

Health Services



Air Force Doctrine Document 2-4.2 **11 December 2002**

This document complements related discussion found in Joint Publication 4-02,
Doctrine for Health Service Support in Joint Operations.

SUMMARY OF REVISIONS

This document is substantially revised and must be completely reviewed. It updates Air Force health services doctrine to reflect Air Force Medical Service (AFMS) capabilities and how to organize and employ those capabilities in support of expeditionary operations. Since the end of the Cold War, the AFMS has transformed into a light, lean, life-saving, and mobile expeditionary medical force. By modularizing medical assets, health service support is a properly tailored response in all contingencies. Deployable modular aeromedical evacuation (AE) units provide the interface between the ground-based expeditionary medical contingency support units and the critical care capable AE system. The build up of AE modular support, concurrent with the build up of ground-based medical support units, ensures that timely evacuation of casualties occurs. This revision captures the essence of these doctrinal changes by expanding chapter two, Command and Control (pp 5-12), and adding new chapters covering medical planning (chapter 3, pp 13-20), force health protection (chapter 4, pp 21-30), information management and technology (chapter 12, pp 65-68), and education and training (chapter 13, pp 69-72). The AFMS core competencies have been added—Fixed-wing AE (chapter 6, pp 33-36); Expeditionary Medical Care in Military Operations (chapter 7, pp 37-44); Interface with World Health Care (chapter 8, pp 45); Human Performance, Sustainment, and Enhancement (chapter 9, pp 47-52); and Population Health (chapter 10, pp 53-56). Another new chapter, Domestic Support Operations (chapter 11, pp 57-64), is included since many of the skills required to support peacetime health services, wartime operations, and military operations other than war (MOOTW) are relevant in these scenarios. This revised AFDD better captures the key role of Air Force medical personnel in military operations, as well as their relevance to commanders at both home-station and deployed locations.

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FOREWORD

This document establishes operational doctrine for Air Force health services and outlines the principles for how the Air Force Medical Service (AFMS) intends to provide medical support to the Air Force throughout the full range and scope of operational scenarios as outlined in Air Force Doctrine Document 2, *Organization and Employment of Aerospace Power*, including joint, coalition, and interagency operations. The AFMS remains committed to ensuring a uniformed medical service is relevant to supporting the Air Force mission and is convinced that such support can be provided at a reasonable cost—a cost that adds true value to our national security both at home and abroad.

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INTRODUCTION

PURPOSE

This Air Force Doctrine Document (AFDD) establishes doctrinal guidance for organizing and employing health services capabilities at the operational level across the full range of military operations. It is a critical element of US Air Force operational-level doctrine and as such should form the basis from which Air Force commanders plan and execute their health services.

APPLICATION

This AFDD applies to all active duty, Air Force Reserve, Air National Guard, and civilian Air Force personnel. National military strategy requires reserve and guard assets be integrated into Air Force warfighting capability. In 1973, DOD adopted a total force policy that acknowledges all active, reserve, guard, and civilian personnel would be utilized to provide US defense. Total Force partnership provides a blueprint for medical personnel to organize, train, and equip as one seamless team.

The doctrine in this document is authoritative but not directive. Therefore, commanders need to consider the contents of this AFDD and the particular situation when accomplishing their missions.

SCOPE

Air Force assets (people, information, and support systems) can be used across the range of military operations at the strategic, operational, and tactical levels of war. This AFDD discusses the fundamentals of organization and employment of Air Force health services capability (regardless of Total Force component) required to support the operational missions assigned by combatant commanders and carried out by air component commanders.

FOUNDATIONAL DOCTRINE STATEMENTS

Foundational doctrine statements (FDS) are the basic principles and beliefs upon which AFDDs are built. Other information in the AFDDs expands on or supports these statements.

- ★ The AFMS, through the major commands, organizes, trains, and equips medical forces to provide rapid response in support of COMAFFOR and unified combatant commanders' broad range of missions; and manages peacetime health services.
- ★ Active, guard, and reserve medical forces should be organized, trained, and equipped into one seamless team thereby optimizing medical readiness capability and total force utilization. It is through this medically ready force that the AFMS provides commanders with medical capabilities of the right size, right skill mix, at the right place, and at the right time. The capability of a unit type code (UTC) should be the same regardless of which component is providing that UTC.
- ★ Speed and the global nature of their reach and perspective is what distinguishes the AFMS core competencies from the core competencies of other Services.
- ★ Force Health Protection, a proactive doctrine, is a "total life-cycle" health support system that addresses all health-related threats affecting the combat force and the supporting community before, during, and after deployment.
- ★ Commanders and AFMS leadership must continue to focus on human performance, sustainment, and enhancement of air and space operators in all operational environments.
- ★ The HQ AFFOR Surgeon is a member of the COMAFFOR special staff and does not exercise command authority or direct control over medical forces, but provides a planning, coordination, and oversight function.
- ★ If no Expeditionary Medical Support or Air Force Theater Hospital component is present, the senior medical officer (e.g., SME, IDMT, etc.) present will be responsible for coordinating health service support activities.
- ★ Deployable modular aeromedical evacuation units provide the interface between the ground-based expeditionary medical contingency support units and the critical care capable aeromedical evacuation system.
- ★ When the AFFOR theater medical concept of operations is developed, planners must consider the risk of NBC attack and the increased burden on medical infrastructure. The same building block approach should be used where medical NBC-specific assets are laid in over conventional medical assets.
- ★ In domestic support operations, AFMS assets, which are able to rapidly deploy and establish capability, provide crucial care to those impacted by a disaster or emergency.

During domestic support operations, military forces always respond in support of a lead federal agency.

- ★ Air Force health services have been, and will continue to be, used in foreign humanitarian assistance roles as a primary instrument of action.
- ★ The purpose of medical intelligence is to conserve the fighting strength of friendly forces; support policy formulation, strategic and medical planning, and tactical operations; and to assess foreign health care systems in both military and civilian sectors.
- ★ The medical threat estimate should help direct decision-making about the selection of, and placement of forces into, a deployment site.
- ★ The expeditionary medical logistics system, designed and executed to provide support and sustainment to Aerospace Expeditionary Force (AEF) forces, provides tailored logistics packages to the deployed medical unit by utilizing a predetermined supply chain.
- ★ Competency (e.g., initial education, credentials, certifications) and currency (recent experience practicing in the area of competency) are basic fibers of readiness woven throughout medical readiness education and training.

CHAPTER ONE

THE AIR FORCE MEDICAL SERVICE

OVERVIEW

This publication reflects Air Force operational-level doctrine on health service support. It begins with discussion on the organization, command and control (C2) of medical forces, and planning considerations; and is followed by chapters that address force health protection (FHP) and Air Force Medical Service (AFMS) core competencies. FHP initiatives aim to protect and maximize the performance of the limited numbers of highly trained military forces. **Avoiding all preventable losses of combat and support personnel is critical to mission success.** AFMS capabilities in the deployed environment are illustrated in discussions of the Medical Service's core competencies. **AFMS core competencies represent the combination of professional knowledge, medical expertise, and technological know-how that, when applied, produces superior health service support capabilities.** This document concludes with a discussion of the AFMS role in domestic support operations, AFMS technology support issues, and education and training.

DOCTRINAL FOUNDATION

Operational and tactical doctrine on health service support is founded in, and consistent with, Air Force basic and operational doctrine. The Air Force Medical Service, guided by doctrine, enables air and space power and the accomplishment of Air Force missions. Doctrine on Air Force Health Service Support is also consistent with the concepts and intents of FHP as outlined in Joint Publication (JP) 4-02, *Doctrine for Health Service Support in Joint Operations*.

As stated in AFDD 2, *Organization and Employment of Aerospace Power*, air and space power may be employed under varying circumstances, ranging from peacetime engagement and crisis response, to deterrence and contingency actions, to war-winning actions. For the medics, these varying circumstances translate into three primary deployment scenarios. **AFMS capability may be employed in humanitarian and civic assistance scenarios, disaster response scenarios, and in support of war-winning operations.**

The leading idea, which should be constantly kept in view, is to strengthen the hands of the Commanding General by keeping his army in the most vigorous health, thus rendering it, in the highest degree, efficient for enduring fatigue and privation, and for fighting. In this view, the duties...are of vital importance to the success of an army, and commanders seldom appreciate the full effect of their proper fulfillment.

*Major Jonathan Letterman
Medical Director of the Civil War*

MEDICAL READINESS AND EXPEDITIONARY MEDICAL OPERATIONS

National security and military strategies impact health services support requirements by driving new wartime scenarios and assumptions. AFMS, through the major commands, organizes, trains, and equips medical forces to provide rapid response in support of unified combatant commanders' broad range of missions (e.g., military operations other than war [MOOTW] through full-scale major theater wars (MTWs); and to manage peacetime health services. Medical readiness is the primary role and relevancy of the AFMS; and as such, the AFMS must be ready to support the broad spectrum of military operations. To shape the world and create favorable conditions for peace and stability, military medical personnel must be trained and equipped to perform humanitarian and civic assistance with coalition allies throughout the world. To respond to disasters and small-scale contingencies, medics must be able to deploy rapidly and efficiently. To prepare for major theater war, the AFMS must train and equip medical forces for prolonged, austere conditions that may include chemical or biological agent threats.

AFMS capability (with few exceptions) has evolved from the fixed facility, 500 bed contingency hospitals of the Cold War, into lightweight, rapidly deployable, modular systems known as Expeditionary Medical Support (EMEDS), which can build up to the Air Force Theater Hospital (AFTH). These systems ensure that highly capable medical teams can deploy quickly, build up their capability incrementally to support any given scenario, provide medical support on the scene for the full duration of the operation, and can do so with minimal airlift requirements. Coupled with a modularized, critical care capable aeromedical evacuation system, the AFMS is able to provide life and limb saving medical support to our valued personnel wherever they are deployed, and if necessary, expeditiously evacuate them back to fixed facility medical care. Working with international partners, the AFMS has exported this capability to several other nations, leading to a fully integrated, coalition-based casualty care system able to provide care to deployed personnel anywhere in the world.

Air Force medics also play a key role in homeland security (HLS) operations. Many of the skills required to support peacetime health services, wartime operations, and MOOTW, are relevant to HLS, and specifically to civil support scenarios.

TOTAL FORCE

Active, guard, and reserve medical forces should be organized, trained, and equipped into one seamless team thereby optimizing medical readiness capability and total force utilization. Through organizational and operational options, the AFMS leverages the strengths of the total force components to adapt to present and future Air Force requirements. It is through this medically ready force that the AFMS provides commanders with medical capabilities of the right size, specialty skills mix, at the right place, and at the right time. AFMS forces should be so well trained that any component member can be deployed anywhere, at any time, for any purpose. The capability of a unit type code (UTC) is the same regardless of which component is providing that UTC. For example, a mobile field surgical team (MFST) is presented and employed as it doctrinally should, regardless of whether the personnel are active duty, guard, or reserve.

HISTORICAL PERSPECTIVE

The Air Force Medical Service, officially created on July 1, 1949, has its origins in the medical service of the Army Air Forces in World War II, and to some extent in the pioneering aeromedical work of Army Air Corps medics in the 1930s.

The first priority of the medical service has always been medical support of Air Force combat units. When necessary, entire medical units deploy to forward combat areas to support the warfighters. In support of this basic warfighting mission, the AFMS has traditionally provided several types of medical programs and activities. Historically, these programs and activities included:

- ✦ Aerospace Medicine and Flight Surgeons
- ✦ Selection and Training of Air Force Personnel
- ✦ Human Factors Research and Development
- ✦ Community Health Care and Preventive Services
- ✦ Medical Education and Basic Medical Research
- ✦ Aeromedical Evacuation
- ✦ Air Force Hospital System
- ✦ Medical Support of Space Exploration
- ✦ Air Transportable Hospitals and Contingency Hospitals
- ✦ Aerobic Fitness Programs

✦ Health Promotion Activities

These programs and activities shaped the foundation upon which AFMS core competencies are built.

CHAPTER TWO

COMMAND AND CONTROL

OVERVIEW

Health services support the global responsibilities of the Air Force. The AFMS structure and processes are simple, responsive, and flexible to support Air Force, joint, or multinational operations. They are organized based on the principle of “centralized control and decentralized execution” to exploit asset flexibility and versatility. AFMS commanders ensure the most current health-related information is available to sustain the fighting force. Health information systems and programs required to facilitate this should be in place and are under the most direct command and control structure possible to ensure timely support to the warfighters.

COMMAND AND CONTROL (C2) RELATIONSHIPS

Clear and effective command relationships are central to effective operations. Health services C2 requirements are coordinated, integrated, and allocated, as appropriate, at the highest levels of C2 infrastructure. C2 relationships must remain flexible enough to meet any situational need, such as the type of operation, mission objectives, existing host-nation infrastructure, or multinational participation.

Military law does not allow for medical commanders or senior medical officers to command line of the Air Force (LAF) units or personnel. Violation of this premise will result in the medical commander and possibly his or her personnel losing their noncombatant status.

COMMUNICATIONS SYSTEMS

Effective communications systems are vital to successful AFMS operations. AFMS communications should be reliable, interoperable, and secure within the theater and from the theater to the continental United States (CONUS). These communications should also link forward medical elements, through each level of capability, to final destination hospitals. Development of Air Force health systems should incorporate the changing nature of global operations (e.g., emerging telemedicine capabilities). Health information management systems should provide:

- ✦ Interoperability with other DOD and Veteran’s Administration medical systems.
- ✦ Timely, accurate, and relevant information on blood management, patient tracking and movement, and medical logistics.
- ✦ Status of medical units, evacuation workload, and critical resources.

While commanders might incorporate some limited medical technology support into C2 systems, care must be taken not to violate the Geneva Conventions and the Law of Armed Conflict (LOAC), and thus cause medical facilities to lose their protected status. For example, medical facilities cannot retain their protected status and house information transfer nodes that will transmit data supporting military operations, in addition to medical information. System developers must understand these requirements to effectively implement and support air, space, and medical operations.

CHAIN OF COMMAND

The President and Secretary of Defense (SecDef) exercise authority and control of the Armed Forces through two distinct branches of the chain of command. One branch runs from the President, through the SecDef, directly to the commanders of combatant commands for missions and forces assigned to their commands. The other branch, used for purposes other than operational direction of forces assigned to combatant commands, runs from the President, through the SecDef, to the Secretaries of the Military Departments. The Military Departments, organized separately, operate under the authority, direction, and control of the Secretary of Defense. The Secretaries of the Military Departments exercise authority through their respective Service Chiefs over their forces not assigned to the combatant commanders. (See Figure 2.1.)

Chief of Staff of the Air Force and Headquarters, USAF

The Chief of Staff of the Air Force is responsible for organizing, training, and equipping the force. Headquarters, United States Air Force develops policy regarding C2 operations, reporting, training, and maintenance operations, and maintains C2 integrity during military operations by allocating appropriate resources.

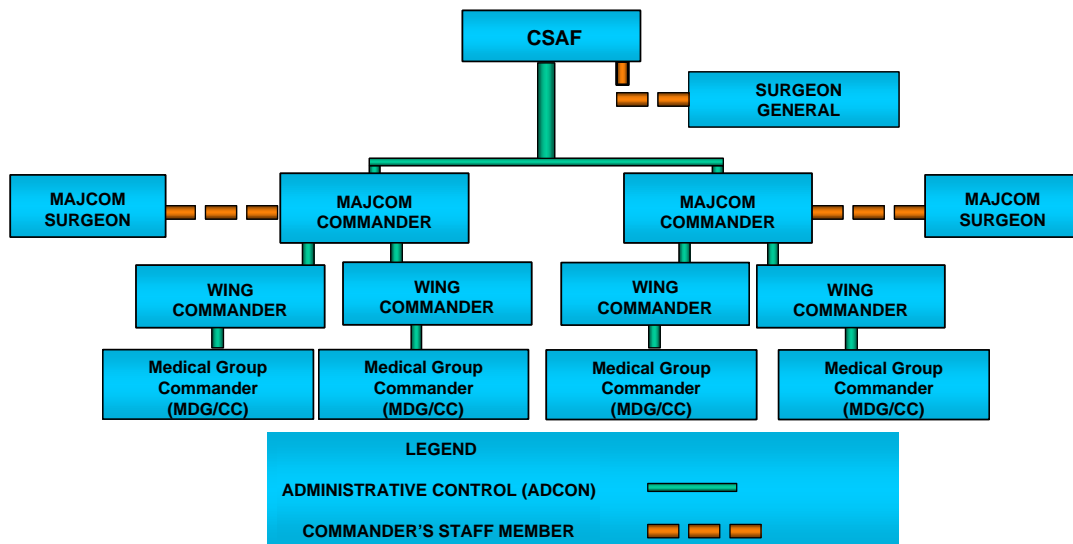


Figure 2.1. Service Chain of Command and Control

Air Force Surgeon General

The Air Force Surgeon General (SG) is primarily responsible for developing and coordinating health care policy for the AFMS. The SG is also responsible for coordinating and aligning health care programs and services to integrate with other Services' medical departments and the Office of the Assistant Secretary of Defense for Health Affairs (OASD-HA). This supports a DOD enterprise-wide health care system.

Major Commands

The Air Force organizes, trains, and equips Air Force forces through major commands (MAJCOMs). The MAJCOMs provide forces to combatant commands for employment. MAJCOM organizations are based on combat, mobility, space, and special operations and the materiel support required for those operations. For example, Air Mobility Command is the aeromedical evacuation (AE) proponent for active and air reserve component forces. Within each MAJCOM, the surgeon is responsible for planning health services operations to support wartime or contingency operations.

Air and Space Expeditionary Force

An air and space expeditionary force (AEF) is an organizational structure composed of force packages of capabilities, providing warfighting combatant commanders with rapid and responsive air and space power. These force packages, together with their support and command and control (C2) elements, are tailored to meet specific needs across the spectrum of response options and are deployed within an air and space expeditionary task force (AETF) as air and space expeditionary wings (AEWs), groups (AEGs), or squadrons (AESs).

Commander, Air Force Forces (COMAFFOR)

The Commander, Air Force Forces (COMAFFOR) serves as the 'single-voice' air commander to the joint force commander, and is responsible for all Air Force forces (AFFOR) assigned or attached to the air component in joint or multinational operations. The COMAFFOR employs and sustains assigned and attached Air Force forces in-theater. Included on the COMAFFOR special staff is a medical service officer functioning as the AFFOR Surgeon. The organizational structure represented in figure 2.2 is an example of how a COMAFFOR may organize the staff. (Reference AFDD 2, *Organization and Employment of Aerospace Power*, for additional discussion on command and control of Air Force forces.)

AFFOR Surgeon

The AFFOR Surgeon, a corps-neutral medical officer usually at the rank of colonel, is a member of the COMAFFOR special staff and is the director of Air Force health services operations. This medical officer is responsible for overall health resources management and provides information on health surveillance and risk assessments, sustainment, and other force

health protection issues. The AFFOR Surgeon does not exercise command authority or direct control over medical forces, but provides a planning, coordination, and oversight function.

