use caution in their movements and assume all casualties entering a medical unit after a CBRN attack are contaminated unless certified as non-contaminated.

RESPONSE AFTER A CHEMICAL, BIOLOGICAL, RADIOLOGICAL, AND NUCLEAR ATTACK

After a CBRN attack, HSS personnel must survey their equipment to determine the extent of damage and their ability to continue the mission. All patients receiving treatment must be checked for CBRN contamination. Also, HSS personnel should expect disorientation in patients and unit personnel. Unless life-, limb-, or eyesight-threatening conditions exist, patients are decontaminated before treatment to reduce hazards to HSS personnel. Patients requiring treatment before decontamination are treated in the HSS decontamination station area. See MCRP 3.40A.1 *Multi-Service Tactics, Techniques, and Procedures for Treatment of Chemical Warfare Agent Casualties and Conventional Military Chemical Injuries,* for more information on how to medically treat patients.

> NOTE: Cardiac arrest in a CBRN environment should immediately be a black tag. Massive hemorrhage and respiratory distress are conditions that might require treatment in the decontamination area.

When evaluating patients, HSS personnel must be vigilant and consider the following in their evaluation of patients:

- Nuclear-induced injuries are immediately observable and typically include thermal burns or blast injuries.
- Radiation-induced injuries might not be observable until a few hours or days after the attack.
- Chemically induced injuries are immediately observable when individuals are exposed to the agent; however, blister-agent patients can show signs of exposure immediately or up to 14 days later.
- Biologically induced injuries or illnesses might not become apparent for hours to days after exposure.

NUCLEAR ENVIRONMENT

In a nuclear environment, the HSS unit must be prepared to continue its mission in well-constructed, protective shelters or vehicles—

- Well-constructed fighting positions with overhead cover and expedient shelters (e.g., reinforced concrete structures, basements, railroad tunnels, trenches) provide good protection from nuclear attacks.

- Armored vehicles provide protection against nuclear weapon blast and radiation effects. Casualties generated in a nuclear attack will likely suffer multiple injuries (e.g., combinations of blast, thermal, and radiation injuries) that complicate HSS. The three categories of nuclear radiation casualties are—
  - Irradiated Casualties. The irradiated casualty has been exposed to ionizing radiation but is not contaminated. These casualties are not radioactive and pose no radiation threat to medical care providers. Casualties who have suffered exposure to initial nuclear radiation are also in this category.
  - Externally Contaminated Casualties. The externally contaminated casualty has radioactive dust and debris on clothing, skin, or hair. This presents a problem for the MTF similar to the lice-infested patient arriving at a peacetime MTF, in that it can present a threat to HSS personnel. The externally contaminated casualty is decontaminated at the earliest opportunity. Lifesaving care is always rendered before decontamination.
  - Internally Contaminated Casualties. The internally contaminated casualty has ingested or inhaled radioactive materials, or radioactive material has entered the body through an open wound. The radioactive material continues to irradiate the casualty internally until radioactive decay and biological elimination remove the radioactive isotope. Attending HSS personnel are shielded, to some degree, by the patient's body. Inhaling, ingesting, or injecting radioactive material sufficient to present a threat to medical care providers is highly unlikely.

RADIOLOGICAL ENVIRONMENT

Decontaminating patients in a radiological environment is performed in a similar manner to that of chemical decontamination. Typically, radiation-induced injuries are observed within a few hours or days after the attack. The initial management of a casualty contaminated by radiological agents is to perform all immediate life-, limb-, or eyesight-saving actions without regard to contamination. See MCRP 3-40A.2, *Multi-Service Tactics, Techniques, and Procedures for Treatment of Nuclear and Radiological Casualties,* for more information.

BIOLOGICAL ENVIRONMENT

A biological attack can be difficult to recognize because, it often does not have an immediate effect on exposed personnel. Health service support personnel must monitor for biological warfare indicators, to include the following:

- An increase in disease incidences or fatality rates.
- A sudden presentation of an exotic disease.
- Other sequential epidemiological events, particularly when presented in lines of communications.

Passive defensive measures (e.g., immunizations, good personal hygiene, physical conditioning, insect repellents, protective masks, good sanitation practices) lessen the effects of most biological intrusions.

Surgical company commanders must enforce contamination control to prevent injury to HSS personnel and to preserve the surgical company's integrity. Incoming patients and equipment must be examined for contamination. Ventilation systems in medical treatment facilities without collective protection shelters must be turned off when biological or chemical exposure is imminent.

Decontamination of most biologically contaminated patients and equipment can be accomplished with soap and water. Patients exposed to a biological agent can require observation and evaluation to determine whether medication, isolation, or treatment is needed. See MCRP 3-40A.3, *Multi-Service Tactics, Techniques, and Procedures for Treatment of Biological Warfare Agent Casualties,* for more information.

CHEMICAL ENVIRONMENT

Handling chemically contaminated patients is challenging for HSS units. The vapor hazard associated with contaminated patients can require HSS personnel to remain at mission-oriented protective posture level four for a time; therefore, HSS personnel must locate clean areas for surgical companies to provide treatment to patients. The surgical company should operate in a contaminated environment only until HSS personnel have the time and means to move the company to a clean area.

MEDICAL EVACUATION

In a CBRN environment, unit commanders must consider what evacuation assets are committed to the contaminated area. If operating in a contaminated area, most medical evacuation assets must operate there; however, efforts should be made to keep some ambulances from becoming contaminated.

There are three basic modes to evacuate casualties: personnel, ground vehicles, and aircraft. Commanders must recognize the constraints CBRN warfare places on CASEVAC during operations and then plan and train to overcome these deficiencies.

PERSONNEL CONSIDERATIONS

Medical treatment requirements increase when operating in a CBRN contaminated environment. As a result, replacing HSS personnel might be needed. Following a CBRN attack, plans must include efforts to conserve available HSS personnel and resources. Generally, HSS personnel provide emergency medical treatment, advanced trauma management, and more definitive treatment as time and resources permit. To provide definitive care, personnel must be able to wear long sleeves. Non-HSS personnel conduct search and rescue activities for injured or wounded individuals; they can also provide immediate first aid and decontamination.

CHAPTER 11.
COMBAT CASUALTY REPORTING

The G-1/S-1 section is responsible for submitting prompt, accurate, and complete casualty reports to higher headquarters. The Defense Casualty Information Processing System is a single-standard system supporting uniform procedures, accounting, and accurate reporting of casualties; ensuring support to family members; benefits tracking; coordinating mortuary affairs; and returning personal effects and human remains. During combat operations, casualty tracking information can be obtained from the role 3 level of care using the US Transportation Command Regulating and Command and Control Evacuation System (TRAC2ES). This web-based system facilitates responsive communications essential to patient movement and is used to maintain and protect patient privacy and troop strength information. It replaced the defense medical regulating information system, Automated Patient Evacuation System, and theater Army medical management information system medical regulating module. Also, TRAC2ES provides global support throughout the operational medical continuum: fixed and deployable MTFs, global movement, and TPMRCs. Additionally, TRAC2ES links the global patient movement requirements center and the TPMRCs. Reporting personnel must be familiar with casualty reporting procedures. Marine Corps Order (MCO) 3040.4, *Marine Corps Casualty Assistance Program*, and other local directives in the 3040 series addresses casualty reporting. The system described in these directives is one in which personnel losses, regardless of cause, are reported through the chain of command to a central location.

