

NAVY TACTICS, TECHNIQUES, AND PROCEDURES

**FORWARD DEPLOYABLE
PREVENTIVE MEDICINE
UNIT
NTTP 4-02.8**

EDITION SEPTEMBER 2008

**DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS**

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October 2008

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1. NTTP 4-02.8 (SEP 2008), FORWARD DEPLOYABLE PREVENTIVE MEDICINE UNIT (FDPMU), is UNCLASSIFIED. Handle in accordance with the administrative procedures contained in NTTP 1-01.
2. NTTP 4-02.8 (SEP 2008) is effective upon receipt and supersedes NWP 4-02.4 (Part C), FORWARD DEPLOYABLE LABORATORY dated August 1995. Destroy superseded material without report.
3. NTTP 4-02.8 (SEP 2008) describes the forward deployable preventive medicine unit (FDPMU) which provides health service support by rapidly assessing, preventing, and controlling health threats in the theater of operations and therefore enhancing organic preventive medicine assets.
4. Distribution of NTTP 4-02.8 (SEP 2008) is authorized to U.S. government agencies only for operational use to protect technical data or information from automatic dissemination. This determination was made August 2008. Other requests shall be referred to Navy Warfare Development Command, 686 Cushing Road, Newport, RI 02841-1207.

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A. M. ROBINSON, JR.

NTTP 4-02.8 (SEP 2008) was reviewed for format and approved Joint and Navy Service terminology. The contents of NTTP 4-02.8 (SEP 2008) support Navy Strategic and Operational Level doctrine.

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WENDI B. CARPENTER
Commander
Navy Warfare Development Command

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September 2008

PUBLICATION NOTICE

ROUTING

- 1. NTTP 4-02.8 (SEP 2008), FORWARD DEPLOYABLE PREVENTIVE MEDICINE UNIT, is available in the Navy Warfare Library. It is effective upon receipt.
- 2. Summary.
 - a. This publication describes the uses, capabilities, and limitations of the forward deployable preventive medicine unit.
 - b. The scope includes current doctrine and tactics, techniques, and procedures for the establishment, use, and deployment of the forward deployable preventive medicine unit.
 - c. The intended audience includes operational commanders, supporting commanders, planners and logisticians, and health service support personnel.

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PREFACE

NTTP 4-02.8 (SEP 2008) provides current doctrine and tactics, techniques, and procedures for the establishment, use, and deployment of the forward deployable preventive medicine unit. It incorporates lessons learned from recent operations and relevant information from a broad range of related documents.

Report administrative discrepancies by letter, message, or e-mail to:

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When items for changes are considered urgent send this information by message to the Primary Review Authority, info NWDC. Clearly identify and justify both the proposed change and its urgency. Information addressees should comment as appropriate. See accompanying sample for urgent change recommendation format on page 17.

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Submit routine recommended changes to this publication at any time by using the accompanying routine change recommendation letter format on page 18 and mailing it to the address below, or posting the recommendation on the NWDC Doctrine Discussion Group site.

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WARNINGS, CAUTIONS, AND NOTES

The following definitions apply to warnings, cautions, and notes used in this manual:



WARNING

An operating procedure, practice, or condition that may result in injury or death if not carefully observed or followed.



CAUTION

An operating procedure, practice, or condition that may result in damage to equipment if not carefully observed or followed.

Note

An operating procedure, practice, or condition that requires emphasis.

WORDING

Word usage and intended meaning throughout this publication is as follows:

“Shall” indicates the application of a procedure is mandatory.

“Should” indicates the application of a procedure is recommended.

“May” and “need not” indicate the application of a procedure is optional.

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1. The following changes are recommended for NTTP X-XX, Rev. X, Change X:

a. CHANGE: (Page 1-1, Paragraph 1.1.1, Line 1)
Replace "...the ~~National Command Authority~~ President and Secretary of Defense establishes procedures for the..."
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b. ADD: (Page 2-1, Paragraph 2.2, Line 4)
Add sentence at end of paragraph "See Figure 2-1."
REASON: Sentence will refer reader to enclosed illustration.
Add Figure 2-1 (see enclosure) where appropriate.
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CHAPTER 1

General

1.1 HEALTH SERVICES SUPPORT MISSION

The Secretary of Defense (SecDef) defines the mission of military health services as providing and maintaining readiness, medical services, and support to members of the armed forces during military operations, to their dependents, and to others entitled to Department of Defense (DOD) medical care. Naval expeditionary health service support (HSS) is capable of deploying naval personnel to promote physical and mental health readiness and to care for the sick and injured in military operations.