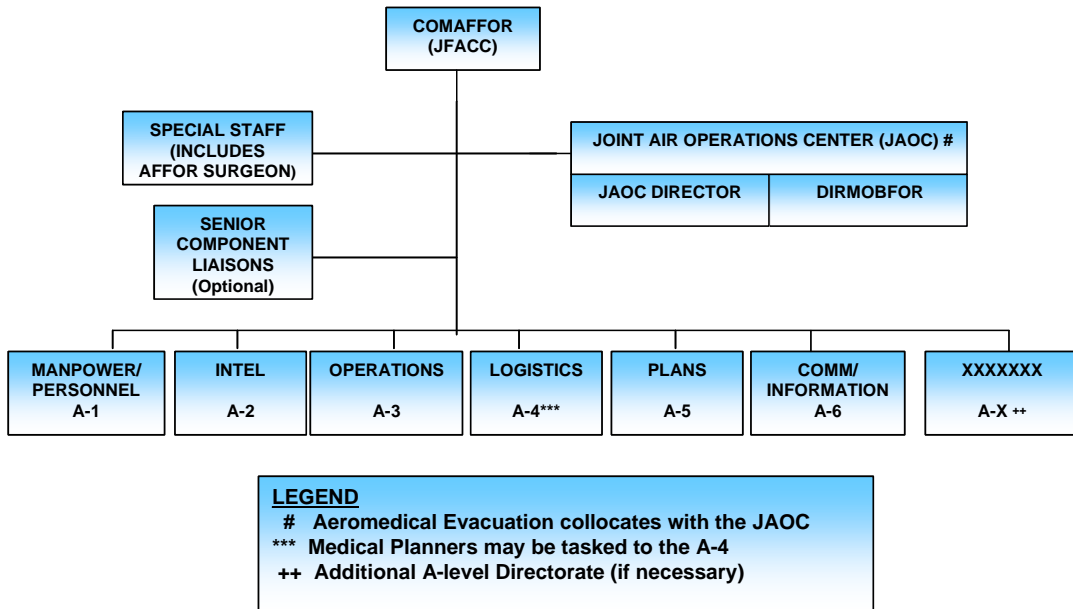


Figure 2.2. Headquarters Organization with COMAFFOR as Joint Force Air Component Commander (JFACC)

Air and Space Expeditionary Wing

An AEW is a deployed wing or a wing slice attached to an AETF or in-place NAF by G-series orders. An AEW normally is composed of the wing command element and several groups. The AEW commander has administrative control (ADCON) of all assigned AEW assets, including medical support. A medical group commander is a member of the AEW commander's staff. (See figure 2.3.)

Deployed Medical Commander (DMC)

The DMC is the commander of the deployed medical facility (e.g., Expeditionary Medical Group), designated on G-series orders specifically for the deployment, and is responsible to the wing commander for the health service support of the deployed population. The DMC functions similarly to a medical group commander (MDG/CC), and exercises professional oversight of all assigned or attached Air Force medical personnel, including squadron medical elements (SMEs) and independent duty medical technicians (IDMTs). The DMC communicates and coordinates with the AFFOR Surgeon on theater medical support issues.

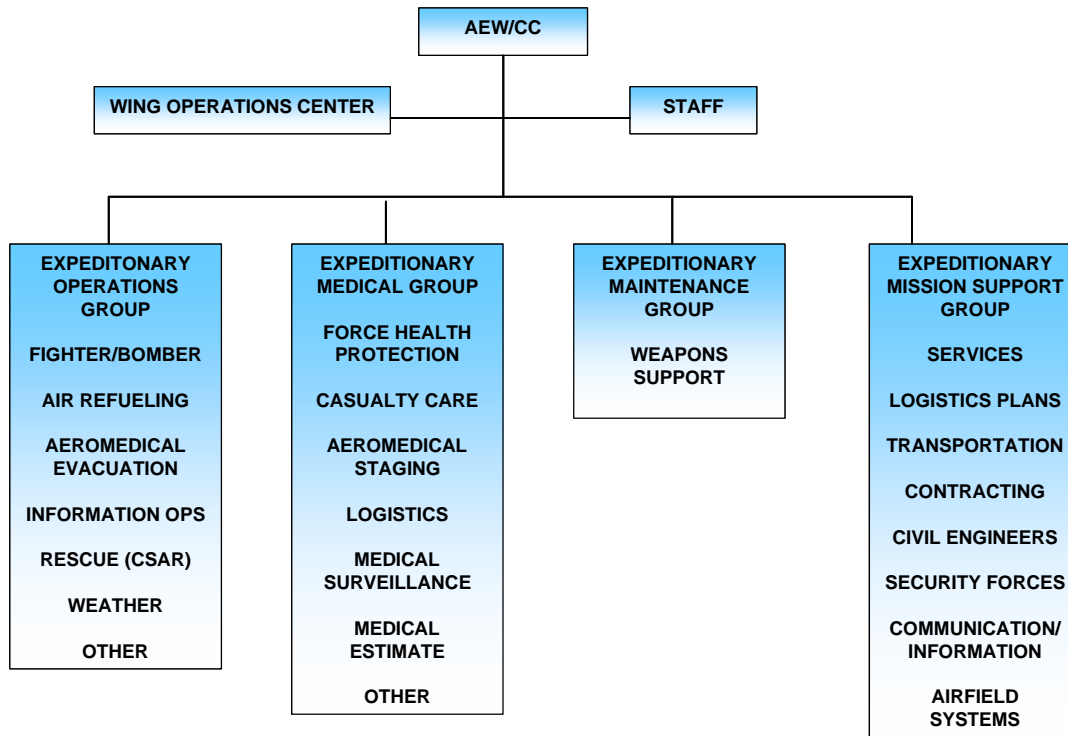


Figure 2.3. The Air and Space Expeditionary Wing

If an Expeditionary Medical Support (EMEDS) or AFTH facility is deployed to an existing site with a medical treatment facility (MTF), the DMC and the MDG/CC establish the framework for cooperative efforts among AF medical personnel.

Squadron Medical Elements (SMEs) or Independent Duty Medical Technicians (IDMTs) With and Without Deployed Medical Facility Support

SMEs and IDMTs are under the command and control of line commanders; specifically, the commander of the unit to which they are assigned. However, while they report to their line commander, they are a part of and contribute a valuable resource to the overall medical capability of a base or operating location. As such, SME and IDMT personnel are under the professional guidance of the DMC (vice ADCON or tactical control [TACON]) when deployed along side an Expeditionary Medical Support (EMEDS) or Air Force Theater Hospital (AFTH) facility. In these instances, the DMC establishes the framework for cooperative efforts among Air Force medical personnel at the deployed location, ensuring a seamless and continuous medical support system for the warfighter. **If no EMEDS/AFTH component is present, the senior medical officer (i.e., SME or IDMT) present is responsible for coordinating health service support activities.**

If SMEs or IDMTs are deployed to an existing site with an MTF, the DBMS exercises professional oversight of the SMEs and/or IDMTs. In these instances, the DBMS establishes the framework for cooperative efforts among Air Force medical personnel.

AFMS Support in Military Operations Without a COMAFFOR

Some military scenarios requiring medical support may involve Air Force medical personnel as the only AFFOR in an area of operations. An example is a humanitarian relief operation (HUMRO), in which an Air Force medical team, in support of a JFC mission, provides medical support to a host nation's indigenous population. UPHOLD DEMOCRACY is an example of this type mission. After the initial airlift of forces into Haiti, the primary Air Force presence was a medical unit.

In a situation of this nature, a medical commander is designated and the medical unit may be attached to the joint force commander (JFC) who exercises command authority over the Air Force medics. Or, the medical unit may be in direct support of the JFC mission and command authority resides within the supporting commander's channels. (Reference JP 0-2, *Unified Action Armed Forces [UNAAF]*, for additional discussion of command authorities and relationships.)

Air Force Medical Support for Special Operations Forces (SOF)

Air Force Special Operations Command (AFSOC) is unique in that it is aligned under a functional unified command, US Special Operations Command (USSOCOM). AFSOC functions as both an Air Force MAJCOM and as the air component of USSOCOM. With this type of relationship, command and control is dependent on the structure assigned for the given operation or mission. Traditionally, when AFSOF are tasked to perform joint force special operations component commander (JFSOCC) missions, C2 should be through an established joint special operations air component commander (JSOACC).

AFSOC operational medical personnel are under the command and control of the Air Force commanders. While they report to a line commander, they are part of, and contribute a valuable resource to, the overall medical capability of a base or operating location. In addition to providing medical support in a forward area, AFSOC medics perform casualty evacuation (CASEVAC) missions, assist with personnel recovery, and infiltration/exfiltration missions.

When collocated with conventional medical assets or in a joint arena, the AFSOC deployed medical commander or senior member establishes the framework for a joint cooperative effort. AFSOC medical personnel may be under the professional oversight of a conventional medical commander (i.e., the DMC) or the senior medical officer on the base or operating location for clinical issues; or where applicable, the joint special operations task force (JSOTF) surgeon. With the possibility of dual C2 and lines of communication at one operating location, it is essential medical roles and missions be communicated and an operating framework established.

Air Reserve Component (ARC) Personnel

Under full mobilization, full ADCON authority goes to the COMAFFOR. Under less than full mobilization, the COMAFFOR receives specified ADCON, which includes Uniform Code of Military Justice (UCMJ) authority, force protection requirements, and other specific authorities written in G-series orders. The Air Reserve Component (ARC) retains all other ADCON authorities. The DMC may also receive specified ADCON (with UCMJ authority), written in G-series orders, for ARC personnel deploying in support of a deployed medical facility.

Aeromedical Evacuation (AE) Command and Control

Command and control functions exercised over AE missions are consistent with those for all air mobility missions and are handled in accordance with the C2 structures described in JP 3-17, *Joint Doctrine and Joint Tactics, Techniques, and Procedures (JTTP) for Air Mobility Operations*; AFDD 2, *Organization and Employment of Aerospace Power*; AFDD 2-6, *Air Mobility Operations*; and Air Force Tactics, Techniques, and Procedures (AFTTP) 3-42.5, *Aeromedical Evacuation*.

C2 of AE assets, to include tasking authority for AE and mobility forces, reside with the normal C2 structure for that component. Decisions that affect patient medical care or destination medical facilities takes place with the advice and coordination of the Patient Movement Requirements Centers (PMRCs). The Tanker/Airlift Control Center (TACC) or Air Mobility Operations Control Center (AMOCC), or theater equivalent, provides C2 for air mobility assets used to accomplish AE missions within their respective areas of operation. AE cells should be established within each of those organizations to provide the critical link between C2 and the PMRCs. (If an AE cell is not established or present in the peacetime organization, the theater MAJCOM's AE squadron, as an extension of the Air Mobility Division, provides the link between C2 and the PMRC.) When medical requirements warrant changes to a specific AE mission, those changes are coordinated through the AE cell within the appropriate airlift control center (TACC, AMOCC, or air and space operations center [AOC]).

Patient Movement Requirements Centers (PMRCs)—Global, Theater, and Joint

The PMRC is a joint activity that coordinates patient movement. It is the functional merging of joint medical regulating processes, Services' medical regulating processes, and coordination with movement components for patient evacuation. PMRCs are the single responsible agents in their respective theaters or area of responsibility (AOR) for collaborative patient movement planning, patient movement management, and patient in-transit visibility (ITV). PMRCs should exist at the joint level as an element of the joint movement center. PMRCs have the authority to ensure lift and bed requirements are communicated to supporting agencies, healthcare facilities, and government agencies within their AOR. Transfer of patient accountability occurs when the patient enters the receiving PMRC's AOR. The PMRC may be

joint, reporting to the joint task force surgeon; theater, reporting to the theater surgeon (TSG); or global, reporting to the US Transportation Command (USTRANSCOM) surgeon (TCSG).

CHAPTER THREE

PLANNING CONSIDERATIONS

OVERVIEW

This chapter addresses some of the planning activities and considerations to be taken into account when developing the health service support plan for any military operation. It begins with a brief discussion of the medical planner's role in ensuring an effective and efficient casualty care system is in place to support operations. The remainder of the chapter addresses some of the specific considerations to be made by the planner, which includes: medical intelligence and the medical estimate; human performance, sustainment, and enhancement (HPS/E) issues; medical logistics and blood support operations; patient movement items (PMIs), and postconflict operations.

MEDICAL PLANNERS

Medical planners play a key role in the deliberate and crisis action planning process. They must understand and apply health service support and force health protection principles when planning military operations. They should use appropriate planning factors and build scenarios and load plans that reflect modern threats and warfare. Medical planners must also understand and apply interagency relationships relating to joint and multinational operational planning. Additionally, medical planners evaluate and assess combatant commander's medical preparedness and prepare the medical portion of an OPLAN (Annex Q).

Medical planners should be trained in and knowledgeable with Air Force and joint doctrine and systems. They must understand all the peripheral planning considerations, i.e., logistics, transportation, base operating support, etc. Additionally, it is key to be well versed in the systems and applications that make the plan a reality (e.g., Joint Operation Planning and Execution System (JOPEs), time-phased force and deployment data (TPFDD), Medical Analysis Tool (MAT), Global Command and Control System (GCCS), etc.). Medical planners may be in key positions at numbered air forces (NAFs), major commands (MAJCOMs), and Air Staff.

Medical planners should know and understand what the AFMS is able to contribute to any military operation. This requires a firm understanding of AFMS core competencies and the proper employment of capabilities. The international health specialist (IHS) can be a valuable resource to the medical planner during the planning and execution phases of medical operations. This collaborative effort helps ensure a seamless casualty care system is in place.

Medical planners are key to providing a seamless casualty care system, where interface points between other combat support units are transparent. To accomplish this, planners must overcome hurdles to ensure planning, communication, and coordination are accomplished between deployed commanders of conventional medical assets, AE personnel, squadron medical elements (SMEs), independent duty medical technicians (IDMTs), and special operations forces

(SOF) medical assets, at all levels of care. All these players come together to ensure that our casualty care system is effective and efficient.

MEDICAL INTELLIGENCE

Medical intelligence is the product resulting from collection, processing, integration, analysis, evaluation, and interpretation of available information concerning foreign medical, infectious disease, biotechnological, and environmental information. The purpose of medical intelligence is to conserve the fighting strength of friendly forces; support policy formulation, strategic and medical planning, and tactical operations; and to assess foreign health care systems in both military and civilian sectors. Medical intelligence uses all-source intelligence to include human intelligence (HUMINT), signals intelligence (SIGINT), imagery intelligence (IMINT), open-source intelligence (OSINT), and measurement and signature intelligence (MASINT). **Medical intelligence reports, in some cases, require security clearances and special handling and dissemination of the information. That said, security is critical when using intelligence of any classification.** Even unclassified intelligence is considered sensitive to public dissemination.

In addition to these uses for medical intelligence, nuclear, biological, and chemical (NBC) medical defense and biotechnological development assessments require a paradigm shift in how these assessments should be used. These assessments add a new dimension to what medical intelligence can add to AFMS's toolbox. For instance, research and development (R&D) requirements can be determined using medical or military intelligence. Intelligence on technological advances of foreign countries provide insight into new or different uses for these technologies and can be used to enhance medical support to the US military or to identify areas where medical defense or countermeasures may require R&D actions to further develop our capabilities.

Certain limitations exist on all intelligence, including medical. Medical intelligence does not provide approved/authorized prophylaxis, recommended medical treatment protocol, or medical policy/doctrine. However, since medical intelligence defines the operational environment and determines the risk in an area, it can be used in combination with known factors or other information to provide a viable medical threat estimate for the commander.

Medical intelligence should be used in combination with other intelligence such as public health infrastructure of an area to provide long-term standing requirements, deployment-specific requirements, or short notice requirements. Medical or military intelligence will be limited because of lack of requirements within the intelligence community and assets to collect those requirements. Therefore, it is critical to identify and request medical or military intelligence in support of medical operations as early as possible to ensure the best possible intelligence in support of the medical threat estimate.

MEDICAL THREAT ESTIMATE

AFMS personnel (e.g., medical intelligence officers) provide a medical threat estimate to the commander for all three deployment stages of forces into an area of operations: predeployment, during deployment, and post deployment. The medical threat estimate provides a clear picture of the entire spectrum of medical issues for forces associated with any given deployment, thus ensuring force health protection.

The estimate must include a thorough description of the human performance threats in anticipated operational environments such as sustained operations, crew scheduling, combat stress, night operations, and operational intelligence with human performance considerations (e.g. laser and NBC threats). To ensure the most accurate medical threat estimate, intelligence requirements must be defined, refined to the specific situation, and tailored to meet the current deployment. **It is critical that the medical threat estimate is current and as definitive as possible** to ensure that personnel are not exposed to threats that will cause adverse health impact during the mission and after the mission is complete.

Medical threats come in many forms. Threats can be genetically engineered or naturally occurring. To continuously define and monitor the medical threats in an area, intelligence must be timely, current, and specific to the area of interest. Finished intelligence products provide the risk within the area or to the individual from the operational environment. In addition to current or estimative intelligence, support derived through current deployments threat data in that same area is vital for accuracy of the medical estimate. This data may include information on risk-based NBC surveillance, detection, and abatement, and evaluation of deployed maintenance operations, medical intelligence, illnesses, injuries, food, water potability, and NBC detection and protection, including personal protective equipment capabilities, decontamination systems, and recovery.

The threat estimate should also include a thorough description of potential impact of the physical environment (e.g., ambient temperature, altitude, and humidity) on human performance. Another major concern is the operational environment of the deploying forces. The threat estimate should include toxic industrial chemicals (TICs) or toxic industrial materials (TIMs) within 10 kilometers of the deployed forces. These environmental hazards can contaminate the soil, water, and air at the deployment site and therefore, directly affect the force's ability to sustain military operations. These hazards can drive work-rest cycle changes and other additional countermeasures affecting commanders' decisions regarding personnel, environmental surveillance and monitoring equipment, base locations, documentation, and other resources.

The medical threat estimate should help direct decision-making about the selection of, and placement of, forces into a deployment site. The medical threat estimate should include medical and military intelligence that is current and should forecast future actions, current tactical information of forces at the deployment area, and other Services' medical data (e.g., US Army Center for Health Promotion and Preventive Medicine [USACHPPM]).

HUMAN PERFORMANCE, SUSTAINMENT, AND ENHANCEMENT (HPS/E)

During the transition from in-garrison health care to in-theater or deployed operations, personnel perform intense set-up operations in a new environment to which they have not adapted. Special attention to HPS/E for health and safety risks must be considered. Essential participation by medical personnel throughout bed-down planning activities helps maximize HPS/E from the very onset of field operations.

MEDICAL LOGISTICS AND BLOOD SUPPORT OPERATIONS

The expeditionary medical logistics system was designed, and is executed, to provide support and sustainment to air and space expeditionary force (AEF) forces. To meet this requirement, medical logistics personnel must have the knowledge and training to successfully sustain a deployed medical force through the full spectrum of military operations. The medical logistics function includes planning for blood and other transfusion products. It is imperative that planners and medical personnel understand logistics and blood distribution processes in order to meet the deployment and sustainment challenges of AEF forces. (Reference AFTTP 3-42.8, *Medical Logistics and Blood Support Operations*, for additional information.)

Expeditionary Medical Logistics (EML)

The Expeditionary Medical Logistics (EML) system consists of two main concepts, focused logistics and agile combat support, which provide tailored logistics packages to the deployed medical unit by utilizing a predetermined supply chain. Both concepts are required to meet AEF deployment and sustainment challenges.