TACTICAL COMBAT CASUALTY CARE CARD

Hospital Corpsmen at the unit level are usually the first to record written information about a casualty using the Department of Defense Form (DD Form 1380), a tactical combat casualty care card depicted in Figure 11-1 and Figure 11-2. It is a casualty tag printed in a set that provides a hardened original copy for attaching to the casualty, whether wounded or deceased. The HM, who provided initial treatment to the casualty retains a carbon copy. The HM must render initial casualty treatment promptly and deliver copies of TCCC cards to the unit commander or their representative. Unit commanders need these documents for casualty reporting responsibilities through their chain of command, MCO 3040.4 requires.

When initial casualty treatment is rendered at point of injury, a BAS, or other level of care, a TCCC card is initiated, and a copy is forwarded through the facility's chain of command. Regarding whether a casualty is received with or without a TCCC card, the receiving facility compiles a casualty list and, then they forward the list through their chain of command. A casualty list is prepared at least once a day, and it should show each casualty received, held, evacuated, or returned to duty during the reporting time.

Minimum information required on each casualty includes the following:

- Name.
- DoD identification number.
- Rank.
- Unit.
- Brief description of wound, injury, or disease.
- Actual or expected disposition.

Planning, training, and execution of operations should include instructions in casualty reporting procedures for all MAGTF elements. The TCCC card facilitates patient accountability, provides a means to document a casualty's condition, and the treatment HSS personnel provided. The TCCC card is an emergency medical tag used for casualties when they are initially treated, in the field or field medical facility. Completing a TCCC card initiates an important medical record that follows the casualty through the levels of care. This card is an administrative document that contains the most dependable information a commanding officer has regarding a casualty in the unit. North Atlantic Treaty Organization allies, by formal agreement, use TCCC cards containing the same essential information as recorded on the cards filled out by US personnel. Medical personnel must be trained on how to prepare and fill-in a TCCC card. The following general guidelines apply:

- Tag casualties with a TCCC card when providing initial treatment.
- Prepare each TCCC card and record accurate medications and treatments, and the time they were administered.
- Ensure the TCCC card remains attached to the casualty until reaching their ultimate destination in the chain of evacuation or until a clinical record is established.
- Record treatment administered, by different levels of medical care on the previously attached TCCC card.
- Prepare another card if there is no space left on the original card. If all space on the original card has been utilized, an additional card is prepared and attached to the casualty. The original TCCC card(s) is not removed when an additional card is attached.
- Establish a clinical record for the casualty; the TCCC card becomes part of the clinical record.
- Transcribe the original TCCC-card information onto a clean form if the patient requires decontamination.

CUI (when filled in)

Prescribed by: DoDI 6040.45, DoDD 6490.02E, DHA-PI 6040.01 *(Updated 20250721)*

TACTICAL COMBAT CASUALTY CARE (TCCC) CARD

BATTLE ROSTER #: _____

EVAC: ☐ **Urgent** ☐ **Priority** ☐ **Routine**

NAME *(Last, First)*: _____ **LAST 4:** _____

SEX: ☐ **M** ☐ **F** **DATE** *(DD-MMM-YY)*: _____ **TIME:** _____

SERVICE: _____ **UNIT:** _____ **ALLERGIES:** _____

Mechanism of Injury: *(**X** all that apply)*

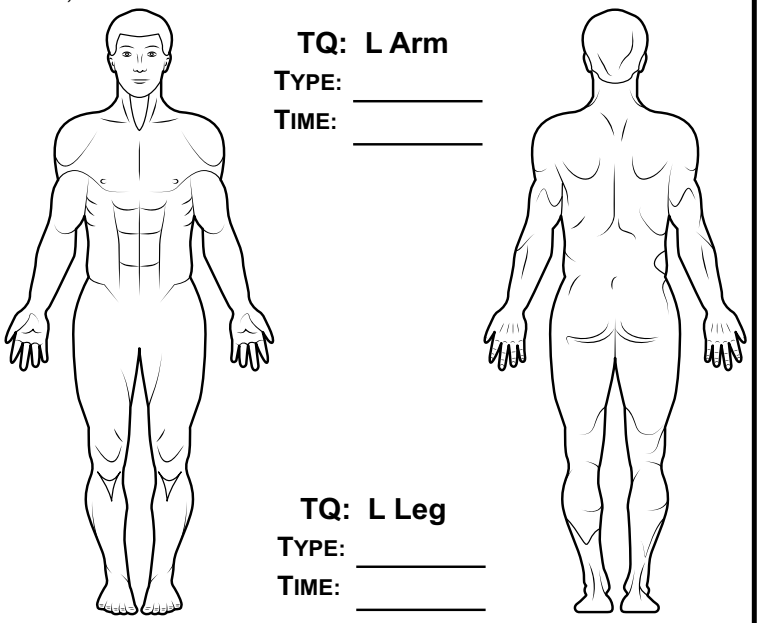
☐ **Artillery** ☐ **Blunt** ☐ **Burn** ☐ **Fall** ☐ **Grenade** ☐ **GSW** ☐ **IED**

☐ **Landmine** ☐ **MVC** ☐ **RPG** ☐ **Other:** _____

Injury: *(Mark injuries with an **X**)*

TQ: R Arm
TYPE: _____
TIME: _____

TQ: L Arm
TYPE: _____
TIME: _____



TQ: R Leg
TYPE: _____
TIME: _____

TQ: L Leg
TYPE: _____
TIME: _____

Signs & Symptoms: *(Fill in the blank)*

Time				
Pulse (Rate & Location)				
Blood Pressure	/	/	/	/
Respiratory Rate				
Pulse Ox % O2 Sat				
AVPU				
Pain Scale (0-10)				

DD FORM 1380, JUL 2025 **TCCC CARD**

CUI (when filled in)

Controlled by: DHA
CUI Category: PRVCY
Distribution/Dissemination Control: FEDCON
POC: dha.ncr.bus-ops.mbx.dhs-formsmanagement@health.mil

Figure 11-1. Tactical Combat Casualty Care Card (Front).

CUI (when filled in)

(Updated 20250721)

BATTLE ROSTER #: _____

EVAC: ☐ **Urgent** ☐ **Priority** ☐ **Routine**

Treatments: *(X all that apply, and fill in the blank)* ***Type***

C: TQ- ☐ **Extremity** ☐ **Junctional** ☐ **Truncal** _____

Dressing- ☐ **Hemostatic** ☐ **Pressure** ☐ **Other** _____

A: ☐ **Intact** ☐ **NPA** ☐ **CRIC** ☐ **ET-Tube** ☐ **SGA** _____

B: ☐ **O2** ☐ **Needle-D** ☐ **Chest-Tube** ☐ **Chest-Seal** _____

C:	***Name***	***Volume***	***Route***	***Time***
Fluid				
Blood Product				

MEDS:	***Name***	***Dose***	***Route***	***Time***
Analgesic *(e.g., Ketamine, Fentanyl, Morphine)*				
Antibiotic *(e.g., Moxifloxacin, Ertapenem)*				
Other *(e.g., TXA)*				

OTHER: ☐ **Combat-Pill-Pack** ☐ **Eye-Shield (** ☐ **R** ☐ **L)** ☐ **Splint**

☐ **Hypothermia-Prevention** **Type:** _____

NOTES:

FIRST RESPONDER

NAME *(Last, First):* _____ **LAST 4:** _____

DD FORM 1380, JUL 2025 **TCCC CARD**

CUI (when filled in)

Figure 11-2. Tactical Combat Casualty Care Card (Back).