The forward deployable preventive medicine unit (FDPMU) provides HSS by rapidly assessing, preventing, and controlling health threats in the theater of operations and therefore enhancing organic preventive medicine assets. FDPMU capabilities include:

1. Identifying and evaluating environmental health hazards, including chemical, biological, and radiological agents
2. Assessing the risk of adverse health outcomes, monitoring the health of deployed forces, and assessing adverse health outcome risks through aggressive medical surveillance, infectious disease assessment, epidemiological analysis, disease vector surveillance, and control measures
3. Advising the operational commander concerning significant health risks and recommending mitigation strategies
4. Supporting deployed forces with flexible and sustainable force health protection services
5. Supporting task force commanders with specialized preventive medicine that can be rapidly deployed using portable, state-of-the-art detection/diagnostic equipment and real-time analytical capabilities
6. Task-organizing to meet any contingency, from small-scale humanitarian support to major theater war
7. Adapting to land-based operations, mobile platforms, large deck amphibious ships, aircraft carriers, and hospital ships.

1.2 DEPLOYMENT OF THE FORWARD DEPLOYABLE PREVENTIVE MEDICINE UNIT

The FDPMU can deploy within 96 hours of validated tasking. Once equipment and personnel are assembled on site, the FDPMU can have laboratory capabilities within 12 hours. As a task force component, the FDPMU is dependent on the operational commander for site preparation and other base operating support (BOS) services. To prevent environmental contamination during specimen processing, the FDPMU is placed downwind from adjacent facilities, equipment, and personnel. Specialty capabilities of the FDPMU include the following:

1. Preventive Medicine Component
2. Chemical Component
3. Radiological Subcomponent

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4. Microbiology Component
5. Disease Vector Component
6. Logistics Support Module.

For administrative and technical support facilities, the FDPMU configuration could require a maximum work area footprint of 7,500 square feet of level ground. Task-organized FDPMUs can be organized in smaller footprints.

FDPMU personnel are trained to receive, process, and analyze biological and chemical warfare agents and toxic industrial chemicals capable of creating environments immediately dangerous to life and health.

The process for requesting an FDPMU is discussed in Chapter 2.

1.3 HISTORY OF THE FORWARD DEPLOYABLE PREVENTIVE MEDICINE UNIT

The evolution of the FDPMU began with the preventive medicine mobile medical augmentation readiness team (MMART), whose mission was to serve as a force of trained personnel capable of rapidly augmenting operational forces for limited, short-term military operations, disaster relief missions, fleet and Marine Corps exercises, and scheduled deployments. The MMART concept extended preventive medicine capabilities to meet specific requirements. While MMARTs continued into the late 1990s, the Navy forward laboratory (NFL), as a new force health protection (FHP) asset, was developed to deliver preventive medicine capability to operational forces.

The NFL was an advanced infectious disease diagnostic laboratory that served as a theater-wide reference laboratory. The primary responsibilities of the NFL were to:

1. Provide laboratory diagnosis of clinical cases of infectious diseases
2. Assist in threat assessment of military-important infectious diseases
3. Detect potential biological warfare (BW) agents
4. Render public health assistance.

The use of the NFL during combat operations demonstrated the need for state-of-the-art diagnostic support in regions with a high infectious disease threat and also demonstrated the important role of Navy medical research in support of operational forces. The NFL concept was institutionalized into the forward deployable laboratory (FDL), which represented the next evolutionary step for delivering preventive medicine capabilities.

The FDL gave the task force commander rapidly deployable, portable, and state-of-the-art diagnostic capability with added flexibility to meet specialized needs of evolving contingencies. Depending on the contingency and the functions required, the FDL was configured either as a basic capabilities core laboratory or as an enhanced comprehensive laboratory through the use of special diagnostic and/or biological threat agent modules. The FDL remained operational through 1998 and paved the road for the creation of the FDPMU.

The primary goal for establishing the FDPMU was to deliver deployable medical surveillance. It allowed operational commanders broader capabilities for the detection, analysis, and identification of chemical, biological, and radiological (CBR) hazards. Operational commanders could more easily integrate environmental and medical hazards into briefings. The newly developed FDPMU, equipped with enhanced technology and a greater degree of mobility in support of maneuver warfare, was first deployed in 2004 to support detainee operations in the Global War on Terrorism (GWOT). The units then routinely deployed in support of Operation IRAQI FREEDOM (OIF) and major military-supported humanitarian operations, both domestic and international.