Focused logistics is the combination of information and logistics technologies to ensure required materiel arrives at the right time, at the right place, every time, no matter where or at what level the conflict. The primary goal of focused logistics is a compression of the customer wait time. To achieve this goal, customers and suppliers must employ effective information management practices and have timely access to reliable and secure telecommunication channels.

The focused logistics supply system uses high velocity, time definite transportation to manage mission and logistic requirements while minimizing the reliance on stockpiles. New transportation systems will enable the shift from supply-based systems to direct vendor or prime depot delivery.

Agile combat support is the second concept supporting EML and it is crucial to the Air Force philosophy of power-projection—the deployment of Air Force personnel primarily from the CONUS. Agile combat support is the rapid movement of required materiel directly from “factory to flight line,” providing a “reachback” sustainment capability for medical and other deployed personnel, which allows for a much smaller logistical footprint in the operating theater.

The EML process uses a sustaining base to receive a deployed medical unit's requirements and to process orders to approved vendors or depots that meet strict Air Force availability, time, and shipping criteria. Commercial transportation is used as far forward as possible and may connect with the military transportation system.

The number of nodes and hand-offs must be minimized and consolidation points must be avoided when possible to allow materiel to flow rapidly and nonstop. Reliable worldwide telecommunication support and Internet access are essential to facilitate information flow among system users throughout the supply chain and to ensure in-transit visibility (ITV) of materiel. The EML system is the linking process for a complex supply chain.

The Air Force Medical Logistics Operation Center (AFMLOC) is the center for Air Force medical supply chain management. The AFMLOC is the focal point for coordinating and integrating medical logistics planning and support. The AFMLOC functions as the supply chain manager and creates and maintains responsive, visible sustainment to the theater combatant commander and to the deploying/deployed forces. The AFMLOC synchronizes information, commercial technology, logistics, and transportation strategies to meet the full spectrum of operational requirements.

Medical Logistics Management Center (MLMC)

In theater, there may be a jointly staffed Medical Logistics Management Center (MLMC) linked to the combatant commander, joint task force (JTF)/SG, AFFOR/SG, deployed medical units, CONUS sustaining base, and the AFMLOC. The MLMC supports the theater medical logistics manager in providing medical asset visibility and in facilitating materiel movement.

Blood Distribution System

Each of the Services maintains a blood program and maintains its own Food and Drug Administration (FDA) license for the manufacture of blood and blood products. The Air Force Blood Program is a key peacetime and wartime linchpin for the Armed Services Blood Program. The blood distribution system is a joint, integrated system that assures blood in the required amounts is delivered when and where needed. (See figure 3.1.)

Blood is planned as a medical logistics function; however, blood is a living tissue and requires special handling, storage, and shipment to maintain its viability. Hence, the receipt, storage, and distribution of blood products require special consideration and procedures to ensure a successfully coordinated effort.

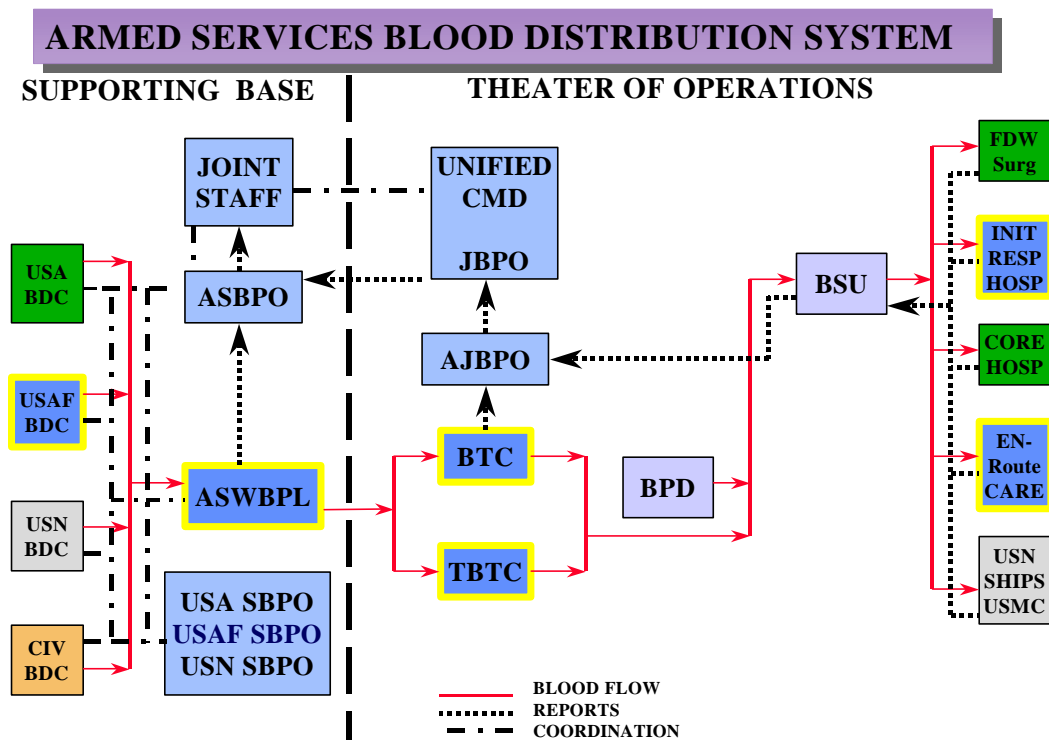


Figure 3.1. Blood Distribution System

Theater blood management is the responsibility of the Joint Blood Program Office (JBPO), which is a member of the unified command surgeon's staff. There is also one or more Area Joint Blood Program Offices (AJBPOs) in a theater that coordinates blood management within their respective geographic area. The AJBPO reports to the JBPO for blood management functions.

Patient Movement Items (PMIs)

PMI are the jointly designated supplies and equipment necessary to support patient movement and aeromedical evacuation (AE). Medical logistics personnel manage inventory availability (at PMI centers and cells), asset visibility, and flow of PMI through available transportation methods to meet requirements. (Reference AFTTP 3-42.5, *Aeromedical Evacuation*, for additional information.)

A major factor in the movement of patients through the levels of care is to ensure specific medical equipment and durable supplies designated, as PMI are available. The PMI system supports the in-transit patient care capability without removing equipment from patients, exchanges like-kind PMI without degrading medical capabilities, and provides prompt recycling of PMI. The system provides a seamless in-transit patient and/or equipment management process from initial entry into AE to the patient's final destination.

Due to the small footprint of some medical facilities, providing medical supplies and equipment to accompany patients through the evacuation process may be difficult. Therefore, PMI should be coordinated in advance with the AE system, since most items can be provided from the AE staging base. PMI accompanies a patient throughout the chain of evacuation, from the originating MTF to the destination MTF. PMI centers “push” equipment to the forward locations where patients encounter the AE system. During contingency operations, the AE cell under the theater combatant commander, directs the PMI activities for that theater.

POSTCONFLICT OPERATIONS

The AFMS plans for and maintains the ability to support postconflict operations. All base services and force protection measures remain until all personnel have departed from a deployment site. Planning begins prior to deployment and continues throughout the mission or conflict, and includes:

- ✦ **Reconstituting health records.** Health records must document all health-related incidents and occupational and environmental exposures sustained by an individual while deployed. This is critical to follow-up health care of returning forces.
- ✦ **Preparing for retrograde movement.** Units returning to home station must perform decontamination, pack equipment, mark items for refurbishment or disposal, and arrange for disposal of hazardous waste following theater guidance and plans.
- ✦ **Conducting medical surveillance.** Effective, comprehensive, medical surveillance includes collecting relevant postdeployment health information from returning individuals. This ensures a valid database that can be used to provide comprehensive individual health care and to ensure a complete and reliable medical intelligence database for future deployments and retirement records.
- ✦ **Repatriating.** Every major US military conflict includes the possible event of capture and detention of US forces. AFMS personnel must plan for and be prepared to provide appropriate follow-up care to repatriated US prisoners of war (POWs), to include their families, who also need health support during and after the conflict.
- ✦ **Redeploying.** During redeployment activities, Air Force personnel may encounter numerous demands to attend to the needs of the indigenous population. Close coordination and cooperation among military forces and government or non-government (NGOs) agencies are particularly critical during the transition period when forces are redeploying and functions begin transferring to nonmilitary organizations.

CHAPTER FOUR

FORCE HEALTH PROTECTION (FHP)

OVERVIEW

Force health protection (FHP) is a “total life-cycle” health support system that addresses all health-related threats affecting the combat force and the supporting community before, during, and after deployment. Although FHP is a joint concept, the discussion in this chapter represents the Air Force’s view of FHP and the activities that support it.

The human performance, sustainment, and enhancement of combat and support forces requires the same level of care as any other military weapon system. In this sense, Air Force personnel are viewed as a “human weapon system.” FHP is the life-cycle maintenance program for this human weapon system with casualty prevention as a primary focus. The life cycle maintenance program in figure 4.1 represents a continuous health surveillance program of disease and casualty prevention, workplace health and safety, health promotion, and medical intervention.

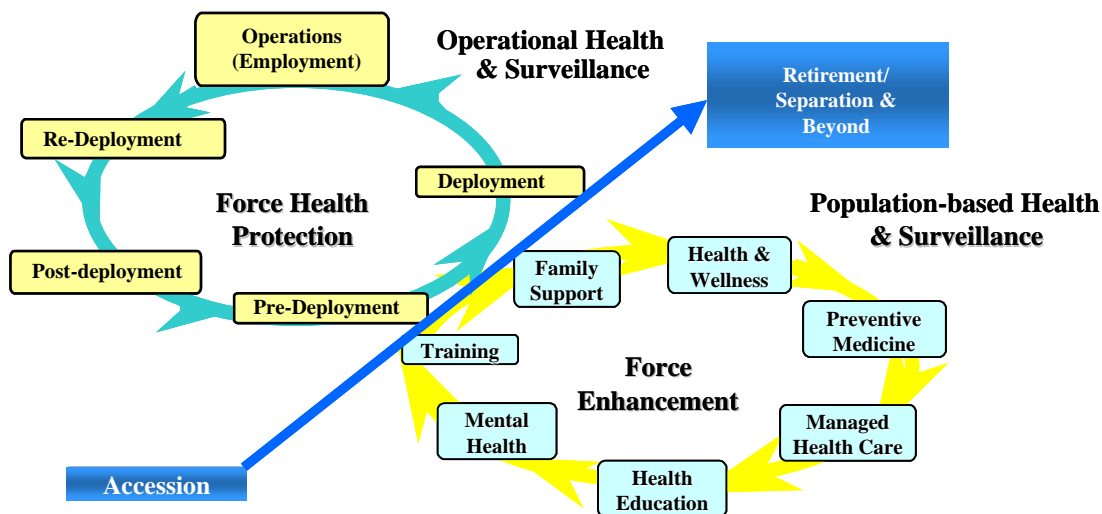


Figure 4.1. Human Weapon System Life-Cycle Maintenance Program

The AFMS doctrine of FHP provides the construct for a health service support system that provides a fit and healthy force when and where the mission requires it while simultaneously creating a medical force that is technologically advanced, smaller, and mobile. FHP, a more proactive doctrine, represents a significant departure from the more reactive, conventional combat medicine because it:

- ✦ Institutes programs to develop and support healthy and fit service members and families.
- ✦ Emphasizes prevention of injury and illness while maintaining an exceptional casualty management system.
- ✦ Employs concepts that call for essential care in the theater and evacuation to definitive care outside the theater of operations.

FHP is about much more than clinical medicine. First and foremost, FHP involves enhanced methods of preventing casualties before, during, and after a military operation. It does this through a full spectrum of health services that:

- ✦ Emphasize workplace safety, fitness, preparedness, and preventive measures.
- ✦ Improve the monitoring and surveillance of threats and forces engaged in military operations.
- ✦ Enhance service members' and commanders' awareness of health threats before they can affect the force.
- ✦ Develop and implement evidence-based countermeasures to prevent or mitigate health threats and other medical, dental, or psychological causes of noneffectiveness to operational forces.
- ✦ Support the health needs of the fighting forces and their families across the continuum of medical services.

In this way, FHP has been the catalyst for a fundamental reorientation of military medical forces—toward proactive, preventive services that strive to prevent casualties. It is designed to improve existing health; proactively address medical threats; and to provide care for any illness or injury that does occur. **FHP doctrine is described in terms of three “pillars”: a healthy and fit force, casualty prevention, and casualty care and management.** (See figure 4.2.) Each of these medical support concepts is so inextricably linked that successful FHP development should proceed in a way that the pillars rise in a balanced and planned manner.

Force Health Protection



Figure 4.2. Three Pillars of Force Health Protection

HEALTHY AND FIT FORCE

A healthy and fit force is the necessary precondition for all other elements of FHP. The most important weapon system in the US military is people, and their health and fitness is the basic guarantor of military success at all levels of engagement.

The first pillar of FHP supports warfighting commanders with a healthy and fit force. Promoting wellness and ensuring quality of life to strengthen the human component of our forces against disease and injury provides a healthy and fit force that is mission-ready and reliable in body, mind, and spirit. Fit and healthy personnel are more resistant to illness, less prone to injury and the influence of stress, and better able to quickly recover should illness or injury occur. Creating a healthy and fit force starts at entry to the Service. Maintaining such a force requires both a commitment from individual Service members and commanders plus a sustained effort from the entire spectrum of military health services before, during, and after deployment—through to retirement.

Personnel in a healthy and fit force maintain and improve the health of their bodies and minds in a supportive environment. Developing a healthy “body” requires attention to physical fitness, injury prevention, workplace hazards, disease prevention, nutrition, and dental health. Service members with a healthy mind maintain their cognitive, behavioral, emotional, and spiritual health. Finally, a supportive environment provides the means for individuals to achieve

health goals by including occupational and environmental health as well as aspects of community and family relationships.

Medical forces focus their resources and capabilities on supporting commanders' efforts to build a fully fit force. Implementation of healthy and fit force concepts assures commanders that they have an operational force with an unsurpassed level of fitness for the highest overall military capability and effectiveness.

CASUALTY PREVENTION

Effective implementation of the second pillar of FHP (i.e., casualty prevention concepts) prevents casualties from combatant environmental, occupational, operational, nuclear, biological, and chemical warfare threats.

Casualty prevention, a force-multiplying tool for commanders, is essential throughout the health life cycle of Service members. Before deployment, good health requires control of environmental and occupational threats to prevent casualties and help maintain a healthy and fit force. Additionally, successful casualty prevention requires an understanding of the changing nature of deployed forces. The old notion that deployed military forces are primarily composed of healthy, young males is only partly valid today. Based on an increased presence of reserve components and civilian contractors, and the greater diversity of skills filled by female Service members, deployed forces are somewhat older, more representative of the civilian population, and much more diverse. FHP must accommodate changes in the demographics of the deployed force.

During deployment, the enemy and the "total" environment both generate threats to the forces. The enemy threat produces most combat-related casualties commonly called battle injuries (BI), while the total environment threat produces disease and nonbattle injury (DNBI) casualties. DNBI's historically have accounted for three-quarters or more of battlefield admissions (69 percent in Vietnam, over 95 percent in World War II and Somalia). Prevention of DNBI casualties requires the full commitment of individual Service members and unit commanders. Medical unit support for preventing DNBI's includes refined military medical surveillance and objective exposure measurements to identify DNBI threats, determine effective methods of threat assessment, and develop countermeasures to meet actual and potential threats.

Good doctors are no use without good discipline. More than half the battle against disease is fought, not by the doctors, but by the regimental officers.

***--Field Marshall the Viscount William J. Slim,
British Army Commander in Burma, 1943***

Prevention of DNBI casualties historically has focused on reducing or eliminating the risk of food-, water-, waste-, and insect-borne illnesses, and heat and cold injuries during deployments. However, OPERATION DESERT SHIELD/DESERT STORM demonstrated the need to also place a much greater emphasis on environmental and occupational exposures,

combat stress, and nonbattle injuries. Following the several fundamental tenets of casualty prevention will lower DNBI rates and sustain the health and fitness of the fighting force. These are:

- ✦ **Control of Disease and Nonbattle Injury is a Command and Individual Responsibility.** Virtually all DNBI prevention is done through the actions of individual Service members and commanders to control or eliminate the threats. Medical personnel identify potential threats, develop courses of action, and advise commanders of the risks and threat countermeasures. Commanders must decide how they will use the advice and ensure that their units carry out the actions required.
- ✦ **Identifying Preventable Threats and Implementing Countermeasures.** This is the realm of preventive medicine. Preventive medicine teams should be highly deployable, light, and mobile. To be effective, preventive medicine teams need automated information support systems, equipment designed for rapid detection and on-the-spot evaluation of environmental and biological threats, and protective devices. Access to essential deployable computer systems with environmental exposure data and unit locations is critical. Security is a must when information is transmitted virtually.
- ✦ **Infectious Disease Prevention.** Throughout predeployment and deployment, potential and emerging infectious diseases need to be addressed in a timely manner and appropriate countermeasures implemented. As such, medical providers must be skilled in recognizing diseases that are endemic in other parts of the world, but not here in the US. Infectious disease resulting from deployment may not be immediately apparent upon an individual's return. Therefore, military personnel returning from deployment should participate in necessary vaccination/chemoprophylaxis programs to minimize the threat of postdeployment infections. Deployment history must become a permanent part of the medical record.
- ✦ **Mental Health Casualty Prevention.** Mental health problems and appropriate medical intervention throughout all phases of deployment are critical to mission success. Preventive interventions for individuals and units include proactive stress management; voluntary and command-directed counseling; family support services, to include spiritual counsel; support from family and friends through available media; activation of an existing spouse support network; personnel input into rest and relaxation policies and schedules; and critical incident stress debriefings.
- ✦ **Total Environmental and Occupational Health Casualty Prevention.** Collection and analysis of objectively measured levels of total chemical, biological, and physical exposures are required to determine the risk of the total exposure load. Environmental and occupational exposure testing and monitoring are continuous processes prior to and throughout the deployment life cycle. Analysis of the operational environment is the key to determining environmental hazards. Occupational health and occupational medicine specialists should be present in all phases of deployment (as well as home-base security)

to readily assess potential toxic exposures in real time and identify and implement appropriate countermeasures.

- ✦ **Nonbattle Injury Prevention.** FHP calls for the identification of all injuries likely to impede the attainment of mission objectives or result in hospitalization or recurrent injury. This identification should use all available sources of health intelligence to determine high-risk threats. NBIs can significantly impair the achievement of mission objectives. To prevent this, a risk management plan must emphasize general safety practices aimed at greatly reducing NBIs during the deployment cycle.
- ✦ **Risk Communication.** Risk communication is essential to threat identification and casualty prevention. All risks must be clearly and appropriately communicated to deploying Service members and to the chain of command. Commanders should receive feedback throughout the deployment cycle from preventive medicine staff regarding preventable threats and countermeasures. Medical staff should ensure that the range of preventable threats is prioritized and commanders are made aware of the risks that could affect operations.

Casualty prevention is a continuous life-cycle process conducted during predeployment, deployment, and postdeployment phases. Comprehensive, continuous military health surveillance, including collection, analysis, and recording of objectively determined exposure levels, is necessary to counter DNBI threats, which can dramatically affect the health of military personnel. An effective casualty prevention program is an operational force multiplier.