IDENTIFICATION TAGS

Identification tags are essential to casualty identification and data recording. Each member is issued a chain and two tags to be worn at all times. The tags contain the member's name, DoD identification number, blood type, Service component, religion or sect, and protective mask size.

The member and unit are jointly responsible for ensuring that information is current and accurate. Both identification tags remain with a casualty at all times (MCRP 3-40G.3 *Multi-Service Tactics, Techniques, and Procedures for Mortuary Affairs in Theaters of Operations*, provides detailed procedures for handling).

CHAPTER 12.
TRAINING

The primary goal for military training is to achieve and maintain the highest level of preparation possible, thereby, developing confidence among personnel and ensuring a high state of readiness. Training enhances combat readiness, and it is equally important for HSS personnel. This is particularly true given the reduced peacetime staffing of HSS units and difficulty of obtaining realistic hands-on trauma training. The end result is, when mobilizing, some medical personnel assigned to deploying HSS units are augmentees with varying field medical skill-set and experience. Medical department personnel must, to the extent possible, be involved in each phase of training and every exercise before deployment.

HEALTH SERVICE SUPPORT GOALS

Staffing and training constraints require efforts be directed toward developing a nucleus of personnel highly skilled in techniques of establishing and effectively operating HSS units in the field. This nucleus, when mobilized, becomes the core of each field medical unit and is tasked with receiving augmentees and shaping them into effective health delivery teams. It is not possible to lay out a training program that applies to every HSSD due to geographic, climatic, and mission variations. Commanders of HSS units and other key medical department personnel must structure training based on available personnel, achievable goals, and limiting factors.

Increase Individual Readiness

To the maximum degree funds and scheduling permits, efforts to increase and maintain readiness should extend beyond currently assigned personnel and incorporate augmentees into training evolutions. Surgeons and other key staff should encourage commanders to involve identified augmentation personnel in exercises when possible. In addition to enhancing individual training, this practice aids in fostering unit identity and cohesiveness amongst its members.

Standardized Methods and Procedures

Methods and procedures must be standardized before mobilization. Augmentees must be familiar with and able to depend on well-developed standing operating procedures, including desktop procedures, and procedural manuals.

TRAINING COURSES

The following training courses are essential in developing effective, efficient, and successful HSS personnel. Course quota management and control are under the cognizance of Bureau of Medicine and Surgery.

Field Medical Service Technician Course

This course provides the fundamental knowledge and skills of TCCC to include care under fire, tactical field care, preparing for tactical evacuation, EFWBT, and prolonged casualty care. Emphasis is on identifying, treating, and evacuating combat trauma casualties in accordance with standards set forth by DHA and Joint Trauma System. Also included are military skills necessary to function and survive in a combat environment. Training includes the establishment and functions of a unit aid station, field sanitation and preventive medicine, medicine in a field environment, and CBRN defense medical requirements. Additionally, an understanding of general military subjects, such as individual and small-unit tactics, military drill, weapons familiarization (i.e., field stripping, cleaning, assembling and firing certain weapons), and physical training and conditioning. Upon graduation, students are awarded the Navy enlisted classification of field medial service technician. This course is required for all enlisted medical personnel before assignment in their first Marine Corps command. The course is available at either of two Field Medical Training Battalions located at Camp Lejeune, North Carolina and Camp Pendleton, California. Students receive a course quota as part of the detailing process.

Field Medical Service Officer Course

This course trains medical department officers in skills essential for duty with the Marine Corps operating forces. The emphasis is on resource management to treat casualties in a combat environment. It includes competency in medical planning, BAS management, PVNTMED, and health care aspects during Marine Corps operations. Also, individuals taking this course gain an understanding in Marine Corps leadership and culture, HSS, administrative management, weapons familiarization to include cleaning, assembling and firing the Service pistol, and physical training or conditioning. The course is available at either of two Field Medical Training Battalions located at Camp Lejeune, North Carolina and Camp Pendleton, California.

Combat Casualty Care Course

Before reporting to a Marine Corps unit, each medical department officer who is a clinical provider (i.e., Medical Corps, Dental Corps, and Nurse Corps) can attend an instruction course in advanced combat life support. In combat support operations, non-physician health care providers can be required to assist medical officers in presurgical preparation and wound management. Training is available through the Defense Medical Readiness Training Institute, Fort Sam Houston, Texas and Naval Operational Medical Institute in Pensacola, Florida.

Tactical Combat Casualty Care Courses

The standardized TCCC curriculum developed by DHA replaces all Service first aid, self-aid, buddy care, and field trauma training. The curriculum, published by DHA for each of the four role-based training tiers, represents the minimum learning objectives for certification and ensures training standardization across Services. Additional topics could be added to meet Service, mission, platform, or unit-specific requirements. See DoDI 1322.24, *Medical Readiness Training,* and Chief of Naval Operation Instruction (OPNAVINST) 1500.86, T*actical Combat Casualty Care, Training* for more information on TCCC courses.

Sick Call Screener Course

Sick Call Screener Course consists of didactic classroom lectures, practical hands-on training in physical examination, physical diagnosis, and supervised clinical practicum. It may be necessary to complete this course over time, but training must not exceed 60 calendar days.

Joint EnRoute Care Course

The Joint Enroute Care Course provides concise, realistic, relevant, and current en route trauma transport team training to joint and coalition forces flight medics, registered nurses, physician assistants, and physicians conducting aeromedical operations, in rotary wing platforms, to optimize en route patient outcomes. The Joint Enroute Care Course is a two-phase course:

- Phase I. Mandatory distance learning modules covering aeromedical and aviation specific content.
- Phase II. A 12-day residence course with additional didactic content, extensive hands-on practical exercises, and culminating with a comprehensive graded written and practical examinations on equipment and critical care transport simulation.

Flight Medic Course

The Flight Medic Course (also referred to as FMC) provides selected medical enlisted personnel with knowledge and skills required to conduct CASEVAC, en route care, and MEDEVAC missions. Training includes patient assessment, basic and advanced lifesaving interventions, in-flight emergency procedures, and critical care transportation skills to stabilize and treat patients, independent of a medical officer, from rotary or tilt-rotor aircraft. Course includes skills and knowledge necessary to care for a patient up to 24 hours under a full spectrum, in the competition continuum environment, independent of a medical officer. Graduates will have the capability to identify and employ various aircraft systems, the “B Medical Kit”, conduct patient turnover, and perform radio communications.

Plans, Operations, and Medical Intelligence Course

The Plans, Operations, and Medical Intelligence Course is designed as a three-week resident training program that addresses strategies, concepts, and tools necessary for an officer and enlisted staff to develop into a plans, operations, and medical intelligence assignment. Topics include—

- Tactical, operational, and strategic levels of planning.
- Doctrinal publications, exercise planning, medical intelligence, and federal response system,
- Pertinent threat and capability briefs, and geographic and geo-political background briefs.
- Joint HSS assets.
- Armed Forces Blood Program.
- Logistics.
- Chain of command issues.
- Communication methods.
- Future initiatives.

Throughout the course, the class participates in a capstone project that culminates in the development and presentation of Annex Q (Medical Services) of an operations order, that is based upon a fictitious scenario mimicking real world events. The target audience is junior medical service corps officers in the health care administration, physician's assistant, environmental health, or industrial hygiene fields and senior enlisted personnel desiring to enter the plans, operations, and medical intelligence field.