1.4 CAPABILITY-BASED FORWARD DEPLOYABLE PREVENTIVE MEDICINE UNIT PLATFORMS

The FDPMU addresses the DOD's concept for support of today's FHP vision, specifically the second pillar, Prevention and Protection.¹ While in theater, the FDPMU is capable of temporarily supplementing and/or enhancing deployed units' organic preventive medicine assets. Built on a modular concept, capabilities are tailored and delivered based solely on requirements. The FDPMU supports the range of military operations (ROMO) providing risk assessment of environmental and anthropogenic hazards, risk communication, and recommendations for mitigation. FDPMUs are staffed by public health experts and scientists who are trained to effectively communicate with nongovernmental organizations (NGOs), local national representatives, and military personnel. FDPMU missions may include:

1. Foreign humanitarian assistance (FHA)
2. Civil-military operation (CMO)
3. Predeployment site survey (PDSS)
4. Environmental health site assessment (EHSA).

1.5 ADVANCED BASE FUNCTIONAL COMPONENT CONCEPT

The FDPMU is an advanced base functional component (ABFC), an element of naval logistics that comprises a preplanned collection of individual functional components, each of which is designed and organized to perform a specific function at an advanced site. By using the ABFC system, planners for logistics, facilities, and constructions can readily identify the equipment, facilities, materials, and other pertinent information needed for each component. The FDPMU ABFC is a designated medical facility planned as a grouping of personnel, facilities, and equipment, and designed to perform a particular function and to accomplish a particular mission at an advanced base. The FDPMU can be prepositioned to support a combatant commander (CCDR). Its design incorporates required operating resources and can also be tailored to provide specialized HSS.

1.6 HEALTH SERVICE SUPPORT REQUIREMENTS DETERMINATION

Navy Medicine provides HSS capability by assigning tasks to its organizations. These tasks are defined in the universal language of the joint tasking system and, in broad terms, are requirements for the medical departments. The Universal Naval Task List (UNTL) is a single-source document that includes the Navy Tactical Task List (NTTL) and the Marine Corps Task List (MCTL). As applied to joint training and readiness reporting, this task list provides a common language that commanders can use to document their command warfighting requirements as mission-essential tasks (METs). The UNTL's tactical level of war tasks are a compilation of Navy, Marine Corps, and Coast Guard tasks that are written using the common language and task hierarchy of the Universal Joint Task List (UJTL).

The UJTL identifies tasks at varying levels of operations by analyzing the Joint Strategic Capabilities Plan (JSCP), current operation plans (OPLANs), and the individual mission. The UJTL provides a detailed discussion of task conditions and standards. Conditions are variables of the environment that affect the performance of tasks in the context of the assigned mission. They are categorized as physical environment, military environment, or civil environment, with a minimum proficiency level required in the performance of a particular task under a specified set of conditions. Standards are established by the commander. The tasks identified in the UJTL are architecturally linked to the tasks identified in the UNTL. They include strategic-national (SN), strategic-theater (ST), and operational (OP) levels of war tasks. Paragraphs 1.6.1 and 1.6.2 provide task lists at the joint and naval levels to include the HSS missions at the different levels of warfighting.

¹ The conceptual framework that supports the uninterrupted continuum of health care for naval forces during predeployment, deployment, redeployment, and postdeployment consists of three pillars: Healthy and Fit Force, Prevention and Protection, and Casualty Care and Management. For additional information on this overarching concept see *Fleet Operational Health and Naval Force Health Protection for the 21st Century (NFHP-21)*.

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1.6.1 Universal Joint Task List

1. Strategic-National
 - a. Determine national residual capabilities (SN 3.3.6).
 - b. Develop and maintain a medical surveillance program (SN 4.3.4).
 - c. Expand HSS (SN 6.6.4).
 - d. Coordinate battle management, command, control, communications, computers, intelligence, surveillance, and reconnaissance (SN 9.1.3).
 - e. Coordinate consequence management (SN 9.2.2).
2. Strategic-Theater
 - a. Manage medical, dental, and veterinary services; laboratories; and supply (ST 4.2.2.3).
 - b. Coordinate joint comprehensive medical surveillance (ST 4.2.2.4).
 - c. Coordinate consequence management (CM) in theater (ST 9.5).
3. Operational.
 - a. Provide for health services in the joint operations area (JOA) (OP 4.4.3).
 - b. Supply operational forces (OP 4.5.2).