CASUALTY CARE AND MANAGEMENT

Casualty care operational strategies include a limited forward medical presence with deployable capability that is lighter, capable, flexible, and mobile. In support of these new strategies, the third pillar of FHP, casualty care and management, supports the warfighting commanders through essential care in theater and rapid aeromedical evacuation to definitive care without sacrificing quality of care. FHP integrates new and emerging technologies with operational health service support and more flexible casualty management to provide exceptional healthcare throughout all phases of deployment.

The third pillar of the FHP doctrine builds on the traditional strengths of military medicine by using new technologies and mobility to achieve a lighter, faster, more responsive medical capability. The **major components of casualty care** comprise a continuum of essential care to stabilize casualties in theater. The continuum begins with the medical first responders supporting basic prevention and caring for both DNBI and combat casualties as quickly and as close to the point of injury as possible. **Medical first responders** provide initial essential care, are intimately involved in advising commanders about unit and individual prevention techniques, and request help to control preventable threats beyond unit capabilities.

The second major component of casualty care is **forward resuscitative surgery** designed to provide life- and limb-saving surgical procedures to attain clinical stability prior to

evacuation to theater hospitals. Clinical stability is achieved when a patient’s airway is secured, hemorrhage is controlled, shock is treated, and fractures are immobilized.

The third major component of casualty care is the **Air Force Theater Hospitals** (AFTHs). AFTHs are of modular design and consist of robust “core” segments and mobile “breakout” segments (e.g., EMEDS Basic, EMEDS +10 beds, +25 beds, etc.) whose medical capability can be tailored to meet the requirements of any contingency or military operation, requiring minimal lift for deployment.

Casualty care and management concepts focus on delivery of essential care in theater and evacuation to definitive care outside the theater of operations as soon as practicable. (See figure 4.3.) Theater hospitals are designed for deployment to locations near major transportation hubs to allow easy access to evacuation assets. All components of the casualty care and management pillar are fused together into a continuum of essential care by a critical-care-capable evacuation system. Casualty evacuation forward of level three is a service responsibility, but aeromedical evacuation (AE) of patients may occur as far forward as there is a secure airstrip. Depending on the concept of operations, flow and availability of airlift and AE support, the patient may be evacuated directly to definitive care. **En route care** teams (e.g., AE crews, critical care air transport teams [CCATTs], service specific advanced care teams, etc.) sustain the level of care initiated prior to evacuation without interruption and prevent patients’ conditions from deteriorating during evacuation.

This doctrine of providing essential care in theater and evacuation to definitive care outside the theater of operations as soon as practicable enables planners to reduce the lift requirements for deploying medical forces into theater but may increase the casualty evacuation requirements out of theater.

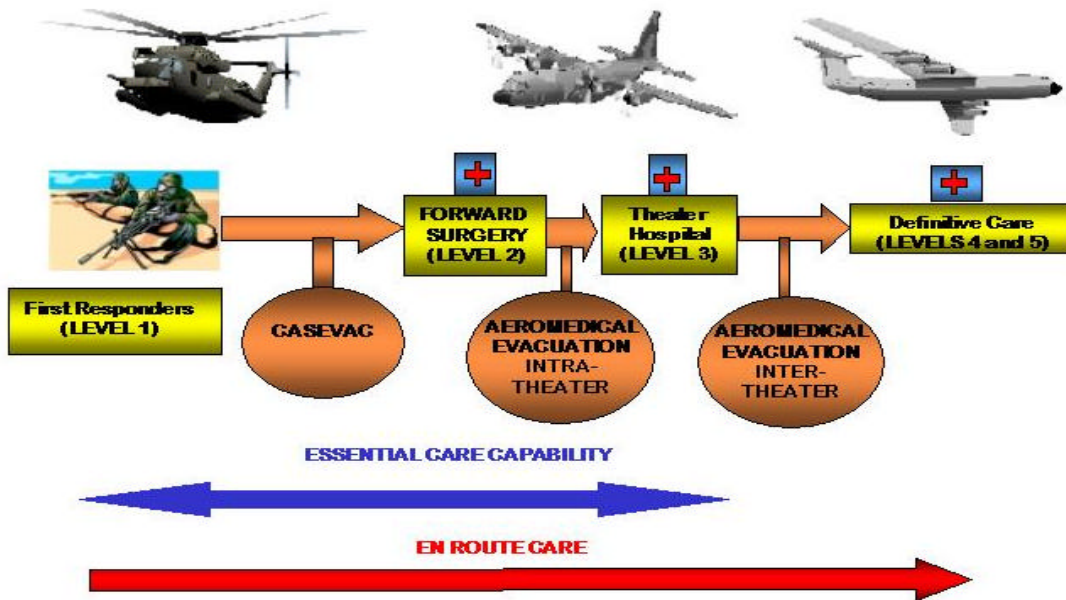


Figure 4.3. Notional Continuum of Casualty Care and Management

FHP ROLES AND RESPONSIBILITIES

The AFMS, through implementation of FHP concepts, is a “force multiplier” for commanders. Supporting the Air Force mission includes provision of top quality medical services on a daily basis to airmen and their families, ensuring airmen are ready to deploy at any time. As such, the AFMS also has the responsibility for screening the force for disqualifying conditions and then in a timely fashion, evaluating them and either correcting them or adjusting the member’s deployability rating.

Preventing disease and injury, appropriately managing stress, promoting healthy lifestyles, and enhancing human performance—physically, mentally, and spiritually—through integrated base support services and wellness centers are key to mission readiness. AFMS personnel provide the background knowledge and tools to support FHP initiatives, but individual Service members (i.e., airmen), supervisors, and commanders at every level must take ownership of these vital issues for implementation.

Airmen

As the core component of the organization, airmen ensure their unit succeeds in its mission. Airmen:

- ✦ Maintain individual health and fitness.
- ✦ Encourage peers, families, and organizations to lead healthy, fit lifestyles.
- ✦ Seek appropriate health care when required.
- ✦ Recognize occupational and environmental health risks and take appropriate protective actions.
- ✦ Are responsible for maintaining currency with required immunizations and wearing required personal protective equipment.

Participation in local base health, wellness, sports, and fitness programs will assist airmen in maintaining emotional and physical fitness.

Supervisors

As an intermediate level of leadership, supervisors monitor subordinates to ensure they meet standards and intervene as appropriate. Supervisors:

- ✦ Ensure individuals receive health care when required.
- ✦ Exemplify and emphasize individual health and fitness maintenance.

- ★ Provide time for airmen to maintain health and fitness standards.
- ★ Recognize factors that negatively impact human performance.
- ★ Improve the work environment and equipment design.
- ★ Reinforce or reward individuals or units for healthful behaviors and performance enhancement initiatives.
- ★ Promote an organizational climate conducive to good health and fitness responsibilities and to maintaining a safe workplace.

Base agencies play an active role in promoting the health, safety, and wellness of warfighters, support personnel, family members, and other beneficiaries. Supervisors are aware of programs available through these agencies or the availability of other programs in the community to help and encourage subordinates to participate. These include, but are not limited to, health promotion programs, family support and services, fitness centers, recreation centers and activities, chaplain services, childcare, and the health and wellness centers (HAWCs).

Commanders

Commanders are ultimately responsible for the morale, health, and well being of their troops. Commanders:

- ★ Balance individual and organizational health and fitness with unit mission requirements.
- ★ Ensure timely response to the needs of airmen and their families.
- ★ Ensure personnel are aware of health threats and that they participate in prevention programs.
- ★ Ensure troop fitness by applying programs to prevent DNBI.
- ★ Ensure his/her unit's individual readiness requirements are met.
- ★ Ensure individuals receive health care when required.
- ★ Ensure human performance measures are in place that develop and maintain a safe, healthy and fit force.

The necessary tools, such as prevention-oriented health programs and population-based health care delivery, are in place to support the forces across the entire spectrum of military operations. All commanders should ensure participation in periodic physical, medical, and dental assessments to achieve optimal compliance with health and fitness standards.

CHAPTER FIVE

AFMS CORE COMPETENCIES

Core competencies are at the heart of the AFMS's strategic perspective and thereby at the heart of the Air Force medical contribution to our nation's total military capabilities. Core competencies are not doctrine per se, but are the enablers of our doctrine. **Our core competencies represent the combination of professional knowledge, medical expertise, and technological know-how that, when applied, produces superior health service support capabilities.** Core competencies are the basic areas of expertise that the AFMS brings to any activity across the range of military operations. They are made possible by the effective integration of people, research and technology, bases, logistics, and all supporting infrastructure. AFMS core competencies are:

- ✦ Fixed-wing Aeromedical Evacuation
- ✦ Expeditionary Medical Care in Military Operations
- ✦ Interface with World Health Care
- ✦ Human Performance, Sustainment, and Enhancement
- ✦ Population Health

What distinguishes the AFMS core competencies from the core competencies of other Services are the speed and the global nature of their reach and perspective. In this context, the competencies represent medical capability embodied in a well-trained and well-equipped AFMS. The AFMS's fundamental service to the Air Force and the nation is its ability to develop, train, sustain, and integrate the elements of health service support across the spectrum of military operations. AFMS core competencies are expressed within the context of the Air Force core competencies, directly supporting them. (See figure 5.1.)

When AFMS capability is employed, an element of more than one competency may be demonstrated. For example, following the USS Cole incident, the mission to retrieve US Service members from the French hospital was accomplished by converting the back of a C-9 aircraft into a "flying ICU," complete with critical care air transport teams (Core Competency: Fixed-wing AE). Additionally, French speaking AFMS physicians, who had studied in France and understood cultural sensitivities, went as part of the medical team (Core Competency: Interface with World Healthcare) and interacted with French line commanders and medical personnel, facilitating the transfer of the Service members to US medical care.

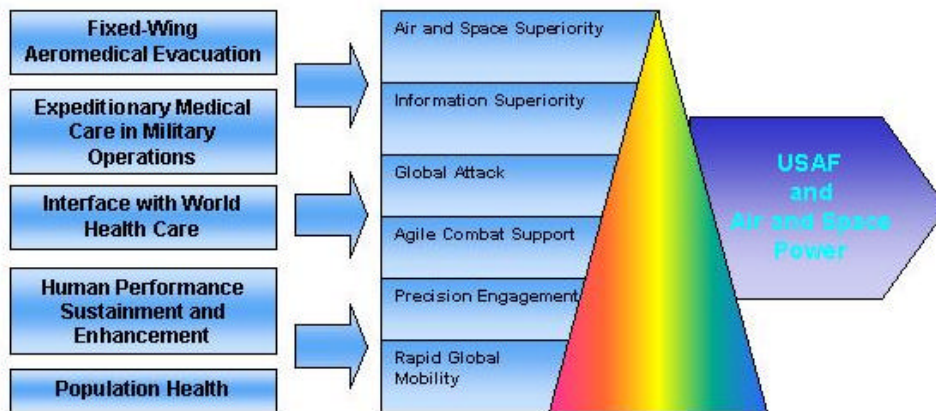


Figure 5.1. Enabling Air and Space Power

CHAPTER SIX

FIXED WING AEROMEDICAL EVACUATION

MISSION AND CAPABILITIES

The Air Force AE mission is to rapidly evacuate patients under the supervision of aeromedical evacuation crewmembers (AECMs) by fixed-wing aircraft. Air Force AE is one component of the larger DOD patient movement system. Refer to AFTTP 3-42.5, *Aeromedical Evacuation*, for tactical doctrine on AE of patients.

AE can operate as far forward as fixed-wing aircraft are able to conduct air/land operations. The evacuation can be from forward airfields in the combat zone to points of definitive medical care also within the combat zone (intratheater); from the combat zone to medical care in the communications zone (COMMZ) (intratheater or intertheater, depending on the theater); or from the COMMZ to either an intermediate supporting theater or on to the CONUS (intertheater). Depending on the concept of operations, flow and availability of airlift and AE support, the patient may be evacuated directly to definitive care.

AE forces provide a rapid, flexible, incremental, mobile response and can significantly improve casualty recovery rates by providing rapid transportation with appropriate en route care of the sick and wounded to more advanced medical facilities for treatment. AE forces are incrementalized and can build from a small liaison team to a full theater aeromedical evacuation system (TAES). The initial expeditionary AE assets can deploy far forward, are mobile, and support various medical ground units of all Services. AE elements are employed to provide command, control, communications, patient care, and system support. Force packages are developed based on a modular, "building block" principle.

Air Force AE delivers movement capability while maintaining a broad spectrum of medical capabilities for patients. The Air Force AE system provides: (a) control of casualty movement by fixed-wing transport; (b) AE personnel and equipment for in-flight supportive patient care and ground support operations; (c) Critical Care Air Transport Teams (CCATTs) to monitor and manage patients requiring intensive care; (d) facilities and personnel on or in the vicinity of airheads and air bases for the administrative processing, staging, and limited medical care of casualties entering or transiting through the AE system; (e) command and control of all theater AE forces and AE operations; and (f) an organic communication network capability between/among en route medical facilities and airlift command and control (C2) agencies.

MEDICAL DIRECTION AND OPERATIONAL COMMAND AND CONTROL (C2)

C2 functions exercised over AE missions are consistent with those for all air mobility missions and are handled in accordance with the C2 structures described in JP 3-17, *Joint Doctrine and Joint Tactics, Techniques, and Procedures (JTTP) for Air Mobility Operations*; AFDD 2, *Organization and Employment of Aerospace Power*; AFDD 2-6, *Air Mobility Operations*; and AFTTP 3-42.5, *Aeromedical Evacuation*.

An airlift control center provides C2 of AE missions for operational issues (airframe, crews, equipment) and the PMRC provides medical direction for clinical issues. All medical aspects of patient movement management in the AE system (e.g., mission diversions for medical reasons, nonmedical diversions that affect patient management, etc.) should be referred to the supporting PMRC. When medical requirements warrant changes to a specific AE mission, those changes will be coordinated through the AE cell within the appropriate airlift control center (TACC, AMOCC, or AOC).

EN ROUTE CARE

En route care requires the use of state-of-the-art lightweight medical equipment which supports the evacuation system's successful transport of patients from the point of injury or illness to definitive care. Configuration and medical equipment interface with the aircraft is of utmost importance and is one of the competencies demonstrated by the AECM. En route care equipment and supplies are standardized throughout the system and comply with air-worthiness requirements. This ensures the ability to exchange equipment rapidly and forward re-supply. Information and communication technology provide in-transit visibility (ITV) of patients and C2 for patient movement.

AE OF NBC CASUALTIES

Patients contaminated with nuclear, biological, or chemical agents will normally be decontaminated prior to evacuation. (Note: Decontamination of patients contaminated with biological agents is rarely warranted. Care of these patients is usually a matter of following infection control procedures.) If decontamination is not possible, only the theater combatant commanders and USCINCTRANS decide when aircraft will be used for evacuation. Commanders must understand that using aircraft and personnel for this purpose may result in a loss of those assets for the duration of theater operations. Additionally, the aircraft must have permission to land at its intended destination, and in some cases, obtain over-fly permission, before any contaminated patients or passengers are off-loaded from the aircraft or occupy foreign airspace.

AE TRAINING DOCTRINE

The overall objective of the AE training program is to develop and maintain a high state of mission readiness of AE personnel for rapid employment across the spectrum of operational requirements. AE personnel must be able to prepare any AE capable aircraft (e.g., designated aircraft, aircraft of opportunity, retrograde lift) for patient evacuation and provide appropriate in-flight care.

CHAPTER SEVEN

EXPEDITIONARY MEDICAL CARE IN MILITARY OPERATIONS

OVERVIEW

The AFMS must be ready and capable of providing required medical support to the warfighters no matter the scenario (e.g., war and military operations other than war). The Aerospace Medical Contingency Ground Support System represents the cornerstone of medical support to AEF forces deployed in any worldwide contingency. This chapter focuses on and describes how best to organize and employ medical capability in contingency scenarios, in NBC environments, in foreign humanitarian assistance scenarios, and in military operations other than war.

Doctrinally, the AFMS provides a tiered approach towards flowing in medical capability and a tailored response that is driven by mission, threat scenario, airlift availability, and population at risk (PAR). The concept is to flow essential medical capability in on the first aircraft. Additional medical capability is brought in to meet requirements as the operation expands and as airlift becomes available. Medical capability ramps down at a similar rate as the installation, commensurate with the threat scenario and the PAR, thus ensuring the availability of health service support. This doctrinal framework supports the concepts of providing essential medical capability with the first deployment of personnel and continuing until the last personnel depart (i.e., medical support is on the first plane in and remains until the last plane departs) and of ensuring health service support is available throughout the entire deployment, employment, and redeployment process, whenever personnel-at-risk are present.

In general, military operations may be described in three phases as illustrated in figure 7.1. There is an initial build-up or deployment phase (also called the “ramp-up phase”) where forces are deployed into an area of operation. It is during this period that military forces are at high risk for food/water/sanitation DNBI, industrial or occupational accidents, and terrorist attacks. This phase is depicted as the ramp-up red wedge and represents a period of maximum vulnerability.

The sustainment phase follows the deployment phase and is characterized by activities geared towards accomplishing the mission as opposed to further deployment of forces. During sustained operations, the EMEDS or AFTH should be in place; whichever modular size and capability are required to meet mission requirements of the deployed location.

Finally there is the ramp-down or redeployment phase. This phase is characterized by similar risks as those seen during the initial build-up phase and represents another period of maximum vulnerability. The redeployment phase is depicted as the ramp-down red wedge.

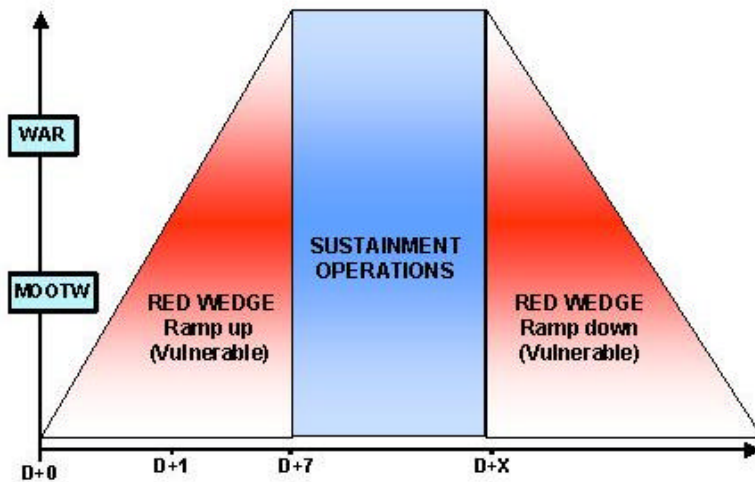


Figure 7.1. Notional Phases of Military Operations With Periods of Maximum Vulnerability

The modularity of the Aerospace Medical Contingency Ground Support System maximizes flexibility and options for the commander and allows for the custom building or tailoring of force for specific mission “footprint.”

AEROSPACE MEDICAL CONTINGENCY GROUND SUPPORT SYSTEM

The mission of the AFMS Aerospace Medical Contingency Ground Support System is to rapidly deploy and provide forward stabilization, primary care, dental services, force health protection, and to prepare air and space expeditionary forces and/or civilian casualties (as appropriate) for aeromedical evacuation. The components of this medical ground support system are utilized to provide essential care in theater, deferring definitive care to the CONUS or supporting theaters.