Medical Regulators Course

This course provides students with knowledge and skills required to function as medical regulating and patient evacuation team members. This course provides concepts and principles on medical regulating, patient movement, operations, HSS assets, planning, and communications unique to Navy and Marine Corps, as well as the joint operating arena.

Joint Medical Operations Course (Basic and Advanced)

The Joint Medical Operations Course (Basic) is a five-day course focused on joint and combined operational medical planning from point of injury or illness to the appropriate level of care during military operations. This course familiarizes students with policy guidance and information relevant to Joint Staff publications. The Joint Medical Operations Course (Advanced) is a five-day training course consisting of planning activities associated with joint military operations by CCDRs and their subordinate joint force commanders in response to the competition continuum. Additionally, an in-depth discussion is conducted on the comprehensive system providing uniform policies and procedures for reporting on the Armed Forces ability to fight and meet the national military strategy.

Joint Medical Planning Tool

Joint Medical Planning Tool (JMPT) is a five-day course that provides hands-on training on the JMPT and MPTk. Through a series of exercises utilizing the crawl, walk, run method, students use the JMPT and MPTk to develop a model demonstrating the flow of patients from point of injury through definitive care, planning implementation, and logistics strategies for mission success. The JMPT is where casualty estimates come from, which is done at a higher-headquarters level, not the unit level. This highly complex process requires medical subject matter expert support and higher-headquarters approval for official casualty estimates to be determined and published (usually classified).

Amphibious Warfare Staff Planning Course

The Amphibious Warfare Staff Planning Course provides Navy and Marine Corps officers and senior enlisted with the knowledge and skills required to plan amphibious operations. This training focuses on tasks performed by officers and senior enlisted assigned to primary and special staff sections of the amphibious ready group (also referred to as ARG) and MEU.

Expeditionary Warfare School

The Expeditionary Warfare School is a 41-week resident, or distant learning non-resident school, that provides career-level professional military education and training to company grade Marine officers, and selected officers from other Services and countries. Upon graduation, students are prepared to lead, in billets of increased responsibility, within the complex and distributed Naval expeditionary environment.

Mountain Medicine and Cold-Weather Medicine

Prepares medical personnel assigned to the FMF, or those who may augment it, with advanced technical and field skills needed to support units in complex, compartmentalized, mountainous terrain at high to very high altitudes, and in cold-weather environments. This course is designed to bring students to a high standard of technical and medical proficiency in skills peculiar to these environments. The course covers mountain movement; bivouac routine; medical planning and leadership; prevention, diagnosis, and how to treat high-altitude and cold-weather illness and injury; and techniques to transport casualties through this challenging environment.

COMMANDER'S RESPONSIBILITIES

Commanders are responsible for ensuring all assigned personnel receive appropriate training, in military and technical subject areas, emergency medical training of nonmedical personnel, and continued training of medical department personnel in field medical practices and related military subjects. Commanders develop, conduct, and evaluate individual and collective HSS training based on training standards published, by Training and Education Command, in the NAVMC 3500.84B, *Health Services Support Training and Readiness Manual*. If standards are not published, commanders ensure training is based on doctrinal, tactical, and technical publications approved for Navy and Marine Corps use.

MEDICAL DEPARTMENT OFFICERS AND SENIOR ENLISTED

The division and wing surgeons maintain staff supervision over all medical training programs, including exercise planning and execution, for medical department personnel assigned to their respective subordinate commands. Within the MLG, the group surgeon and dental officer, with the G-3, exercises staff cognizance over all general medical training programs. Medical and dental battalion commanders are responsible for all battalion training programs, including internal planning and execution. The MLG HSSO exercises staff cognizance of MLG planning and exercises; all medical department officers and senior enlisted conduct and supervise HM's training.

TYPES OF TRAINING

Individual Training

Individual training can be conducted in a formal school or at the member's command. This training prepares individuals to perform specific tasks related to general military duties or assigned specialties. Medical department personnel who regularly perform their occupational specialty develop increased confidence and proficiency. Individual training can include first aid, cardiopulmonary resuscitation, and formal programs such as the Plans Operations Medical Intelligence course; Joint Medical Planners Course; and Medical Regulating Course.

Unit Training

Unit training prepares an individual to function as a cohesive element within a unit. Such elements can include teams, sections, platoons, companies, or MTF. Unit training for the FMF is typically conducted afloat or in a field environment and involves the entire organization, including assigned HSSEs. Unit training works best when conducted in a simulated combat environment. These exercises involve setting up facilities in the field and improve skill-sets by performing hands-on treatment on simulated casualties. Other field units, such as infantry battalions, regiments, combat support, and combat service support organizations conduct field training exercises involving HSS personnel organic to those units. Each operational unit is required to have two Marines trained as combat lifesavers for each Corpsman on the unit tables of organization.

Exercises

Training exercises provide a realistic environment, allowing HSS personnel to apply and refine their field medical skills and expand their proficiency in the following areas:

- Landing force organization and communications.
- HSS functions in the field.
- Deployment procedures, including combat loading of HSS equipment.
- Sanitation standards for shipboard and field environments.
- Ship-to-shore operations.
- CASEVAC and MEDEVAC.
- Mass-casualty training.
- HSS supply and resupply.
- Operations in severe environments.
- Problem solving in the amphibious objective area.

Chemical, Biological, Radiological, and Nuclear Defense Training

Readiness training for patient decontamination, patient care, and CBRN defense can be conducted at the individual or unit level. Training in medical procedures associated with CBRN casualties cannot be adequately addressed in on-the-job training and requires instructors specifically trained in the subject area. For more information on CBRN defense training requirements, see MCRP 3.40A.1; MCRP 3-40A.2; MCRP 3-40A.3; MCRP *Multi-Service Tactics, Techniques, and Procedures for Treatment of Biological Warfare Agent Casualties*; and MCRP 3-40A.6, *Multi-Service Tactics, Techniques, and Procedures for Health Service Support in a Chemical, Biological, Radiological, and Nuclear Environment.*

Preventive Medicine Training

Fleet Marine Forces' HSS personnel must receive instruction on how to recognize disease symptoms and environmental hazards for their specific area of operations. Emphasis should be placed on identifying environmental risk through OEHS activities, combined with personnel PVNTMED measures at all levels. Division, group, and wing surgeons should review contingency plans often, with an emphasis on identifying measures to promptly and effectively prevent disease and other health hazards. This information should be incorporated into all training programs for medical department personnel.

Logistics and Supply Training

The Marine Corps and Navy supply systems are sufficiently different to create confusion. Unit commanders with a health care mission must ensure Navy personnel are sufficiently trained in basic procedures to operate within the Marine Corps supply system. Marine Corps supply personnel in key positions are trained in procedures that enable them to provide medical supply support when deployed. Training should encompass interfacing with the SIMLM system also.

NON-HEALTH SERVICE SUPPORT PERSONNEL

Health service support personnel are responsible to train non-HSS personnel on subjects including TCCC, CLS, personal hygiene, field sanitation, and PVNTMED. All non-HSS personnel, including chaplains and religious program specialists, should receive extensive training in first aid procedures, self-aid, buddy aid, and personal decontamination. Personnel should have knowledge in specific personal protection and disease prevention topics as described in NAVMED P-5010-9, *Preventive Medicine for Ground Forces*. Additional information on availability and applicability of specific individual or unit HSS training can be found by addressing the Task Analyst, Training and Education Command or Director, Operational Readiness and Training Division, Bureau of Medicine and Surgery.