1.6.2 Universal Naval Task List

1. Navy Tactical Task List
 - a. Assess tactical environment (NTA 2.2.4).
 - b. Support peace operations (NTA 4.8.1).
 - c. Obtain and analyze medical information (NTA 4.12.8).
 - d. Train medical and nonmedical personnel (NTA 4.12.9).
 - e. Provide disaster relief (NTA 6.5.1).
 - f. Provide for operational safety of personnel and equipment (NTA 6.6).
2. Marine Corps Task List.
 - a. Conduct humanitarian assistance operations (MCT 1.6.6.7).
 - b. Perform consequence management (MCT 6.3).
 - c. Operate in a chemical, biological, radiological, nuclear, and explosive environment (MCT 6.4).
 - d. Conduct chemical, biological, radiological, nuclear, and explosive operations (MCT 6.4.1).

- e. Conduct chemical, biological, radiological, and toxic industrial chemical agent detection, identification, monitoring, and sampling operations (MCT 6.4.3).
- f. Conduct enhanced nuclear, biological, or chemical operations (MCT 6.4.5).

Note

Additional information on the development of Service component METs can be found in the Chairman of the Joint Chiefs of Staff Manual (CJCSM) 3500.03 (series), *Joint Training Manual for the Armed Forces of the United States*. Office of the Chief of Naval Operations Instruction (OPNAVINST) 3500.38B/Marine Corps Order (MCO) 3500.26A/United States Coast Guard Commandant Instruction (USCG COMDTINST) 3500.1B, *Universal Naval Task List (UNTL)*, provides a breakdown of Navy tactical task (NTA) metrics.

1.7 TAXONOMY OF CARE CAPABILITIES

1.7.1 Clinical Capabilities

HSS is provided to expeditionary forces using ascending taxonomy of care capabilities, which is a continuum of care starting at the point of illness or injury and continuing through evacuation and en route care. Patients are initially directed to a facility capable of decisive intervention to preserve life, limb, and eyesight. Once stabilized, depending on their condition, patients are either returned to duty or are transferred to facilities outside the theater of operations for definitive treatment. The taxonomy of care concept weighs four interdependent factors:

1. Urgency of the patient's needs
2. Medical personnel and facilities mobility requirements
3. HSS personnel capabilities, equipment, and supplies
4. Care capability level workload relative to its treatment capacity.

The DOD has institutionalized the newly developed taxonomy of care capabilities as the health services standard. Figure 1-1 summarizes the taxonomy of care capabilities found in the Navy Warfare Publication (NWP) 4-02, *Naval Expeditionary Health Service Support Afloat and Ashore*.

According to the Allied Joint Publication (AJP) 4-10, *Allied Joint Medical Support Doctrine*, the North Atlantic Treaty Organization (NATO) retains its levels-of-care schema, which corresponds to levels 1 to 4 of the US taxonomy of care capabilities.

Note

In coalition and multinational operations, personnel from non-NATO countries may have different interpretations of the levels of care. In such circumstances, evacuation of casualties through the standard progressive levels of care may not occur, and patients may arrive at a theater hospital facility without receiving first responder or forward resuscitative care.

CAPABILITY	HEALTH CARE	EXAMPLE(S)*
First Responder	Medical care rendered at the point of initial injury or illness	Self Aid/Buddy Aid Hospital Corpsman Marine Corps Lifesavers
Forward Resuscitative Care	Forward advanced emergency medical treatment performed close to the point of injury/illness	Ship's Medical Department Battalion/Wing Aid Station Shock Trauma Platoon Forward Resuscitative Surgery System Expeditionary Medical Facility Surgical Company Casualty Receiving and Treatment Ship Aircraft Carrier
Theater Hospitalization	Modular theater hospitals with medical and surgical capabilities required to support theater operations	Hospital Ship Expeditionary Medical Facility
Definitive Care	Full range of acute, convalescent, restorative, and rehabilitative care	Outside the continental United States (OCONUS) MTF Continental United States (CONUS) MTF Veterans' Administration National Disaster Medical Systems Hospital
En Route Care	Medical treatment during movement between capabilities	Tactical En Route Care Teams**
<p>*This is not an all-inclusive list of medical resources.</p> <p>**The principles of en route care are used throughout all capabilities of care.</p>		

Figure 1-1. Taxonomy of Care Capabilities

1.7.2 Prevention and Protection Capability

The FDPMU provides FHP by rapidly assessing, preventing, and controlling health threats in a theater of operations and enhancing organic preventive medicine assets through the tenets of the joint HSS prevention and protection capability.