The Aerospace Medical Contingency Ground Support System begins with an initial force package known as the squadron medical element (SME) and progresses through the modular building block concept based on medical support requirements, to the fully developed stage of the mature Air Force Theater Hospital (AFTH) where significant specialty care capability and intensive care is available.

System components deploy in various combinations to support a specific theater/regional population size and deployment scenario. Medical support rapidly deploys in a modular, incremental, and interoperable manner, using components as building blocks to support the military operation. There are a variety of specialty modules that may be used to match the scenario’s requirements. Additionally, personnel and equipment packages may be tailored, replicated, or combined with previously deployed UTCs to reach the desired capability. Refer to

AFTTP 3-42.7, *Aerospace Medical Contingency Ground Support System*, for tactical doctrine on AFMS support to air and space expeditionary force forces.

The medical capability required at each bed-down location is determined by the commander's operational needs; expected casualty rates; casualty types; PAR; and evacuation policy, delay, and distances. Geographical positioning of medical capability, which minimizes the time from point of injury to treatment, is essential.

Deployable modular aeromedical evacuation units provide the interface between the ground-based expeditionary medical contingency support units and the critical care capable aeromedical evacuation system. Parallel build-up of AE modular support ensures that timely evacuation of casualties occurs. (See figure 7.2).

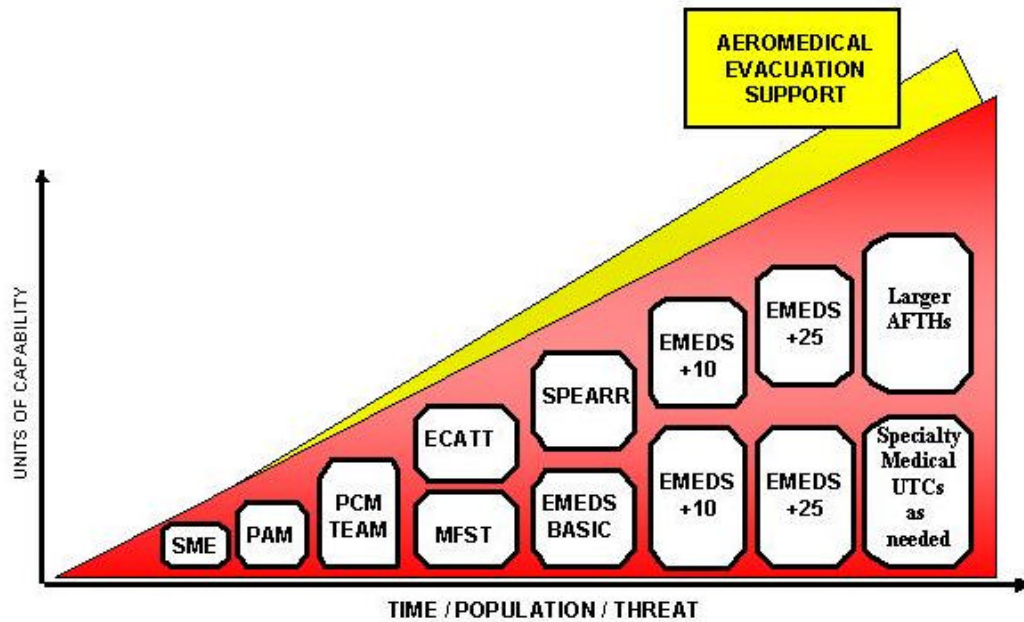


Figure 7.2. Notional Tiered Response and Tailored Medical Capability with Parallel AE Buildup

It is critical that the AFMS deliver essential care targeted towards optimizing warfighter performance. The Aerospace Medical Contingency Ground Support System optimizes warfighter performance by delivering essential care targeted to maximize unit effectiveness, readiness, and morale with minimal cost in terms of weight, cube, lift, and forward footprint.

HEALTH SERVICE SUPPORT (HSS) IN NBC ENVIRONMENTS

Air Force Medical Service NBC operations are organized in terms of the force health protection concepts of casualty prevention and casualty care. Casualty prevention operations are further categorized under the NBC passive defense (PD) concepts of contamination avoidance, protection, and contamination control. Casualty care operations include patient decontamination, triage, clinical care of NBC casualties, patient movement on the air base, restriction of movement/quarantine, and aeromedical evacuation. AFTTP 3-42.3, [Draft] *Health Service Support in Nuclear, Biological, and Chemical (NBC) Environments*, provides guidance for the employment of AFMS assets in NBC environments.

Air operations in high NBC threat areas will launch from airfields that likely are primary targets of enemy NBC attack - air bases are generally considered high value targets. Air Force Medical Service assets support the PD component of Air Force operational counter NBC doctrine, AFDD 2-1.8, *Counter Nuclear, Biological, Chemical Operations*.

COMAFFOR medical assets—both NBC specialty and general casualty care—are available to provide health service support (HSS) in the theater of operations. Using their operational knowledge and experience, the COMAFFOR must balance available lift and time against the NBC and conventional threats to lay down medical assets at theater and wing levels to maximize HSS. The increasing NBC threat and other medical threats should be considered when evaluating the proper order of buildup of capabilities. In operations where the planner cannot laydown a more robust medical NBC capability, they should use a hub and spoke concept and utilize opportune transportation to support far forward locations. This approach increases response time to NBC risk at each location and must be balanced against lift constraints and NBC threat in the theater.

Successful NBC attacks may produce mass casualty events. When the AFFOR theater medical concept of operations is developed, planners must consider the risk of NBC attack and the increased burden on medical infrastructure. The same building block approach should be used where medical NBC-specific assets are laid in over conventional medical assets. (See figure 7.3.) The flow of these medical NBC-specific assets into the theater must be driven by the mission needs of the JFC and the relative medical threats.

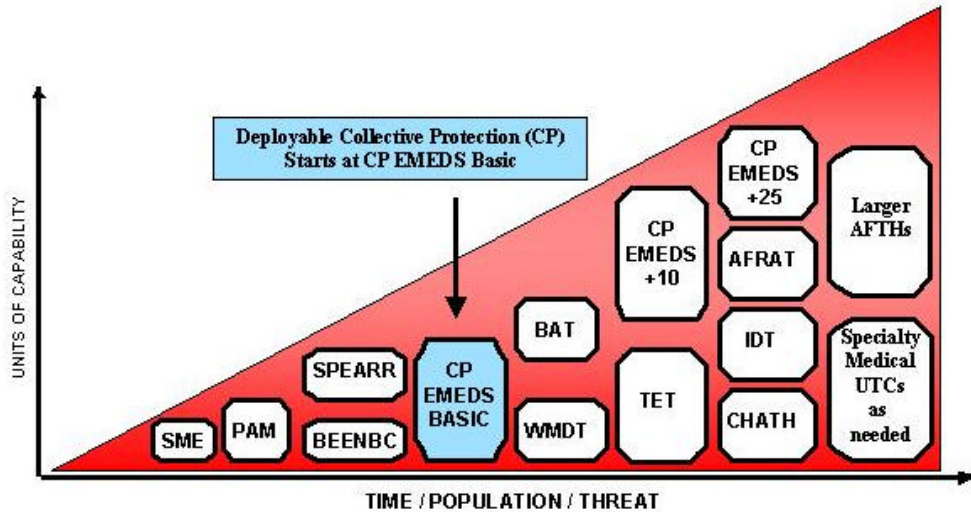


Figure 7.3. Notional Building Block Approach for NBC-specific and Conventional Medical Assets

MILITARY OPERATIONS OTHER THAN WAR (MOOTW)

AFDD 1, *Air Force Basic Doctrine*, defines MOOTW as military actions not associated with sustained, large-scale combat operations. MOOTW may be classified as typically combat, typically noncombat, and a group of operations that may be either combat or noncombat. (See figure 7.4).

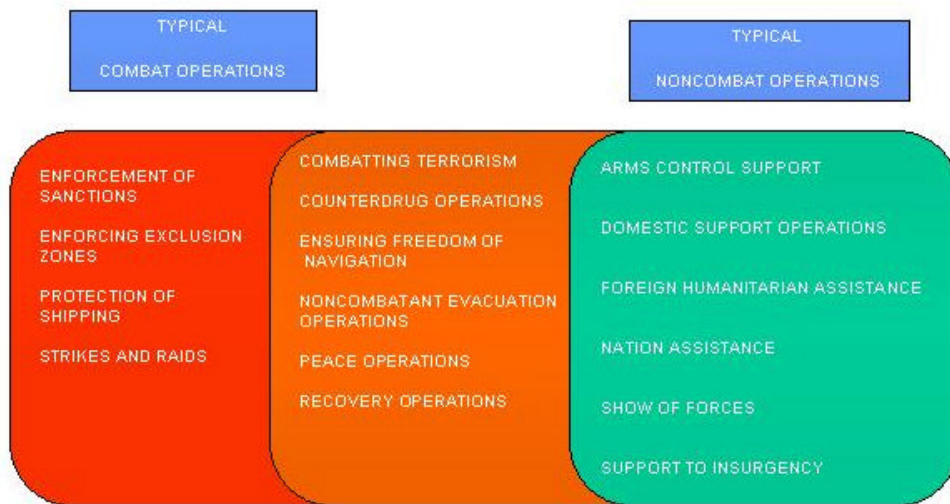


Figure 7.4. MOOTW Operations

Military medical forces may play a leading role in MOOTW. Disaster relief, humanitarian assistance, peacekeeping, and nation building are important missions in this type of operational environment. These missions' requirements are different than wartime requirements in at least four ways:

- ★ First, the patient population tends to be more diverse. Medical units may be required to treat local civilians, refugees, and coalition partners; civilian employees of the US government; or civilian contractors. These groups vary more in age and gender, health status, and types of acute or chronic medical conditions.
- ★ Second, medical assets of the host nation have often been destroyed. Moreover, medical assets of coalition partners may be inadequate for the mission. As a result, the US may compensate for these differences by covering shortfalls with the theater medical system, and by supplementing coalition medical assets.
- ★ Third, some coalition patients may require intensive or prolonged hospital care that goes beyond what the theater surgeon has planned to provide in an area of operations.
- ★ Fourth, humanitarian assistance missions may have a strong public health component which may include ensuring the quality of the water supply to prevent spread of disease, establishing basic sanitation conditions in a refugee camp, or improving sanitation techniques in host nation medical facilities. In such cases, Air Force medical forces may find themselves providing medical supplies, community health services, public health education, training, and even basic equipment to augment the local medical infrastructure. (Note: There is also a strong public health component as part of contingency operations. Refer back to chapter four, FHP, "Casualty Prevention" for additional information.)

Fundamentally different types of forces are required to perform these broader MOOTW missions. Simplistically put, combat requirements increasingly call for minimal care to save lives, for rapid evacuation, and for smaller in-theater "footprints." MOOTW, on the other hand, demands a larger forward presence in relatively immobile environments to provide a wider range of on-site care.

A common set of health-related functions runs across the entire spectrum of military operations (e.g., disease/injury prevention and health promotion, trauma care, disease nonbattle injury [DNBI] care, care of POWs and noncombatants, medical reporting, security of medical forces, etc.). These functional requirements are not unique to any one form of military operation. What changes is the relative contribution of each to the specific operation. For example, trauma care and medical evacuation are prominent features of high intensity conflict, while prevention and management of DNBI may be more important in peacekeeping operations. The point to be made is that some MOOTW scenarios may require a different medical force mix and skill set than that required in combat scenarios.

The AFMS has flexible, deployable teams of responders that are relevant to MOOTW scenarios. Depending on the nature of the military operation, these responder teams may consist of primary care physicians and qualified support personnel such as nurses, physician assistants (PAs), technicians, and public health and preventive medicine professionals. These teams should be available and organized for rapid assembly and deployment, be trained to understand the nature of MOOTW issues and varied cultures, and be comfortable working with multinational organizations and foreign governments.

The emergence of MOOTW as a predominant mission requires a fluid military organization capable of responding flexibly to widely varied, complex, and changeable situations. As an example, the AFMS is capable of rapid self-organization to generate deployable units structured with the capabilities needed for dealing with specific local situations. Air Force medical personnel must be capable of mobilizing or working with many other kinds of organizations—from other US government agencies, international institutions (e.g., the International Red Cross), and coalition forces to the thousands of nongovernmental organizations (NGOs) providing humanitarian assistance today.

Learning to cooperate effectively with NGOs is especially important. They have very different outlooks and organizational cultures, and often have a negative stereotype of the military. But NGOs do most of the real work over the long haul in complex humanitarian emergencies. They are often there when the military comes into a situation, and they are still there after the military leaves. Military medical personnel must respect NGOs, learn to work with them, support them, and take great care not to undermine their efforts. A successful outcome to a MOOTW mission may depend on the effective use and involvement of these nongovernment organizations to achieve near-term goals and long-term stability.

In summary, in order to head off crises and shape world events, the US needs to find grounds for positive engagement with other nations. **Health is potentially the single strongest ground for engagement** because it is the major determinant of quality of life in most societies. In these scenarios, AFMS capability may be an essential element in successful MOOTW.

FOREIGN HUMANITARIAN ASSISTANCE

The AFMS may be tasked to provide support in foreign humanitarian assistance operations. Several components of the Aerospace Medical Contingency Ground Support System are relevant to these scenarios.

Foreign humanitarian assistance operations alleviate the human suffering, disease, or hunger that result from natural or man-made disasters. These operations may be the primary mission, as in the case of floods and earthquakes, or may be secondary to ongoing military operations such as PROVIDE COMFORT in Northern Iraq in 1991. Air Force medical units can respond rapidly to these emergencies and provide critically needed support to alleviate immediate suffering and assist the host government in beginning its long-term reconstruction effort. (See AFDD 2-3, *Military Operations Other Than War*, for additional discussion.)

Air Force health services have been, and will continue to be, used in humanitarian roles as a primary instrument of action, as in UPHOLD DEMOCRACY in Haiti, or can be used to support other forces during foreign humanitarian assistance operations. When authorized, the Air Force can provide medical support to a civilian populace and to refugees.

A major disaster or emergency may cause numerous fatalities and injuries, property loss, and disruption of normal life-support systems. Large number of casualties, heavy damage to buildings and basic infrastructure, and disruption of essential public services will most likely overwhelm local and host nation capabilities to meet the needs of the situation.

In foreign humanitarian assistance operations, the employment and redeployment concept of AFMS resources follows a similar pattern as the “Red Wedge” construct discussed earlier in this chapter. **The difference is in the response time and build-up of military medical resources.** (See figure 7.5.) The majority of medical UTCs should flow into the disaster area as soon as possible following the event. As time progresses, the military response decreases and redeployment of AFMS support occurs commensurate with the increase in civilian/international response and the successful reestablishment of civilian medical capabilities.

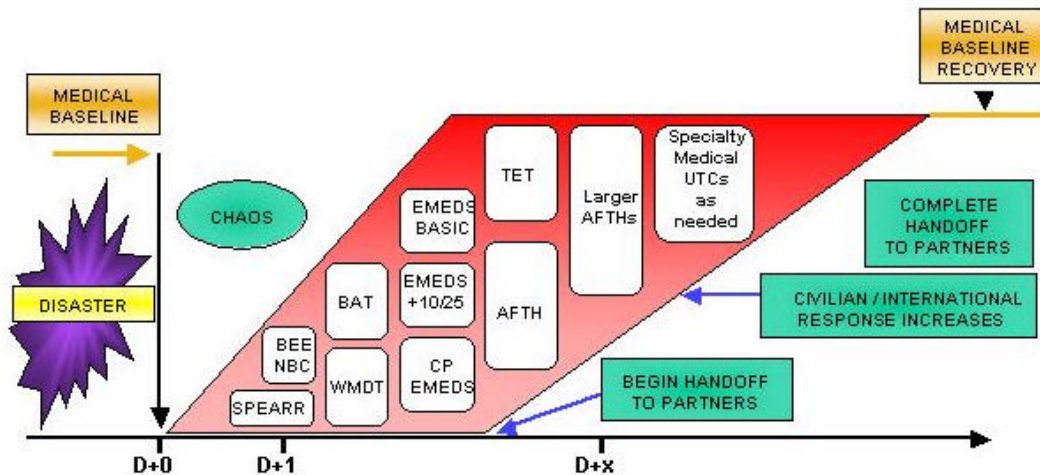


Figure 7.5. Notional Foreign Humanitarian Assistance “Red Wedge” Construct

CHAPTER EIGHT

INTERFACE WITH WORLD HEALTH CARE

OVERVIEW

Air Force Medical Service leadership believes an in-depth understanding of our international partners' respective cultures, including a working knowledge of local languages, geography, and medical standards and capabilities, is crucial to the success of military operations in general, and MOOTW missions specifically. Air Force medics believe transcultural training for all deployed forces will help US forces avoid mistakes caused by cultural misperceptions. Finally, the AFMS believes a healthy understanding and appreciation of international cultures will be demanded of future leaders.

A new kind of medical specialist promoting this level of understanding is needed to support regional combatant commanders. These specialists should partner with the host nations in which they are deployed to facilitate focused logistics; to optimize military-to-military and military-to-civilian interfaces; to familiarize themselves with the international organizations (IOs), nongovernment organizations (NGOs), and private voluntary organizations (PVOs) already working in the host nation; and to enhance medical force protection. The AFMS identifies and develops personnel with these unique skills and qualifications.

INTERNATIONAL HEALTH SPECIALISTS

An international health specialist (IHS) is a military healthcare professional with extensive knowledge in the politics, military, economy, medical, and cultural aspects of a country/region associated with their second language. This specialist supports the geographic combatant commander's medical surveillance, planning, coordination, and execution of MOOTW missions. Personal and long-term relationships with key players in the United Nations (UN) agencies, IOs, NGOs, PVOs, and national and regional Ministries of Health are vital for IHS success.

The IHS member has an in-depth understanding of local medical standards, capabilities, and expectations, all of which are crucial to successful mission implementation. These health specialists are proficient in the host nation language. In this sense, IHS members are highly effective in ascertaining and detecting changes in the medical "pulse" of a country. They also have strong interpersonal skills and are able to manage highly volatile, risk-related communications. Their diplomacy cultivates effective cross-cultural/international alliances, furthering the AFMS' relationships with local IOs, NGOs, PVOs, local governments, and medical communities.

The IHS program identifies and develops personnel with the unique skills and qualifications necessary to support combatant commander's missions. The IHS cadre expands combatant commander and Air Force component capabilities toward more productive and beneficial ally exchanges. The IHS cadre strives to promote productive engagements with

international partners and allies across a full range of medical operations, to include disaster response, humanitarian assistance, terrorist response, peacekeeping, homeland defense, and major conflicts.

In summary, increasing involvement in domestic and international MOOTW requires military medical personnel work closely with the Department of State and other civilian government agencies; the UN system and other international organizations; coalition forces and their respective governments; and a wide range of IOs, NGOs, or PVOs. Effective coordination among this range of organizations requires ongoing efforts to build relationships, to which the IHS member plays a key role. Pre-arranged alliances among organizations are critical for developing the rapid mobilization capability to deal with large-scale MOOTW contingencies and to ensure a robust medical capability is available for our military forces located in areas without US military medical support.

Most MOOTW will be carried out in multiorganizational settings where success will depend on effective cooperation between US forces and other organizations. The IHS has a vital role in the successful completion of these missions.