APPENDIX A.
AUTHORIZED MEDICAL AND DENTAL ALLOWANCE LISTS

Health service support AMALs and ADALs are arranged in a modular concept. They contain equipment and reusable materiel required to establish the basic function of the module (e.g., operating room). The supply module contains consumable materials designed to support the treatment function to designated casualties or to perform a specific task. An equipment module might be stored with its corresponding supply module. The medical logistics supply company in the MLG maintains and resupplies the AMALs and ADALs. Each AMAL with a consumable block has a ratio of one equipment set per two consumables sets (1:2); with the exception of FRSS, which has a 1:5 ratio. The AMALs or ADALs number and nomenclatures are described in Table A-1.

Table A-1. Authorized Medical and Dental Allowance Lists.

AMAL	Nomenclature
618–Lab Equipment	Equipment and reusable materiel to establish a laboratory capable of hematology, microbiology, urinalysis, collecting, and chemistry testing.
619–Lab Supply	Consumable supplies to perform hematology, microbiology, urinalysis, and chemistry testing for 100 patients.
627–X-Ray	Equipment, consumable supplies, and reusable materiel to establish 1 X-ray suite.
631–Shock Surgical and Triage Equipment	Equipment and reusable materiel to establish a basic shock trauma surgical team or triage supporting the receipt, resuscitation, sorting, and temporary holding of casualties.
632–Shock Surgical Team or Triage Supply	Consumable supplies required to receive, resuscitate, sort, and temporarily hold 50 casualties with major wounds.
633–Acute Care Ward Equipment	Equipment and reusable materiel to establish a 10-bed unit providing care for patients.
634–Acute Care Ward Supply	Consumable supplies to provide ward support for 100-bed days to patients.
635–Battalion Aid Station Equipment	Consumable supplies to provide aid station support, initial resuscitative and stabilizing care for 50 casualties with major wounds prior to evacuation and resupplying basic line Corpsman.
636–Battalion Aid Station Supply	Consumable supplies to provide aid station support, initial resuscitative and stabilizing care for 50 casualties with major wounds before evacuation and resupplying basic line Corpsman.
637–Preventive Medicine Maneuver	Equipment and reusable materiel to establish a PVNTMED section providing technical PVNTMED advice and inspection of food service operations, waste disposal, water potability and sources, vector control, coordinating control measures required of communicable diseases, and monitoring and assisting in immunization programs.
638–Preventive Medicine Technician	Consumable supplies required to support PVNTMED effort of the MEF in 12, five-day packages for 60 days.

Table A-1. Authorized Medical and Dental Allowance Lists (Continued).

AMAL	Nomenclature
645–FRSS	Equipment, consumable supplies, and reusable materiel required to care for 18 patients in a 48-hour period.
646–FRSS Resupply	Equipment and consumable supplies required to reconstitute the FRSS suite.
647–ERCS	Equipment, consumable supplies, and medical treatment protocols necessary for the medical management of 2 critically injured/ill, but stabilized, patients during transport aboard Marine Corps aircraft from elements ashore to elements at sea or ashore.
648–CASEVAC	Provides the equipment and consumables required to conduct en route care for two critically injured or ill, but stabilized patients within the ACE.
650–Preventive Medicine, Office of Environmental Health Services.	Provides the equipment and consumables required to conduct industrial hygiene functionality and environmental health assays.
651–Preventive Medicine ENTO	Provides equipment and consumables required to conduct entomology functionality.
652–CBIRF	Provides the equipment and consumables required to provide care to military and civilian casualties from a CBRN or high-yield explosives incident in CONUS and OCONUS.
660–MARFORSOC	Provides the equipment and consumables required to provide initial resuscitative and stabilization capability for a MARFORSOC unit.
685–GEO Mission and Cold Weather	Consumable supplies and reusable materiel to accommodate special mission/ geographic related requirements into areas where cold-related injuries are likely to occur.Consumable supplies and reusable materiel to accommodate special mission and geographic related requirements into areas where heat-related injuries are likely to occur.
687–GEO Mission and CBRN Individual	Materiel required for the individual to conduct primary decontamination and treatment in a CBRN environment.
688–GEO Mission and CBRN Unit	Materiel required for the units to conduct primary and secondary decontamination and treatment in a CBRN environment.
692–MEDLOG Test and Repair Supply	Consumable supplies to accommodate a medical repair section in the testing, calibrating, and intermediate maintenance of medical/dental equipment.
699–Sick Call	Medical materiel to provide essential treatment for DNBIs during routine sick call for 300 deployed Marine Corps forces for 30 days. This AMAL provides the sick call capability for a BAS and will usually be deployed with the BAS AMALs.
ADAL	**Nomenclature**
662–Field Dental Operatory	Equipment and reusable materiel establishing a field dental clinic. Consumable supplies providing emergency, diagnostic, preventive, and maintenance dental support for 400 patients.

LEGEND

CBIRF	Chemical-Biological Incident Response Force
ENTO	entomologist
GEO	geographic
MARFORSOC	Marine Corps Special Operations Command
OCONUS	outside the continental United States

APPENDIX B.
BLOOD SUPPORT

The Joint Blood Program requires deploying medical forces that use blood and blood products for their mission to write standing operating procedures to contact and integrate into the Armed Services Blood Distribution System.

Armed Services Whole Blood Processing Laboratories (ASWBPL) are Air Force-managed, tri-Service staffed, central repository for liquid and frozen blood required in peacetime, contingencies, and war. An ASWBPL releases blood to unified commands upon approval by the Armed Services Blood Program Office. Theater MTFs may not go directly to the ASWBPL for blood. The ASWBPL is responsible for—

- Retyping blood for A, B, and O blood types and Rhesus factor only.
- Packing, icing, and preparing blood for shipment to theater.
- Maintaining a peacetime inventory of 250 units of liquid blood to use as a rapid response requirement.

See MCO 6530.2, *Department of the Navy Blood Program*, for more information.

An HM can move blood forward for transfusion, if there is a proper transport container to use, and the cold chain is preserved. Only group 'O' red blood cells (i.e., type-O), Rhesus factor positive or negative are used.

The surgical platoon can store 120 units of type-O packed red blood cells (RBCs) in a field blood refrigerator. Emergency collection capability exists if stored supply is exhausted, and no blood bank testing is available.

The LHA or LHD ships can carry 400 frozen RBC units and 25 fresh frozen plasma (FFP) units for contingency operations, and 950 frozen RBCs and 50 FFP for mobilization. The EMF can hold 90 units of liquid RBC units. Specific requirements are established for each mission. Emergency collection capability exists if stored supply is exhausted.

Hospital ships can carry 2,375 frozen RBCs and 100 FFP units for contingency operations, and 2,850 frozen RBC units and 120 FFP for mobilization.

ARMED SERVICES BLOOD PROGRAM OFFICE

The Armed Services Blood Program Office (ASBPO) manages the blood program for DoD and the Secretary of Defense authorizes and directs the ASBPO through the Assistant Secretary of Defense for Health Affairs and the Joint Chiefs of Staff's OPCON.