CHAPTER NINE

HUMAN PERFORMANCE, SUSTAINMENT, AND ENHANCEMENT (HPS/E)

GENERAL

The performance, sustainment, and enhancement of the human weapon system requires at least the same, if not a greater level of, attention and care as any manufactured weapon system. The incomparable complexity associated with the human operator compared to even the most sophisticated piece of military hardware mandates this perspective.

CARE AND MAINTENANCE OF THE HUMAN WEAPON SYSTEM

The care and maintenance of the human weapon system has a profoundly disproportionate impact on achieving and maintaining superior military capabilities. **Commanders are ultimately responsible for ensuring the human operator performs at optimal effectiveness.** To sustain, enhance, and optimize the operational capability (performance) of the human weapon system and manufactured weapon systems, commanders should include AFMS personnel in discussions regarding effective integration of individuals into the larger operational arena. AFMS guidance regarding the human weapon system must span the entire spectrum of force activities, from system design, through acquisition and fielding, to operational employment.

PURPOSE

Human performance, sustainment, and enhancement (HPS/E) issues are much more than prevention oriented, although preventing adverse events from occurring can be a direct result of proper application. For example, HPS/E can enable flyers to “max-perform” or “fully exploit” aircraft performance. HPS/E does not concern itself with “staying awake” or “not being tired.” Its goal is sustained maximum performance; i.e., minimizing error under prolonged periods of operations or enabling/promoting above normal performance, thereby lowering the overall error rate.

A small investment of AFMS personnel can yield large returns in operational safety, aircrew protection, and enhanced operational capabilities. Commanders should ensure medical personnel provide direct operational health and fitness support to force activities on a daily basis around the world.

Special programs are designed to develop and sustain individual performance and define the roles of AFMS personnel in optimizing force performance in weapon systems during warfighting operations and in daily garrison operations. The intended objective of developing and sustaining individual performance is to optimize the “warrior/operator” as a weapon system within the weapon system they are operating. The desired outcomes of these efforts include:

- ★ Increased operational capability (e.g., intuitive displays, decision-making tools for command and control and information transfer, anti G-suits, pressure suits).
- ★ Enhanced mission effectiveness (e.g., fatigue countermeasures, night vision goggles, lightweight helmets).
- ★ Preservation of assets (i.e., antiexposure garments, advanced technology escape systems, laser eye protection).

Adverse mission or operational factors can have a detrimental impact on human weapon systems and their ability to accomplish tasks. These may include:

- ★ Prolonged/sustained operations.
- ★ Insufficient training or training capability for complex missions.
- ★ Sub-optimal displays, information transfer, human to systems controls, and situational awareness difficulties.
- ★ Restrictive life-support and protective gear or clothing.
- ★ Inadequate protection/knowledge of threats related to laser, directed energy, ejection, altitude, temperature, acceleration, low light, noise, etc.
- ★ Knowledge gaps regarding screening, selection, and occupational performance.

Identifiable consequences of these adverse factors include:

- ★ Fatigue and cognitive errors.
- ★ Command decisions to not engage targets based on unacceptable operator risks associated with the mission.
- ★ Disorientation and confusion.
- ★ Increased crew ratios and personnel requirements to compensate for limitations to human endurance and performance.
- ★ Increased risk to operators manifested in reduced survivability, fatalities, injury, or ability.

Human performance, sustainment, and enhancement activities focus on providing solutions to address the deficiencies described above. Some solutions may require engineering changes to current systems; others may require science and technology (S&T) to provide

enhancements for sustainment of human performance and effectiveness. Line and medical leadership must identify gaps in human performance; use S&T to identify solutions to eliminate those gaps; commit MAJCOM support to S&T; and then transition that S&T to a real, fielded capability.

RESEARCH AND DESIGN

Like other Air Force systems, the human weapon system requires detailed life-cycle management to sustain and optimize operational capability. Direct AFMS involvement with human performance in all operational tasks and in the design and development of military weapon and support systems can increase effective airman-weapon system integration. Pilot-physicians, researchers, engineers, physiologists, and other AFMS personnel should be actively engaged with line personnel in operational performance research, studies, and analysis to develop and improve countermeasures to operational performance threats. AFMS advocacy to line leadership is critical to achieve optimal force enhancement and airman operational capability.

Commanders should ensure a life-cycle maintenance process is in place to support the human as a weapon system. This process represents a continuous health surveillance program, at home and while deployed, of disease and casualty prevention and health promotion, employing the human weapon system life-cycle maintenance program illustrated in chapter four, FHP, figure 4.1. **Commanders and AFMS leadership (e.g., Aerospace Medicine, Space Medicine) must continue to focus on human performance, sustainment, and enhancement of air and space operators in all operational environments.** This involves conducting a critical analysis of workplace (including airborne) environments. Recent environments analyses include F-22 operations above 50,000 feet; 36-hour gunship deployments; laser threats to vision; night vision requirements; and Critical Care Air Transport Teams (CCATTs) operating in low-light, high-noise, and cramped quarters. Threats within these operational settings may include: environmental toxin exposure; infectious diseases; operational demands or fatigue; loss of situational awareness; task saturation and faulty prioritization; decompression sickness; etc.

Successful HPS/E requires full and continued exploitation of research, development, technology, and modernization initiatives. These initiatives, integrated with war skills and preventive health care protocols, enhance force mission success. Examples of leveraging technology to enhance human performance in the operational environment include:

- ★ Frequency-agile laser eye protection.
- ★ Ejection-compatible full-color binocular panoramic NVS.
- ★ Improved body armor.
- ★ 3-D sound systems.
- ★ Helmet-mounted targeting systems.

- ✦ Integrated “life-support” systems providing body cooling/heating control.

The AFMS must develop effective force health protection countermeasures against weapon systems ranging from nonlethal weapons to weapons of mass destruction (WMD). This would include measures that enhance and sustain human performance in environments marked by biological, chemical, or radioactive contamination.

OPERATIONS

The AFMS integrates, and HPS/E supports, two distinct yet interdependent missions: in-garrison healthcare and in-theater healthcare. The difference lies in the operational context in which that health care occurs. In-garrison healthcare focuses on daily preventive or intervention healthcare. This is the environment for planning, organizing, training, and equipping medical forces to support military operational missions. In-theater healthcare focuses on delivering medical care in a deployed situation, whether it is war, contingency, disaster response, or humanitarian relief operations. The goal in both missions is to ensure efficient and effective responsiveness to the health and performance requirements of military forces, whether in garrison or when deployed. Relevant AFMS activities supporting these interdependent missions include:

- ✦ **Health-Based Risk Assessment.** Through the proper application of such assessments, the Air Force health services can assist in the design and use of weapons systems, military operations, and installation infrastructure processes. This will help optimize human performance capabilities in USAF weapon systems as well as minimize the harmful impacts of their air, ground, sea, and space operations on the environment and personnel.
- ✦ **Injury and Disease Prevention.** AFMS provides comprehensive DNBI programs including: surveillance, safety, data analysis, and high-level line advocacy of relevant technological advances and appropriate prevention strategies. Commanders should ensure and individuals should strive to adopt appropriate health behaviors and fully use preventive medicine tools, resources, and countermeasures to control the impact of DNBI on mission effectiveness.
- ✦ **Force Health Protection (FHP).** HPS/E activities complement FHP and the human weapon system life-cycle maintenance program. FHP activities involve strategies and programs for integrated preventive, surveillance, support and operational engagement designed to sustain, enable, and enhance the human weapon system in all operational environments. HPS/E optimizes human performance; therefore, it optimizes operational capability and mission success. FHP and HPS/E consider countermeasures to operational performance threats. Performance enhancement training, human system integration, and science and technology programs are key elements of FHP and HPS/E. FHP initiatives should address all health-related threats that affect the combat force and the supporting community, before, during, and after deployment into retirement.

- ✦ **HPS/E activities that improve individual and team capability** in order to enhance performance (e.g., CCAT teams; EMEDs teams, Counterfatigue Program, ejection seat metrics, etc.).
- ✦ **HPS/E activities that ensure compliance with environmental regulations and limit environmental impact of military operations.** AFMS personnel should be involved in the design/use of weapons systems, military operations, and installation infrastructure processes, to minimize their performance-degrading impacts on air, ground, sea, and space. AFMS personnel should be trained to recognize, evaluate, and control exposure to hazards and assess and respond to potential HPS/E threats. This requires emphasis on total hazard exposure monitoring and development of scientific technologies for measuring and recording exposures.
- ✦ **Medical Surveillance.** A robust medical surveillance program supports the goals of HPS/E through routine, standardized tracking of epidemiological disease and injury incidence in meaningful categories. This acts to guide and assess the effects of current HPS/E efforts and to highlight new areas for potential HPS/E benefit. Militarily significant preventive medicine information is provided to commanders and to medical support units in the theater of operations (also accomplished in-garrison). AFMS personnel should provide surveillance for, and detection of, individual, occupational, or environmental health-related threats to HPS/E. This includes maintaining oversight on food, water, and disease vector pests. Commanders should support employing aggressive and proactive preventive medicine countermeasures to help neutralize or minimize the impact of the health threat on operator performance.

SPECIAL OPERATIONS PERFORMANCE ENHANCEMENT INITIATIVES

There are minimal unmanned systems within Air Force Special Operations Command (AFSOC). Therefore, performance of the AFSOC special operator is of primary importance to the AFSOC Surgeon (SG). The AFSOC/SG is determined to fully exploit specialized knowledge of the human weapon system and go one step further to determine, develop, or advocate new ways to enhance the performance capabilities (psychological and physiological) of all AFSOC personnel.

SUMMARY

HPS/E measures and equipment should be developed and employed to detect WMD threats and to counter their adverse effects on the health and performance of the human weapon system. An operator's current protective equipment poses its own performance-degrading effects (e.g., risk of heat injury while wearing mission oriented protective posture [MOPP] gear). Countering a threat at the source is the preferred means. Providing countermeasures for the operator through immunizations or personnel protective/life support equipment is appropriate when the threat cannot reliably or reasonably be controlled. These activities promote flying and ground safety and are a critical factor in overall combat effectiveness.

Ultimately, it is every commander's responsibility to ensure that every effort is made to counter the occupational and environmental threats to the human weapon system inherent in operations and/or endemic to the environments in which those operations occur. To do this, AFMS personnel must be involved with and support commanders in their efforts to stay a step ahead with technology in order to ensure the human weapon system is optimally equipped to perform at maximum capability.

CHAPTER TEN

POPULATION HEALTH

POPULATION HEALTH

The AFMS has undergone significant re-engineering over the past four years. The primary focus of this re-engineering effort has been to transition from a reactive and primarily sickness-based health-care delivery system to a more efficient, proactive, prevention-based system. The transition was driven by changes in doctrine and policy. It also involved the development and implementation of programs and tools to assess population health status, risks, and preventive medicine needs; enhance the delivery of preventive services; manage disease and other medical conditions; and evaluate health-status improvement and delivery-system effectiveness and efficiency. **AFMS population health initiatives support the mission requirements of expeditionary Air Force forces.**

The AFMS integrates two distinct yet interdependent missions supporting FHP: delivering population-based health care and providing wartime or contingency operational health support in a theater of operations. Health is defined as physical, emotional, mental, and spiritual well-being and not just as the absence of disease. The Air Force ensures FHP by promoting the health of its beneficiaries through the best clinical and business practices; human performance enhancement and population health activities; and a variety of key community health programs. Implementation of these health care measures ensures efficient and effective responsiveness to readiness missions, personnel readiness requirements, and beneficiary health needs.

Population health represents the body of knowledge on the health of defined populations and the determinants of the health status for those populations. This body of knowledge includes the aggregate effect of individual physical, behavioral, and psychological characteristics; economic and social factors; external forces impinging upon the population, such as chemical and physical environmental factors; and the effect of resource investment on those multiple determinants.

POPULATION-BASED HEALTH CARE

Population-based health care is the process of improving the overall health of a defined population through needs assessment/current health assessment, proactive delivery of preventive services, condition management, and outcomes measurement. **The assessment** describes the characteristics and needs of individuals and groups in the population. It forms the basis for prevention/intervention program development, delivery, and effectiveness. **Proactive delivery of preventive services** is the foundation for improving population health. Preventive health care involves the delivery of periodic screenings and targeted assessments for individuals without disease. Prevention may also be considered part of the set of individual and population conditions to be managed. **Condition management** is the efficient delivery of evidence-based interventions. **Outcomes measurement** evaluates the population's health-status improvement and the delivery system's effectiveness and efficiency.

Population-based health care includes proactively delivering health-oriented preventive services through education and training, conducting periodic health assessments, and applying sound epidemiological principles. A total community approach to population-based health care reduces unhealthy risk factors and provides opportunities to enhance health and wellness. Evaluating population health improvement and health care delivery, with support from established data systems, promotes effectiveness and efficiency. **A successful population health program improves the morale and general well being of the force, resulting in improved readiness and mission-effectiveness.**

POPULATION-BASED COMMUNITY INITIATIVES

In conjunction with its internal re-engineering efforts, the AFMS has led an Air Force-wide re-engineering of the delivery of community based prevention services focused on modifiable behavioral and community risk factors. These risk factors, such as relationship, legal, financial or work-related problems, substance abuse, family violence, etc., are all associated with decreased overall function, and negatively affect the organization and the community as a whole. They contribute to lost workdays, reduced productivity, reduced readiness, as well as dysfunctional families and communities. Ultimately they are key barriers to a fit and healthy force and have a negative impact on force health protection.

The AFMS has significant assets and resources devoted to addressing maladaptive behaviors and behavioral and community risk factors. Yet, these risk factors are not just medical issues but rather community issues; and, the Air Force offers many additional prevention services through multiple line agencies. The AFMS has actively engaged line leadership and led development of new population-based initiatives to provide for the coordinated and integrated provision of all Air Force services that address these risk factors. Examples of these initiatives include:

- ✦ The development of a new formal structure, the Integrated Delivery System (IDS) and Community Action Information Board (CAIB), designed to improve overall community health-related outcomes.
- ✦ A conceptual framework, community capacity, designed to shift focus from individual deficits to community assets and to emphasize the important role of units and unit leaders in achieving positive health outcomes.
- ✦ A revised performance measurement and planning system designed to assess outcomes and results rather than activities.

Integrated Delivery System (IDS)

The IDS is a cross-functional working group composed of AFMS (e.g., Life Skills, FAP, ADAPT, HP) and line agencies (e.g., DP, IL, HC, XOF), responsible to the installation commander. Functionally, the IDS organizes and coordinates the overlapping prevention missions of participating agencies to address the entire spectrum of risk factors. The IDS prevention model, adapted from Centers for Disease Control and Prevention (CDC) recommendations, is a population based approach employing multiple and locally targeted prevention programs simultaneously to increase the likelihood of achieving the desired effect.

Community Action Information Board (CAIB)

The CAIB is a forum for cross-organizational review and resolution of individual, family, and installation community issues that impact the readiness of the force and the quality of life for Air Force members and their families. Chaired by the installation commander it provides senior leadership with oversight and direction of IDS activity.

Summary

The implementation of the IDS and CAIB represents a fundamental new way of doing business regarding the health of our members and their families. It establishes strong partnerships with our customers, both line leadership as well as our beneficiaries, and acknowledges shared responsibility for achieving desirable health care outcomes critically related to FHP. This model of providing population level initiatives in a cross-functional way, with the active support and collaboration of leadership, is currently unique to the Air Force, but has captured national attention.

CHAPTER ELEVEN

DOMESTIC SUPPORT OPERATIONS (DSO)

DOMESTIC EMERGENCIES

Domestic emergencies are those events that affect the public welfare as a result of enemy attack, insurrection, civil disturbance, earthquake, fire, flood, or other public disasters or equivalent emergencies that endanger life and property or disrupt the usual process of government. **Consequence management** involves measures to alleviate the damage, loss, hardship, or suffering caused by emergencies. Consequence management includes measures to restore essential government services, protect public health and safety, and provide emergency relief to affected governments, businesses, and individuals. **Crisis management** includes measures to resolve a hostile situation and to investigate and prepare a criminal case for prosecution under federal law and includes a response to an incident involving a weapon of mass destruction, special improvised explosive device, or a hostage crisis.

CONTEXT OF OPERATIONS

The US military primarily organizes, trains, and equips forces to conduct combat operations. It also has the capability to rapidly respond to domestic emergencies and provide support to civil authorities. Such domestic support operations (DSO) usually occur after a Presidential declaration of a major disaster or an emergency and are designed to supplement the efforts and resources of state and local governments and voluntary organizations.

DSOs are those activities and measures taken by the DOD to foster mutual assistance and support between the DOD and any civil government agency in planning or preparedness for, or in the application of resources for response to, the consequence of civil emergencies or attacks, including national security emergencies. **During DSOs, the US military always responds in support of a civilian agency/lead federal agency** (e.g., Federal Emergency Management Agency [FEMA], Department of Justice [DOJ]).

AFMS MISSION-TAILORED SUPPORT

As stated previously in this document, the AFMS provides mission-tailored medical support in the form of expeditionary packages. These expeditionary packages are light, lean, and lifesaving; are prepared to deploy in support of short notice tasking; and are relevant in providing essential medical capability within a framework of limited airlift, number of personnel at risk, and the threat scenario.

Although the first priority and focus of medical readiness and response to support the full range of military operations, the AFMS is postured to provide support to civil authorities in the event disaster or emergency response capabilities exceed local, state, and federal capabilities.

Support to civil authorities will be to the maximum extent practical. However, the AFMS's primary mission will take priority over support to civil emergencies.

PREMISE OF CIVIL EMERGENCIES

- ★ A major disaster or emergency will normally cause numerous fatalities and injuries, property loss, and disruption of normal life-support systems, and will almost always have an impact on the regional economic, physical, and social infrastructures.
- ★ The extent of casualties and damage will usually reflect factors such as the time of occurrence, severity of impact, weather conditions, population density, building construction, and the possible triggering of secondary events such as fires and floods.
- ★ The large number of casualties, heavy damage to buildings and basic infrastructure, and disruption of essential public services may overwhelm local and state capabilities to meet the needs of the situation. In these cases, the President will normally declare a major disaster or emergency.

THE DISASTER CONDITION

- ★ A significant natural disaster or man-made event that overwhelms the affected state's medical capability may necessitate both federal public health and medical care assistance. Hospitals, nursing homes, ambulatory care centers, pharmacies, and other facilities for medical/health care and special needs populations may be severely structurally damaged or destroyed. Facilities that survive with little or no structural damage may be rendered unusable or only partially usable due to a lack of utilities (power, water, sewer) or because staff are unable to report for duty as a result of personal injuries and/or damage/disruption of communications and transportation systems. Medical and health care facilities that remain in operation and have the necessary utilities and staff may be overwhelmed by the "walking wounded" and seriously injured victims who are transported there in the immediate aftermath of the occurrence. In the face of massive increases in demand, reduced capability, and the damage sustained, medical supplies (including pharmaceuticals) and equipment may also be in short supply. Timely restoration of capability and resupply will most likely be delayed due to disruptions in local communications and transportation systems.
- ★ Uninjured persons who require daily or frequent medications such as insulin, antihypertensive drugs, digitalis, and dialysis may have difficulty in obtaining these medications and treatments because of damage/destruction of normal supply locations and general shortages within the disaster area.
- ★ In certain other disasters, there could be a noticeable emphasis on relocation, shelters, vector control, and returning water, wastewater, and solid waste facilities to operation.