JOINT BLOOD PROGRAM OFFICE

The joint blood program office (JBPO) is responsible for the joint blood program management in theater. The JBPO functions as part of the unified command surgeon's office, but it could establish an area joint blood program office (AJBPO) for regional blood management. The JBPO—

- Supports the unified command surgeon or augments the commander, JTF surgeon's staff.
- Is the central point of contact to ASBPO.
- Coordinates joint blood product requirements and capabilities in theater.
- Coordinates requirements, distribution, and facilities. The JBPO is responsible for ensuring blood is where it is needed and determines how blood and blood products get to forward units, ships, and MTFs.
- Monitors shortfalls, of blood products and supplies, for blood collection, deglycerolization, and transfusion.
- Ensures readiness throughout the distribution system through exercises and training.
- Ensures compliance with Armed Service Blood Program policies, Food and Drug Administration regulations, and American Association of Blood Banks standards in peacetime and competition continuum.
- Performs as the unified command subject matter expert in determining blood requirements.
- Provides blood concept of support, coordinate with logistics, transportation, and communication personnel on the joint staff for the unified command and prepare Appendix 2, Joint Blood Program, to Annex Q (Medical Services) in the OPLAN and OPORD.

The AJBPO, when established by the JBPO, coordinates requirements and distribution of all blood products to support the blood supply unit and MTFs in a specific area, regardless of Service component. Not all operations will require an AJBPO.

ARMED SERVICES WHOLE BLOOD PROCESSING LABORATORIES

The Air Force manages the ASWBPLs, which are Tri-Service staffed, central repositories for blood required in contingencies and wartime. The ASWBPLs release blood to unified commands with ASBPO approval. Theater units cannot go directly to ASWBPLs for blood. The ASWBPL East located at Joint Base McGuire-Dix-Lakehurst, supports US Central Command, US European Command, US Africa Command (East Africa), and US Special Operations Command

for contingency inventory. Located at Travis Air Force Base, ASWBPL West supports US Indo-Pacific Command and US Southern Command. If a blood request is made by US Southern Command or US Northern Command, ASBPO is the approval authority and would direct one or both ASWBPLs to support. These ASWBPLs can—

- Retype blood for blood typing system and Rhesus only.
- Pack and prepare blood for shipment to theater.
- Maintain a peacetime inventory of 250 units of liquid blood to use as a rapid response requirement.

BLOOD TRANSSHIPMENT CENTERS

Blood transshipment centers serve as the central receiving point in theater for blood shipments from ASWBPL and for issue to blood supply units. A blood transshipment center can store and process up to 7,200 units of blood daily and is operated by Air Force personnel located at a major theater airfields.Theater blood products are managed by the JBPO or AJBPO. Blood transshipment centers—

- Inspect blood received from ASWBPL.
- Receive, store, ice blood, and perform quality control.
- Issue blood to blood supply units or other theater blood users.

The Navy or Marine Corps must arrange transportation to obtain blood from transshipment centers. Blood issued from transshipment centers to the Navy and Marine Corps, is based on a daily allocation system established by the theater commander.

BLOOD SUPPLY UNITS

The BSUs are responsible for receiving, storing, and distributing blood and blood supplies within theater. They are required to provide a five-day storage supply, based on proposed requirements from the theater and blood reports. A blood supply unit can be identified to provide support in a specific geographical area, to any Service component.

The following facilities can serve as blood supply units: Army blood platoon, Navy EMF, naval CRTSs, T-AHs, MTFs, and blood product depots. Blood supply units can—

- Receive, store, and distribute blood supplies to supported facilities.
- Provide a five-day supply of blood supplies, based on requirements in theater.
- Provide storage capabilities that maintain temperature requirements for liquid blood.
- Produce ice for shipping and re-icing of blood in theater.
- Store frozen blood products including FFP and frozen RBCs.

- Provide blood supplies to MTFs based on the following authorized blood use:
  - First responder: Blood can be taken forward with HMs, provided proper transport container is used. Only group O RBCs (Rhesus positive or Rhesus negative) are used in this situation.
  - Role 1: Group O RBCs only (Rhesus positive or Rhesus negative); FFP, resuscitation fluids (i.e., ringers lactate and human albumin) are available.
  - Theater hospitalization: Group and type specific cells and FFP, as well as resuscitation fluids, are available.

FRESH WHOLE BLOOD TRANSFUSION

A walking blood bank is, "the process of obtaining warm fresh blood (non-Food and Drug Administration compliant) from screened donors for emergency transfusion" (*DoD Dictionary*). The EFWBT program provides Corpsmen the ability to perform blood transfusions on casualties in a field environment. The program focuses on mastery of TCCC skills while implementing hemorrhagic shock management to provide better patient outcomes. Fresh whole blood can either be stored at room temperature and used within 24 hours of collection (and then destroyed if not used), or it can be refrigerated within eight hours of collection. The most important safety consideration in transfusing whole blood is to ensure that the donor's red blood cells and blood type is compatible with the recipient to avoid negative reactions. Organizations must have an effective blood donor screening process to implement the EFWBT process.

APPENDIX C.
OPERATIONAL GRAPHICS

The following operational symbols are used (digitally and in signage) to represent medical locations throughout area of operations.

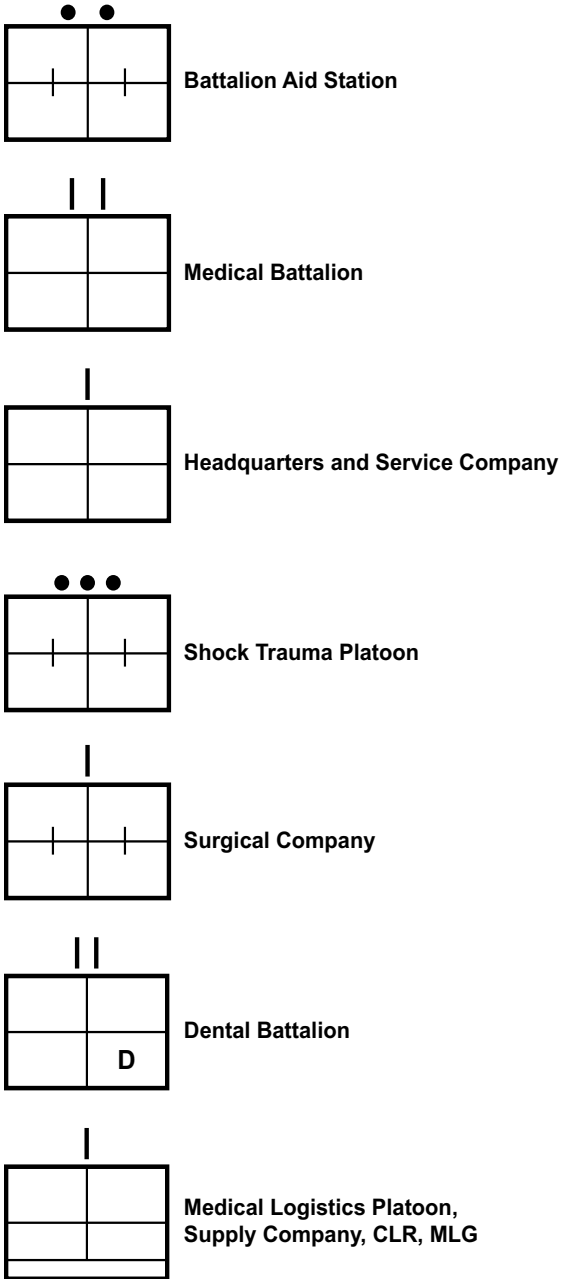


Figure C-1. Operational Symbols.

GLOSSARY

Section I. Abbreviations and Acronyms

ACE	aviation combat element
ADAL	authorized dental allowance list
AJBPO	area joint blood program office
AMAL	authorized medical allowance list
AOA	amphibious objective area
ASBPO	Armed Services Blood Program Office
ASWBPL	Armed Services Whole Blood Processing Laboratories
ATF	amphibious task force
BAS	battalion aid station
C2	command and control
CASEVAC	casualty evacuation
CATF	commander, amphibious task force
CBRN	chemical, biological, radiological, and nuclear
CCDR	combatant commander
CIS	communications and information systems
CLS	combat lifesaver
CONOPS	concept of operations
CONUS	continental United States
COA	course of action
COC	combat operations center
CRTS	casualty receiving and treatment ship
DHA	Defense Health Agency
DNBI	disease and nonbattle injury
DoD	Department of Defense
DoDI	Department of Defense Instruction
DTF	dental treatment facility
EMF	expeditionary medical facility
ERCS	en route care system

FDPMU	forward deployable preventive medicine units
FFP	fresh frozen plasma
FHP	force health protection
FMF	Fleet Marine Force
FRSS	forward resuscitative surgical system
FST	fleet surgical team
G-1	assistant chief of staff, personnel/personnel staff section
G-2	assistant chief of staff, intelligence/intelligence staff section
G-3	assistant chief of staff, operations and training/operations and training staff section
G-6	assistant chief of staff, communications systems/communications system staff section
GCCS	Global Command and Control System
GCE	ground combat element (MAGTF)
HM	Hospital Corpsman
HNS	host-nation support
H&S	headquarters and service
HSS	health service support
HSSD	health service support detachment
HSSE	health service support element
HSSO	health service support officer
J-2	intelligence directorate of a joint staff
JBPO	joint blood program office
JMPT	Joint Medical Planning Tool
JP	joint publication
LCE	logistics combat element
LFSP	landing force support party
LHA	amphibious assault ship (general purpose)
LHD	amphibious assault ship (multipurpose)
MAG	Marine aircraft group
MAGTF	Marine air-ground task force
MCRP	Marine Corps Reference Publication
MCTP	Marine Corps Tactical Publications
MCWP	Marine Corps Warfighting Publication
MEB	Marine expeditionary brigade
MEDEVAC	medical evacuation

MEDLOG	medical logistics
MEF	Marine expeditionary force
MEU	Marine expeditionary unit
MLG	Marine logistics group
MPF	maritime pre-positioning force
MPS	maritime preposition ship
MPTk	Medical Planners' Toolkit
MSOC	medical support operations center
MTF	medical treatment facility
NAVMC	Navy/Marine Corps departmental publication
NAVMED	Navy medicine
NCMI	National Center for Medical Intelligence
OEH	occupational and environmental health
OEHS	occupational and environmental health surveillance
OEHSA	occupational and environmental health site assessment
OIC	officer in charge
OPCON	operational control
OPLAN	operation plan
OPORD	operation order
PACE	primary, alternate, contingency, emergency
PMI	patient movement item
PVNTMED	preventive medicine
RBC	red blood cell
S-1	personnel officer/office
S-2	Intelligence officer/office
S-3	operations and training officer/office
S-4	logistics officer/office
S-6	communications systems officer/communications systems staff office
SIMLM	single integrated medical logistics manager
T-AH	hospital ship
TCCC	tactical combat casualty care
TLAMM	theater lead agent for medical materiel
TPMRC	United States Transportation Command patient movement requirements center

TRAC2ES	United States Transportation Command Regulating and Command and Control Evacuation System
US	United States

The following acronyms are specific to this publication:

EFWBT	emergency fresh whole blood transfusion
JOMIS	joint operational medicine information system

Section II. Terms and Definitions

aeromedical evacuation
The movement of patients under medical supervision to and between medical treatment facilities by air transportation. Also called **AE**. (DoD Dictionary)

aviation combat element
The core element of a Marine air- ground task force (MAGTF) that is task-organized to conduct aviation operations. The aviation combat element (ACE) provides all or a portion of the six functions of Marine aviation necessary to accomplish the MAGTF's mission. These functions are antiair warfare, offensive air support, assault support, electronic warfare, air reconnaissance, and control of aircraft and missiles. The ACE is usually composed of an aviation unit headquarters and various other aviation units or their detachments. It can vary in size from a small aviation detachment of specifically required aircraft to one or more Marine aircraft wings. In a joint or multinational environment, the ACE may contain other Service or multinational forces assigned or attached to the MAGTF. The ACE itself is not a formal command. Also called **ACE**. See also Marine air-ground task force (USMC Dictionary)

casualty
Any person who is lost to the organization by having been declared dead, duty status–whereabouts unknown excused absence whereabouts unknown, missing, ill, or injured. (DoD Dictionary)

casualty collection
The assembly of casualties at collection and treatment sites. It includes protection from further injury while awaiting evacuation to the next level of care. Planning for casualty collection points must include site selection and staffing. (USMC Dictionary)

casualty evacuation
(See DoD Dictionary for core definition. Marine Corps amplification follows.) The movement of the sick,wounded, or injured that begins at the point of injury or the onset of disease and includes movement both to and between medical treatment facilities. Also called **CASEVAC**. (USMC Dictionary)

casualty receiving and treatment ship
In amphibious operations, a ship designated to receive, provide treatment for, and transfer casualties. Also called **CRTS**. (DoD Dictionary)

casualty treatment
Treatment that includes triage and all levels of care from self-aid or buddy-aid through resuscitative care. (USMC Dictionary)

chemical, biological, radiological, and nuclear defense
Actions taken to counter chemical, biological, radiological, or nuclear hazards; reduce their risks; and prepare for or respond to and recover from chemical, biological, radiological, or nuclear incidents. Also called **CBRN defense.** (DoD Dictionary)

combat operations center
The primary operational agency required to control the tactical operations of a command that employs ground and aviation combat, combat support, and logistics combat elements or portions thereof. The combat operations center continually monitors, records, and supervises operations in the name

of the commander and includes the necessary personnel and communications to do the same. Also called **COC**. (USMC Dictionary)

combat service support
The essential capabilities, functions, activities, and tasks necessary to sustain all elements of operating forces in theater at all levels of warfare. Also called **CSS**. (DoD Dictionary)

command and control
(See DOD Dictionary for core definition. Marine Corps amplification follows.) The means by which a commander recognizes what needs to be done and sees to it that appropriate actions are taken. Command and control is one of the seven warfighting functions. Also called **C2**. (USMC Dictionary)

definitive care
Care to conclusively manage a patient's condition, for the full range of preventive, curative acute, convalescent, restorative, and rehabilitative medical care. (DoD Dictionary)

en route care
Care required to maintain the level of treatment initiated prior to evacuationand sustain the patient's medical condition during evacuation. Also called **ERC**. See also evacuation. (DoD Dictionary)

essential care
Medical treatment provided to manage the casualty throughout the rolls of care. (DoD Dictionary)

evacuation
Transfer of a patient to or between medical treatment facilities. (DoD Dictionary, part 1 of a 3-part definition.)

ground combat element
The core element of a Marine air- ground task force (MAGTF) that is task-organized to conduct ground operations. It is usually constructed around an infantry organization but can vary in size from a small ground unit of any type to one or more Marine divisions that can be independently maneuvered under the direction of the MAGTF commander. It includes appropriate ground combat and combat support forces, and in a joint or multinational environment, it may also contain other Service or multinational forces assigned or attached to the MAGTF. The ground combat element itself is not a formal command. Also called **GCE.** See also Marine air-ground task force. (USMC Dictionary)

health maintenance
Those tasks to ensure that a unit and its personnel are medically ready for combat operations. Included are routine sick calls, physical examinations, preventive medicine and dentistry programs, records maintenance, and medical reporting. (USMC Dictionary)

health service support
All services performed, provided, or arranged to promote, improve, conserve, or restore the mental or physical well-being of personnel. Also called **HSS**. (DoD Dictionary)

health surveillance
The continuous, systematic collection, analysis, interpretation, and dissemination of health-related data to identify potential health risks and prevent, treat, reduce, or control disease and injury, which includes occupational and environmentalhealth surveillance and medical surveillance subcomponents. (DoD Dictionary)

information management
The function of managing an organization's information resources for the handling of data and information acquired by one or many different systems, individuals, and organizations. Also called **IM**. (DoD Dictionary)