- ✦ A major medical and environmental emergency resulting from the use of chemical, biological, or nuclear weapons could produce a large concentration of specialized injuries and problems that could overwhelm the state and local public health and medical care system.

MILITARY SUPPORT TO CIVIL AUTHORITIES

Military support to civil authorities (MSCA) is one of many types of military operations other than war. It involves DOD planning for and responding to requests from civil authorities for military support in dealing with actual or anticipated consequences of civil emergencies and attacks on the US (including national security emergencies). **Civil support is defined as DOD support to US civilian authorities for domestic emergencies, for designated law enforcement, and for other activities.** DOD resources are provided only when response or recovery requirements are beyond the capabilities of civil authorities (as determined by FEMA or another lead federal agency for emergency response) and a request for assistance has been made or a local commander is acting under the authority of immediate response.

When a disaster occurs, state and local governments are responsible for ensuring the safety, health, and welfare of their public. Army and Air National Guard forces, acting under state orders (i.e., not in federal service), have primary responsibility for providing military assistance to state and local agencies in civil emergencies. **Specifically, the ANG medical community may be positioned to provide rapid response capability for augmenting civil authorities in the event of a civil emergency. Medical assets assigned to the Adjutant General and activated to provide immediate support operate under the Governor's authority. ANG medical assets may also be utilized outside of their home state in accordance with state-to-state or regional agreements.**

The *Robert T. Stafford Disaster Relief and Emergency Assistance Act* (Stafford Act) provides the authority for the federal government to respond to civil disasters and emergencies in order to save lives and protect public health, safety, and property. The Federal Response Plan (FRP) provides the mechanism for coordinating delivery of Federal assistance and resources to augment efforts of state and local governments overwhelmed by the disaster or emergency. (See figure 11.1.)

DOD Directive 3025.1, *Military Support to Civil Authorities*, states the policy and responsibilities by which the Department of Defense responds to major disasters or emergencies in accordance with the Stafford Act. Air Force Policy Directive 10-8, *Air Force Support to Civil Authorities*, establishes policy and responsibilities for the Air Force to provide MSCA for Presidentially declared or undeclared major disasters and civil emergencies as well as for military support to law enforcement agencies (LEA).

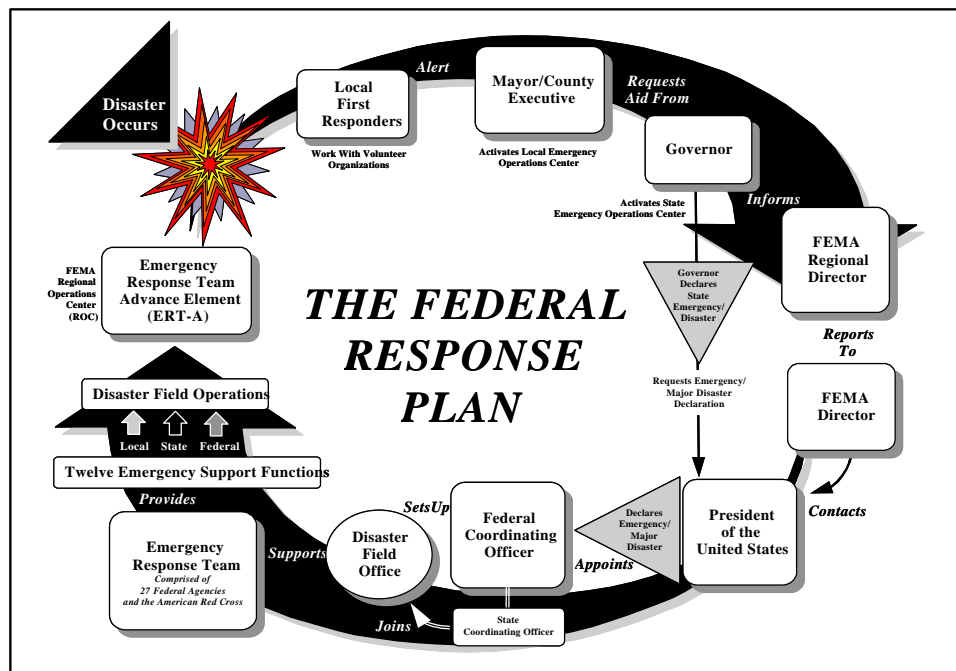


Figure 11.1. Coordinating Federal Assistance – The FRP

IMMEDIATE RESPONSE AUTHORITY

Imminently serious conditions resulting from any civil emergency or attack may require immediate action by military commanders or by responsible officials of other DOD agencies to save lives, prevent human suffering, or mitigate great property damage. When such conditions exist and time does not permit prior approval from higher headquarters, local military commanders and responsible officials of other DOD components are authorized to take necessary action to respond to requests of civil authorities. All such necessary action is referred to as “Immediate Response.”

Any commander or official acting under Immediate Response authority must advise the DOD Executive Agent through command channels, by the most expeditious means available, and seek approval or additional authorizations as needed. Upon activation of the Presidentially approved federal response, the local military commander will be under the federal response. While Immediate Response should be provided to civil agencies on a cost-reimbursable basis if possible, it should not be delayed or denied because of the inability or unwillingness of the requester to make a commitment to reimburse DOD.

AFMS RESPONSE TO CIVIL EMERGENCIES

History has taught us that when a civil emergency occurs, local medical facilities may be quickly overwhelmed with increased patient care demands, increased wait times, etc., at a time the medical facilities may themselves have been compromised by the event. When this occurs,

state officials may request military medical assets to assist with meeting local healthcare needs until the time that civilian medical facilities and state agencies are at an operational capacity sufficient to meet the demands of the population. (See figure 11.2.). AFMS assets, which are able to rapidly deploy and establish capability, provide crucial care to those impacted by the disaster.

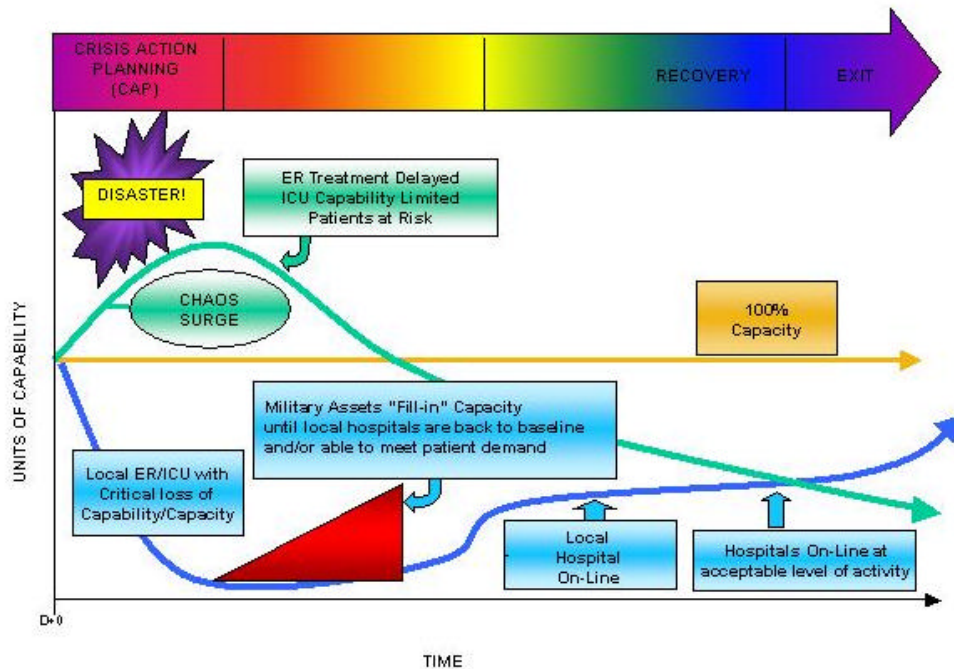


Figure 11.2. Notional Depiction of Patient Surge Demand on Civilian Capability in CONUS Disaster Response

The AFMS expeditionary medical system, while primarily designed to meet its wartime mission, is easily adaptable for civil disaster response. Small, incremental packages of tailored medical capability (e.g., conventional medical UTCs, medical NBC UTCs) can be rapidly deployed to meet immediate and short-term civilian requirements.

The AFMS has identified rapid response resources that can provide medical capability to support domestic operations. If tasked, the AFMS is postured to respond within hours to a validated tasking for assistance; however, actual response time is dependent upon airlift resources, proximity to the disaster, and on-call/positioning of medical UTCs. Following the AFMS “Red Wedge” construct, AFMS assets would expand existing civilian capabilities, by either collocating with civilian facilities or establishing a facility where needed. Augmentation of civilian facilities by AFMS assets distributes the patient workload and allows the facilities time to recover.

Historical Example: Tropical Storm Allison

Beginning on 5 June 2001, rains from Tropical Storm Allison led to some of the worst flooding in Texas history. Particularly hard hit was the city of Houston which lost much of its hospital capacity. On 9 June President Bush declared 28 East Texas counties a disaster area, making them eligible for federal assistance. The Federal Emergency Management Agency (FEMA) was given responsibility for coordinating the federal response, and the Federal Response Plan was implemented.

On 12 June a request for medical assistance was passed from FEMA to the Public Health Service (PHS). The PHS was able to fill most of the request from within its own resources, but turned to the DOD to fill a request for a 25-bed modular hospital to augment Houston's critical care capability. This tasking was ultimately given to the 59th Medical Wing (Wilford Hall Medical Center) at Lackland AFB, Texas. Lead elements of the 59th Medical Wing departed Lackland for Houston during the early morning hours of 14 June.

Entry Operations

The AFMS' building block approach provides a modular, highly capable medical response to maximize options for commanders. Specific packages are employed to ensure efficacy and flexibility. As the situation changes, additional packages are employed as needed. This employment concept extends the AFMS limited resources while providing the highest quality care efficiently and expeditiously. (See figure 11.3.)

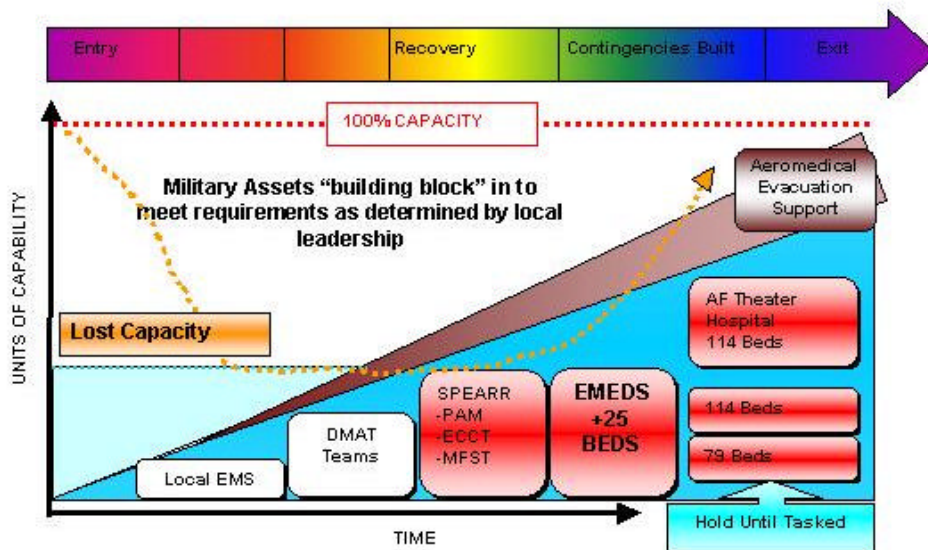


Figure 11.3. Notional Laydown of AFMS Resources Supplementing Civilian Capability in CONUS Disaster Response

Exit Operations

Planning for the withdrawal of AFMS assets should begin as early as possible in the deployment and requires great care and coordination with civil authorities (e.g., the federal coordinating officer [FCO], the state coordinating officer [SCO], and the defense coordinating officer [DCO]) at the disaster field office (DFO). Notionally, the withdrawal of military medical assets will follow the Red Wedge construct, but in reverse. Specifically, the redeployment of AFMS support would be commensurate with the successful reestablishment of civilian medical facilities capabilities. Success is defined as: the complete return of responsibilities to state, local, or nongovernment organizations and AFMS resources begin preparations for redeployment.

NOTIONAL TASKING PROCESS OF STATE AFMS RESOURCES

The National Guard, in state status, is the governor's primary response organization for providing military assistance to state and local agencies in emergencies and disasters. The State National Guard responds under the governor's control, not the DOD's, and in accordance with state laws. However, when the National Guard is federalized by order of the President, it responds under the same limitations and C2 arrangements as active component military organizations.

Individual states can activate AFMS assets (e.g., via ANG, Civil Support Teams, etc.) at the request of the Governor/The Adjutant General (TAG) without FEMA approval. (Refer to individual state emergency response plans for details.) AFMS resources within the Air National Guard are positioned to provide rapid response capability for augmenting civil authorities in the event of a catastrophic event within the United States. Nonpersonnel AFMS assets that are not "owned" by the state (i.e., federalized assets) can be accessed using the same process used for tasking federal military forces.

NOTIONAL TASKING PROCESS OF FEDERAL AFMS RESOURCES

When the Department of Health and Human Services (DHHS) officials determine their assets are insufficient to fill a validated state request, the FRP allows them to subtask the support to a supporting agency. Coordination for possible subtasking of a valid request for assistance begins at the local level within the disaster field office (DFO).

At the DFO, the DOD liaison to the DHHS is the Joint Regional Medical Planning Office (JRMPO). The JRMPO coordinates medical responses of all the Services and serves as the initial filter for medical requests for assistance. The JRMPO assists the defense coordinating officer (DCO) in determining the validity of a request for federal assistance (RFA) and the capability required to meet the request. If the RFA subtasking is determined to be valid and within the capability of DOD resources to support, the JRMPO will coordinate the request with the DCO. The DCO submits the request to the appropriate DOD organization based upon the requirements and the specific Service's ability to meet those requirements within time and resource constraints. **All Air Force assets, whether assigned to a unified command, specified**

command, or to the Chief of Staff of the Air Force, may be tasked to support civil emergencies.

COMMAND AND CONTROL (C2)

Federal military forces employed in MSCA activities shall remain under military command and control under the authority of the DOD executive agent or task force commander at all times. **Based on the magnitude and type of disaster and the anticipated level of resource involvement, DOD may establish a joint task force (JTF) to consolidate and manage supporting operational military activities.** Within the context of this discussion, a JTF is a temporary, multiservice organization created to provide a consequence management response to a major natural or man-made disaster or emergency.

- ★ The supported commander activates and deploys a DCO and, based on the severity and location of the disaster, may deploy a single Service task force or JTF.
- ★ A JTF is configured for each specific mission. In disasters, the JTF may require a greater proportion of support-type units and capabilities than in combat deployments. The JTF is able to provide emergency assistance across all lines of support.

Within a JTF, USAF elements (to include medical) will normally be presented to the supported commander as a task-oriented, tailored force package called an air and space expeditionary task force (AETF) that is under the command and control of a single airman, the Commander, Air Force Forces (COMAFFOR). **In any operation, a COMAFFOR is designated from the US Air Force and serves as the commander of Air Force forces assigned and attached to the US Air Force component.** The COMAFFOR, with the AETF, presents the joint force commander a task-organized, integrated package with the proper balance of force, sustainment, and force protection elements. If a JTF is not established, C2 of Air Force medical assets remains within Service channels. **Command relationships are defined in the warning/operations/execution order.**

CHAPTER TWELVE

INFORMATION MANAGEMENT/INFORMATION TECHNOLOGY

Expeditionary combat support capabilities underpin the Air Force ability to operate anywhere in the world. Effective, efficient combat support is the key to sustaining expeditionary forces. The Air Force must continue to harness information technology, rapid transportation, and the strengths of both to ensure responsive, dependable, precise support.

AFDD 2-8, Command and Control

OVERVIEW

This chapter focuses on pertinent aspects of medical information capabilities, employment, and interoperability. It provides the doctrinal foundation for integrating existing and future medical information systems into an interoperable capability to facilitate the transfer of medical information throughout the AOR.

The primary purpose of the AFMS medical information infrastructure is to automate medical information functional processes by electronically linking deployed AFMS components. The building block approach for designing the infrastructure will provide the needed flexibility to accommodate the tailoring of the AFMS UTCs to support a wide spectrum of theater operations ranging from humanitarian missions to full scale MTWs. An integrated network of computer hardware and communications systems configurations for each UTC component provides the capability to automate the sensing, collecting, processing, storing, presentation, and transmission of medical information functions. Most deployed UTC components have, or have access to, internal and external system interfaces to further enhance the automation of medical information functional processes.

Deployed medical units use the medical information infrastructure to interface with related theater operations and command and control centers, to include fixed medical treatment and staging facilities (which manage and govern patient care), patient movement, and logistics support activities. The network of connected medical treatment and transportation facilities helps ensure the seamless transfer of patient information, enhancing the quality of care for the warfighter.

OPERATIONS

Medical information infrastructure components are embedded within deployable UTC equipment assemblages to include providing expansion capabilities for theater in-place combat zone hospitals and prepositioned war reserve materiel (WRM) assets. Components are deployed in conjunction with its corresponding UTC. The deployment of medical information components should be transparent to the AFMS operation and provide a seamless and integrated

computer and communications systems infrastructure that is fully interoperable with existing architectures supporting operational deployments. The medical information infrastructure facilitates the timely transfer of medical information throughout AFMS deployed operations; returning to existing peacetime facilities as required, supporting and enhancing quality patient care.

The medical information infrastructure leverages existing technologies and deployable communications systems to support both nonsecure and secure voice and data transmissions within the AOR. In addition, the infrastructure utilizes “reach back” long haul communications to the forward and rear AFFOR Headquarters Surgeon staff; to fixed C2 and support centers (e.g., Rear Operations Support Center, Armed Forces Medical Intelligence Center [AFMIC], etc.); to CONUS medical facilities; to supporting theaters; and to links to support activities.

COMMAND AND CONTROL RELATIONSHIPS

Command relationships governing AFMS operations supporting multinational or joint theater deployments will be conducted as specified in applicable execution orders and operations plans. The AFFOR Surgeon will establish and promulgate chain of command policies that will govern AFMS support operations in a deployed environment.

An integrated computer and communications system, operated by theater AFMS forces, provides an automated capability to network medical UTCs across the operational theater spectrum of patient and health services. The networked system facilitates the transmission of medical reports in accordance with AFFOR Surgeon policy, operation plan (OPLAN) reporting requirements, and Air Force Instructions (AFIs).

MEDICAL INFORMATION FUNCTIONS

Medical information functions supporting command and control, patient care, patient movement, medical resource and logistics management activities include:

- ✦ **Sensing:** Sensing includes real-time observation of both clinical and environmental elements and factors relevant to the theater.
- ✦ **Collecting:** Pertinent medical and demographic data is collected at the point of patient encounter and updated as the patient transits through the health care and aeromedical evacuation system.
- ✦ **Processing:** The data is processed to create and update the patient’s medical information record throughout the patient’s duration in the medical support system to include generating situational and status reports.
- ✦ **Storing:** The patient’s medical information record is stored, as necessary, either to a local and/or to a centrally designated data repository.