Marine air-ground task force
The Marine Corps' principal organization for all missions across the range of military operations, composed of forces task-organized under a single commander capable of responding rapidly to a

contingency anywhere in the world. The types of forces in the Marine air- ground task force (MAGTF) are functionally grouped into four core elements: a command element, an aviation combat element, a ground combat element, and a logistics combat element. The four core elements are categories of forces, not formal commands. The basic structure of the MAGTF never varies, though the number, size, and type of Marine Corps units comprising each of its four elements will always be mission dependent. The flexibility of the organizational structure allows for one or more subordinate MAGTFs to be assigned. In a joint or multinational environment, other Service or multinational forces may be assigned or attached. Also called **MAG**. (USMC Dictionary) See also aviation combat element; ground combat element; logistics element.

Marine logistics group
The logistics combat element of the Marine expeditionary force (MEF). It is a permanently organized command tasked with providing combat service support beyond the organic capabilities of supported units of the MEF. The Marine logistics group is normally structured with direct and general support units that are organized to support a MEF possessing one Marine division and one Marine aircraft wing. It may also provide smaller task-organized logistics combat elements to support Marine air-ground task forces smaller than a MEF. Also called **MLG**. (USMC Dictionary)

mass casualty
Any number of human casualties produced across a period of time that exceeds available medical support capabilities. (DoD Dictionary)

medical evacuation
The timely and efficient movement of the wounded, injured, or ill while providing en route medical care to and between medical treatment facilities. Also called **MEDEVAC**. (USMC Dictionary)

medical intelligence
That category of intelligence resulting from collection, evaluation, analysis, and interpretation of foreign medical, bio-scientific, and environmental information that is of interest to strategic planning and to military medical planning and operations for the conservation of the fighting strength of friendly forces and the formation of assessments of foreign medical capabilities in both military and civilian sectors. Also called **MEDIN**. (DoD Dictionary)

medical regulating
The coordination for the movement of patients to match patients withan appropriate medical treatment facility. (DoD Dictionary)

medical regulating control officer
A medical administrative officer who controls and coordinates the seaward evacuation of casualties in the amphibious objective area. The medical regulating control officer is located on the primary control ship. (USMC Dictionary)

medical treatment facility
A facility established for the purpose of furnishing medical and/or dental care to eligible individuals. Also called **MTF**. (DoD Dictionary)

multinational
Between two or more forces or agencies of two or more nations or coalition partners. (DoD Dictionary)

organic
Assigned to and forming an essential part of a military organization as listed in its table of organization for the Army, Air Force, and Marine Corps, and are assigned to the operating forces for the Navy. (DoD Dictionary)

patient movement
The act or process of moving a sick, injured, wounded, or other person to obtain medical and/or dental care or treatment, which include medical regulating, patient evacuation, and en route medical care. (DoD Dictionary)

preventive medicine
The anticipation, communication, prediction, identification, prevention, education, risk assessment, and control of communicable diseases, illnesses and exposure to endemic, occupational, and environmental threats. (DoD Dictionary)

resuscitative care
Advanced emergency medical treatment required to prevent immediate loss of life or limb and to attain stabilization to ensure the patient could tolerate evacuation. (DoD Dictionary)

sustainment
The provision of logistics and personnel services required to maintain and prolong operations until successful mission accomplishment. (DoD Dictionary)

theater hospitalization capability
Essential care and health service support capabilities to either return the patient to duty and/or stabilization to ensure the patient can tolerate evacuation to a definitive care facility outside the theater, which is known as role 3 in North Atlantic Treaty Organization doctrine. (DoD Dictionary)

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3500.84_ Health Services Support Training and Readiness Manual

4000.2 Marine Corps Class VIII Management Handbook

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1.5_ Identification of Medical Material for Field Medical Installations

1.6_ Medical Evaluation Manual

1.9_ Minimum Requirements of Emergency Medical Supplies on Board Ships

1.10_ Medical Aspects in the Management of a Major Incident/Mass Casualty Situation

1.12_ Medical and Dental Supply Procedures

1.14_ Minimum Medical Design Requirements for Military Motor Ambulances

1.19_ Cross-Servicing of Medical Gas Cylinders

3.1_ Military Forensic Dental Identification

4.2_ Deployment Pests and Disease Vectors Surveillance and Control

4.4_ Dental Fitness Standards for Military Personnel and the NATO Dental Fitness Classification system

4.6_ Food Safety, Defense, and Production Standards in Deployed Operations

4.8_ Pre- and Post-Deployment Health Assessments

4.9_ Requirements for Water Quality During Operations

4.12_ Food and Water Defense

4.14_ Food and Water Safety, Defence, and Production in NATO Naval Operations

5.1_ Patient Data Exchange Format for Common Core Information

6_ Allied Joint Civil-Military Medical Interface Doctrine

6.1_ The Civil-Military Planning Process on Oral Health Care and Deployment of Dental Capabilities in All Operations with a Humanitarian Component

7.1_ The Medical Management of CBRN Casualties

7.2_ CBRN First Aid Handbook

7.3_ Training of Medical Personnel for Chemical, Biological, Radiological, and Nuclear (CBRN) Defense

7.4 _ Medical Deployable Outbreak and Incident Investigation Teams

7.5_ NATO Planning Guide for the Estimation of CBRN Casualties

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P8.1_ Documentation Relative to Initial Medical Treatment and Evacuation

P8.2_ Basic Military Medical Report

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8.8_ Medical Warning Tag

8.10_ A Psychological Guide for Leaders Across the Deployment Cycle

8.12_ Military Acute Trauma Care Training

8.13_ The Extent of Dental and Maxillofacial Treatment at Roles 1-3 Medical Support

8.15_ Requirement for Training in Casualty Care for All Military Personnel

9.2_ Guidelines for a Multinational Medical Unit

9.3_ Credentialing for NATO Healthcare Professionals Assigned to Role 2/3 Multinational Medical units

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American, British, Canadian, Australian, and New Zealand (ABCANZ) Armies' Program Standards

2121 Pre-Hospital Combat Casualty Care Standards for ABCANZ Soldiers

2141 MASCAL Response

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3-40A.6 Multi-Service Tactics, Techniques, and Procedures for Health Service Support in a Chemical, Biological, Radiological, and Nuclear Environment

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3-40A.8 Coalition Health Interoperability Handbook

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4400.201_ Marine Corps Class VIII Management and Sustainment

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6600.3_ Dental Health Care Program

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4-02.6 The Medical Company (Role 2)

4-02.10 Theater Hospitalization

4-02.13 Casualty Evacuation

4-02.19 Dental Services

4-02.55 Army Health System Support Planning

Training Circulars (TCs)

4-02.3 Field Hygiene and Sanitation

8-13 Tactical Hospital Infrastructure

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40-502 Medical Readiness Procedures

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3-50 Army Personnel Recovery