- ✦ **Transmitting:** The patient's medical information is transmitted between applicable medical support elements to store data, conduct medical consultation activities, request and coordinate AE airlift support and to provide situational and status reporting information.
- ✦ **Presenting:** The patient's medical information is presented or displayed by the medical support element.

INTELLIGENCE/NATIONAL AGENCY/SPACE SUPPORT

National agency support is currently limited to the use of CD-ROM based products for AFMS UTCs. In certain deployments, Air Force Space Command will provide space-based information such as global positioning system (GPS) data, critical operational and threat warning information, and weather data that directly impact the AOR to which AFMS personnel are deployed.

COMMUNICATIONS/COMPUTER SYSTEMS SUPPORT

The medical information functions associated with providing patient movement, health care, medical support, and medical logistics (including blood) management, are effectively accomplished through the use of integrated communications and computer systems for deployable medical assets, AE system, and SOF medical element theater components, as well as in-place MTFs. The communications systems provide secure and reliable voice, data, and video communications.

Satellite communications systems, linked with ground command, control, communications, computer and intelligence (C4I) systems, provide the AFFOR Surgeon and deployed medical commanders an enhanced ability to direct deployed medical forces. The AFMS medical information infrastructure provides the foundation for the inclusion of medical intelligence functional and informational capabilities, requiring support from the Armed Forces Medical Intelligence Center.

INTEGRATION AND INTEROPERABILITY

The seamless integration of AFMS forces into an operational theater environment enhances the overall medical and health care support to operational forces. **The application of modern engineering design practices and incorporation of state of the art technology in developing and fielding a medical information superiority infrastructure are critical to realizing a small electronic medical footprint for deployed AFMS assets.**

SECURITY

The nature of the medical information infrastructure, and its ability to process sensitive, unclassified, and classified data, requires both physical and operational security. Medical information in and of itself is not classified. However, medical information can become an operations security (OPSEC) indicator in the context of a particular military operation. More specifically, medical data when assessed with other operational data may produce valuable insights to adversaries as to troop strength and vulnerabilities.

Casualty and injury data can be valuable information for opposing forces during conflicts. OPSEC measures to reduce or eliminate these indicators may entail restrictions on medical information dissemination. These measures are detailed in an OPLAN or operation order (OPORD). OPSEC measures may require encryption for transmission only (EFTO) of medical information.

Operational details regarding airlift plans and schedules in support of aeromedical evacuation missions into and out of forward operating locations may be classified, requiring medical information be classified to the level prescribed by the OPLAN. The use of OPSEC measures for medical information is at the discretion of the joint force commander (JFC). To meet mission requirements, certain medical UTCs are equipped with COMSEC and keying material.

LOGISTICS

Logistics support planning for fielded Air Force medical information infrastructure will define a strategy to place only the required number of equipment sets into the hands of the first responders as well as orchestrating delivery to units conducting personnel training. Simultaneous deployments to different locations or the occurrence of surge operations will necessitate additional equipment sets. As infrastructure operations mature, operational units will become more self-sufficient and will reduce overall logistics support requirements. Integration of medical logistics support through interoperability with theater information management systems and other support systems through information reach back must be available to provide adequate and responsive healthcare delivery to operational forces.

CHAPTER THIRTEEN

EDUCATION AND TRAINING

OVERVIEW

The AFMS medical readiness mission is to respond globally with a medical force capable of supporting the full spectrum of military operations, and specifically, war winning operations, humanitarian and civic assistance, and disaster response. It is through education and training that Air Force medical personnel, to include both guard and reserve units, obtain and sustain the necessary operational readiness skills to ensure accomplishment of mission goals. **Hands-on experiences, through daily duties, realistic exercises, and real world crises, are necessary to prepare medical personnel to meet this wide array of challenges.** Participation in these activities reinforces skill sets and provides an opportunity to objectively measure mission capability.

The AFMS, in carrying out its responsibilities to maintain the human weapon system, provides medical readiness education and training that employs the most current medical knowledge and develops the highest competency of skills necessary to ensure a strong fighting force. This education and training addresses the individual USAF specialty code (AFSC) and the unit type code (UTC) lessons learned from past operations, while training for future missions.

Competency (e.g., initial education, credentials, certifications) and currency (recent experience practicing in the area of competency) are basic fibers of readiness woven throughout the Medical Readiness Education and Training Pyramid. (See figure 13.1.) Determination of competency and currency must be performance-based as demonstrated through operational readiness inspections (ORIs), Inspector General (IG) inspections, or by established standards (e.g., board certification, Readiness Skills Verification Program [RSVP], etc.).

BUILDING BLOCKS

Medical readiness education and training building blocks begin with initial training received upon entry into the Service and continue with periodic refresher training throughout the lifecycle of the Service member. The blocks can best be described as three phases: initial training, sustainment training, and just-in-time (JIT) training.

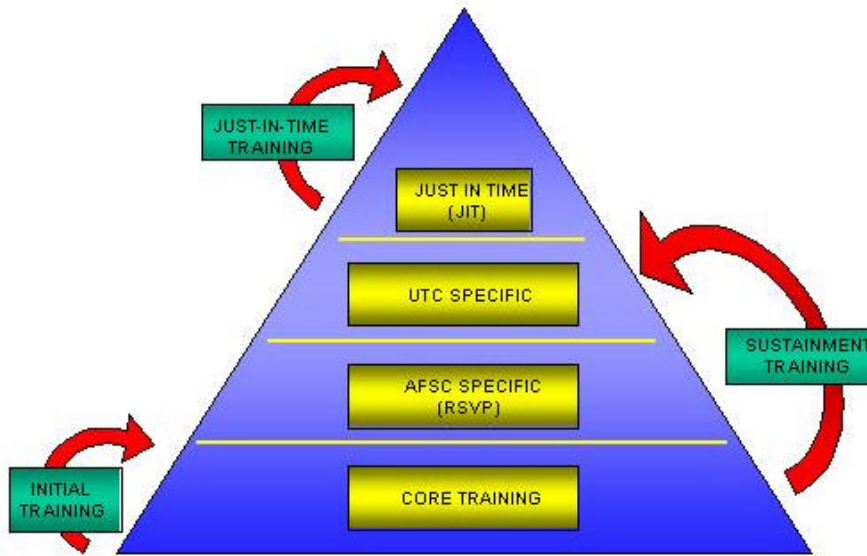


Figure 13.1. The Medical Readiness Education and Training Pyramid

Initial Training

Initial medical readiness training occurs during accession/entry-level courses for officer and enlisted members. Medical readiness training is provided according to the requirements outlined in AFI 41-106, *Medical Readiness Planning and Training*. Officers receive initial medical readiness training by attending the Commissioned Officer Training (COT)/Reserve Commissioned Officer Training (RCOT) course, or through a commissioning program such as a Service academy, Reserve Officer Training Corps (ROTC), or Officer Training School (OTS). Enlisted personnel receive training through Warrior Week during Basic Military Training, and the Expeditionary Medical Readiness Course (EMRC) at Sheppard AFB, TX or Basic Expeditionary Medical Readiness Training (BEMRT) at Brooks AFB, TX.

Sustainment Training

Sustainment training is composed of individual field skills, AFSC specific tasks, and UTC specific requirements. All deployable AFMS personnel participate in medical readiness sustainment training. Officers begin their sustainment training after completion of their unit orientation and achievement of a fully qualified AFSC. Enlisted personnel begin sustainment training upon upgrade to their 5-skill level.

AFSC specific sustainment training ensures an individual’s ability to perform required medical duties in support of military operations. The RSVP database is the source for AFSC

specific sustainment training requirements. The RSVP Functional Training Managers at each unit, as defined in AFI 41-106, *Medical Readiness Planning and Training*, ensure training is identified, planned, conducted, and documented according to the RSVP.

The Manpower and Equipment Force Packaging (MEFPAK) for each UTC establishes a mission essential task list (METL) which identifies the key skills required by UTC members to function effectively in an operational environment. UTC-specific training requirements are derived from the METLs. UTC-specific team training is completed prior to deployment. **Assigned UTC personnel train together, with their deployable assets, and train with other UTCs, as directed by their mission. Cooperative training is especially important for medical UTCs, AE components, and SOF medical assets that must work together in various combinations to ensure a seamless casualty care system.** For example, AETC UTCs that support AFSOC missions should train prior to deployment with the SOF personnel they are identified to support.

Just-in-time (JIT) Training

Just-in-time training is conducted just prior to deployment and is specific to the deployed location and situation. Medical personnel not assigned to a deployable UTC or assigned to staff agencies, field operating agencies, direct reporting units and Air Force elements require JIT training upon notification of deployment orders.

SUMMARY

Superior education and training form the core of a medically ready force. It provides the structure for ensuring medical service personnel are current in their skills, confident in their abilities, and are ready to support the broad spectrum of military operations.

Suggested Readings

Air Force Publications

AFDD 1, *Basic Air Force Doctrine*
AFDD 2, *Organization and Employment of Aerospace Power*
AFDD 2-1.8, *Counter Nuclear, Biological, Chemical Operations*
AFDD 2.3, *Military Operations Other Than War*
AFDD 2-4, *Combat Support*
AFDD 2.4-1, *Force Protection*
AFDD 2-6, *Air Mobility Operations*
AFTTP 3-42.3 [Draft], *Health Service Support in Nuclear, Biological, and Chemical Environments*
AFTTP 3-42.5, *Aeromedical Evacuation*
AFTTP 3-42.6, *Medical Support for Special Operations Forces*
AFTTP 3-42.7, *Aerospace Medical Contingency Ground Support Systems*
AFTTP 3-42.8, *Medical Logistics and Blood Support Operations*

Joint Publications

JP 0-2, *Unified Action Armed Forces [UNAAF]*
JP 3-17, *Joint Doctrine and Joint Tactics, Techniques, and Procedures (JTTP) for Air Mobility Operations*
JP 4-02, *Doctrine for Health Service Support in Joint Operations*
JP 4-02.1, *Joint Tactics, Techniques, and Procedures for Health Services Logistics Support in Joint Operations*
JP 4-02.2, *Joint Tactics, Techniques, and Procedures for Patient Movement in Joint Operations*
JP 6-0, *Doctrine for Command, Control, Communications, and Computers (C4) Systems Support to Joint Operations*

Other Publications

Geneva Convention for the Amelioration of the Conditions of the Wounded and Sick in Armed Forces in the Field, art. 21, adopted Aug. 12, 1949, 6 U.S.T. 3114, 75 U.N.T.S. (1950) 31-83 (entry into force Oct 12, 1950, for US Feb. 2, 1956).

APPENDIX

LEVELS OF CARE

Casualty Care Capabilities – Air Force Medical Assets

- ✦ **Level I.** Level I care consists of care rendered at the unit level. It includes self-aid, buddy aid, emergency medical technician care, examination, and emergency lifesaving measures such as the maintenance of the airway, control of bleeding, prevention and control of shock, splinting or immobilizing fractures, and prevention of further injury. Treatment may include restoration of the airway by invasive procedures, use of IV fluids and antibiotics; and application of splints and bandages.
- ✦ **Level II.** Level II care includes basic resuscitation and stabilization and may include advanced trauma management, emergency medical procedures, forward resuscitative surgery capability, basic laboratory, limited x-ray, pharmacy, and temporary holding facilities. Patients are treated and returned to duty, or are stabilized for evacuation to an MTF capable of providing a higher level of care.
- ✦ **Level III.** Level III care includes clinical capabilities normally found in a facility that is typically located in a reduced-level enemy threat environment. The facility is staffed and equipped to provide resuscitation, initial wound surgery, and post-operative treatment. This level of care may be the first step toward the restoration of functional health, as compared to procedures that stabilize a condition to prolong life. It does not normally have the crisis aspects of initial resuscitative care and can proceed with greater preparation and deliberation.
- ✦ **Level IV.** Level IV care provides the surgical capabilities found in Level III care, and also provides rehabilitative and recovery therapy for those who can return to duty within the theater evacuation policy. This level of care may only be available in mature theaters.
- ✦ **Level V.** Level V care is definitive, convalescent, restorative, and rehabilitative and is normally provided by military, Department of Veterans Affairs (DVA), or CONUS civilian hospitals. On occasion, host nation hospitals in combatant commander-approved safe havens may also be used. This level may include a period of minimal care and increasing physical activity necessary to restore patients to functional health and allow them to return to duty or to a useful and productive life.

Glossary

Abbreviations and Acronyms

ADAPT	Alcohol and Drug Abuse Prevention and Treatment
AE	aeromedical evacuation
AECM	aeromedical evacuation crewmember
AEF	air and space expeditionary force
AEFC	Air and Space Expeditionary Force Center
AEG	air and space expeditionary group
AES	air and space expeditionary squadron
AETF	air and space expeditionary task force
AEW	air and space expeditionary wing
AFCC	Air Force Component Commander
AFDD	Air Force Doctrine Document
AFFOR	Air Force forces
AFI	Air Force Instruction
AFMIC	Armed Forces Medical Intelligence Center
AFMLOC	Air Force Medical Logistics Operation Center
AFMS	Air Force Medical Service
AFRAT	air force radiation assessment team
AFRC	Air Force Reserve Command
AFSC	USAF specialty code
AFSOC	Air Force Special Operations Command
AFTH	Air Force Theater Hospital
AJBPO	Area Joint Blood Program Office
AMOCC	Air Mobility Operations Control Center
ANG	Air National Guard
AOC	air and space operations center
AOR	area of responsibility
ARC	Air Reserve Component
ASBPO	Armed Services Blood Program Office
ASWBPL	Armed Services Whole Blood Processing Laboratory
BAT	biological augmentation team
BDC	blood donor center
BEE	Bioenvironmental Engineer
BEMRT	Basic Expeditionary Medical Readiness Training
BI	battle injuries
BPD	blood product depot
BSU	blood supply unit
BTC	blood transshipment center

C2	command and control
CASEVAC	casualty evacuation
CBRNE	chemical, biological, radiological, nuclear, or high-yield explosives
CCATT	critical care air transport team
CDC	Centers for Disease Control and Prevention
CHATH	Chemically Hardened Air Transportable Hospital
COMAFFOR	Commander, Air Force Forces
COMMZ	communications zone
CONUS	continental United States
COT	Commissioned Officer Training
CP	collective protection
DCO	defense coordinating officer
DFO	disaster field office
DHHS	Department of Health and Human Services
DIRMOBFOR	Director of Mobility Forces
DMC	Deployed Medical Commander
DNBI	disease and nonbattle injury
DOD	Department of Defense
DOJ	Department of Justice
DP	Personnel
DSO	domestic support operations
ECATT	expeditionary critical air transport team
EFTO	encryption for transmission only
EMEDS	Expeditionary Medical Support
EMEDS+10	Expeditionary Medical Support with 10 Beds
EMEDS+25	Expeditionary Medical Support with 25 Beds
EML	Expeditionary Medical Logistics
EMRC	Expeditionary Medical Readiness Course
FAP	Family Advocacy Program
FCO	federal coordinating officer
FDA	Food and Drug Administration
FDS	foundational doctrine statement
FEMA	Federal Emergency Management Agency
FHP	force health protection
FRP	Federal Response Plan
GCCS	Global Command and Control System
GPS	global positioning system
HA	humanitarian assistance
HAWC	health and wellness center
HC	Chaplain Service

HCA	humanitarian and civic assistance
HLS	homeland security
HP	Health Promotions
HPS/E	human performance, sustainment, and enhancement
HSS	health service support
HUMINT	human intelligence
HUMRO	humanitarian relief operation
IDMT	independent duty medical technician
IDT	Infectious Disease Team
IG	Inspector General
IHS	international health specialist
IL	Installations and Logistics
IMINT	imagery intelligence
IO	international organization
ITV	in-transit visibility
JAOC	Joint Air Operations Center
JBPO	Joint Blood Program Office
JFACC	joint force air component commander
JFC	joint force commander
JFSOCC	joint force special operations component commander
JIT	just in time
JOPEs	Joint Operation Planning and Execution System
JRMPO	Joint Regional Medical Planning Office
JTF	joint task force
JSOACC	joint special operations air component commander
JSOTF	joint special operations task force
JTF	joint task force
LAF	line of the Air Force
LEA	law enforcement agency
LOAC	Law of Armed Conflict
MAJCOM	major commands
MASINT	measurement and signature intelligence
MAT	Medical Analysis Tool
MEFPAK	Manpower and Equipment Force Packaging
METL	mission essential task list
MFST	mobile field surgical team
MLMC	Medical Logistics Management Center
MOOTW	military operations other than war
MSCA	military support to civil authorities
MTF	medical treatment facility
MTW	major theater war

NAF	numbered air forces
NBC	nuclear, biological, and chemical
NGO	nongovernmental organizations
OASD-HA	Office of the Assistant Secretary of Defense for Health Affairs
OPLAN	operation plan
OPORD	operation order
OPSEC	operations security
ORI	operational readiness inspection
OTS	Officer Training School
OSINT	open-source intelligence
PA	physician assistant
PAM	preventive aerospace medicine
PAR	population at risk (PAR)
PCM	primary care management
PD	passive defense
PMI	patient movement item
PMRC	Patient Movement Requirements Center
POW	prisoners of war
PVO	private voluntary organization
R&D	research and development
RCOT	Reserve Commissioned Officer Training
RFA	request for federal assistance
ROTC	Reserve Officer Training Corps
RSVP	Readiness Skills Verification Program
S&T	science and technology
SBPO	Supporting Base Blood Program Office
SCO	state coordinating officer
SG	surgeon; surgeon general
SIGINT	signals intelligence
SME	squadron medical element
SOF	special operations forces
SPEARR	small portable expeditionary aeromedical rapid response
TACC	Tanker/Airlift Control Center
TAES	theater aeromedical evacuation system
TAG	The Adjutant General
TBTC	transportable blood transshipment center
TCSG	USTRANSCOM surgeon
TET	theater epidemiology team
TIC	toxic industrial chemical
TIM	toxic industrial material

TPFDD	time-phased force and deployment data
TSG	theater surgeon
UCMJ	Uniform Code of Military Justice
USACHPPM	US Army Center for Health Promotion and Preventive Medicine
USC	United States Code
USSOCOM	US Special Operations Command
UTC	unit type code
WMD	weapons of mass destruction
WMDT	Wartime Medical Decontamination Team
WRM	war reserve materiel
XOF	Security Forces

Definitions

area of responsibility. 1. The geographical area associated with a combatant command within which a combatant commander has authority to plan and conduct operations. 2. [Definition pertains to naval use only and is therefore not included in this AFDD.] Also called **AOR**. (JP 1-02)

military operations other than war. Operations that encompass the use of military capabilities across the range of military operations short of war. These military actions can be applied to complement any combination of the other instruments of national power and occur before, during, and after war. Also called MOOTW. (JP 1-02) [*An umbrella term encompassing a variety of military operations conducted by the Department of Defense that normally complement the other instruments of national power. These military operations are as diverse as providing support and assistance (when consistent with US law) in a nonthreatening environment, and conducting combat not associated with war.*] {Italicized definition in brackets applies only to the Air Force and is offered for clarity.}

war. A state of undeclared or declared armed hostile action characterized by the sustained use of armed force between nations or organized groups within a nation involving regular and irregular forces in a series of connected military operations or campaigns to achieve vital national objectives. (Air Forces Staff College Pub 1).