HSS supports the warfighter by applying prevention and protection capabilities, which are wide-ranging and diverse and match the complexity of human health needs. HSS capabilities focus on the individual and are directed at the family, organization, or force. Additionally, HSS develops and enforces specific minimum standards to ensure that Service members are free of diseases and are in satisfactory medical and dental condition.

When focusing on the joint force, the medical portion of protection is labeled FHP. It includes all measures taken by commanders, leaders, individual Service members, and the military health system (MHS) to promote, improve,

and conserve the mental and physical well-being of Service members across the ROMO. These measures enable a healthy and fit force, prevent injury and illness, and protect the force from health hazards.

Members of the joint force have to be physically and mentally fit. This requirement demands programs that promote and improve the capacity of personnel to perform military tasks at high levels under extreme conditions for extended periods of time. These preventive and protective capabilities include physical exercise, nutritional diets, dental hygiene and restorative treatment, combat and operational stress management, and rest, recreation, and relaxation geared to the individual or organization.

Methods to prevent disease are best applied synergistically. Sanitation practices, waste management, and pest and vector control are crucial to protection from disease. Regional spraying and the application of insect repellent to guard against hazardous flora are examples of prevention methods. Prophylactic measures can encompass human and animal immunizations, dental chemoprophylaxis and treatment, epidemiology, optometry, counseling on specific health threats, and issuing of protective clothing and equipment.

Keys to preventive and protective care are the collection and dissemination of information, the capacity to anticipate the current and future health environment, and proper delivery of care to the affected human population. This information, derived from meticulous health surveillance and medical intelligence, addresses occupational, natural environmental, and enemy-induced threats, including industrial hazards; air and water pollution; endemic or epidemic disease; chemical, biological, radiological, nuclear, and high-yield explosives; and lasers. HSS must be capable of acquiring, storing, moving, and providing information that is timely, relevant, accurate, concise, and applicable to the intended human user. Information is crucial to FHP.

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CHAPTER 2

Concepts of Employment

2.1 CONCEPTS AND CAPABILITIES

2.1.1 Design Concepts for the Forward Deployable Preventive Medicine Unit

The base FDPMU configuration is a 13-member team composed of four distinct components: preventive medicine, chemical, microbiology, and disease vector components; and a radiological subcomponent logistical and administrative support module that includes organic transportation, tents, and generators. The FDPMU deploys as a task-organized preventive medicine unit composed of one or more components. Personnel assigned to individual components are added or omitted as dictated by the mission. Refer to Chapter 3 for a list of additional BOS requirements.

2.1.2 Power Generation and Distribution Capabilities

FDPMU shelters and equipment are powered by 35-kilowatt (kW) trailer-mounted generators that produce three-phase, 60-hertz (Hz), and 120-volt (V) alternating current (AC). A sufficient supply of transformers and/or adapters is necessary to support power needs for equipment when required to convert to 110-V AC power or to connect to direct current (DC) power supply. Use of power sources other than the provided 35-kW generators may cause equipment malfunctions and damage. Although most platform equipment can run off both 50- and 60-Hz power, alternate sources provided by the host nation (HN) or other resources should be avoided and used only after consulting with the Navy Expeditionary Medical Support Command (NEMSCOM).

When task-organized, the FDPMU may or may not be deployed without organic generator support. The supporting commander should be notified regarding electrical requirements early in the planning phase to ensure that approved sources of power are available.

2.1.3 Potable Water and Wastewater Systems

The FDPMU must coordinate with its operational commander to receive potable water.

2.1.4 Environmental Control Unit for the Forward Deployable Preventive Medicine Unit

The FDPMU is equipped with a trailer-mounted, 96,000 British thermal unit (Btu) environmental control unit (ECU), which provides environmental control in temperatures ranging from 17 °F to 125 °F.

2.1.5 Fuel Requirements for the Forward Deployable Preventive Medicine Unit

The FDPMU must coordinate with its operational commander to receive fuel as needed. Fuel requirements are estimated as diesel (20 gallons per day) for each organic vehicle and jet propellant (JP) fuel or diesel (20 gallons per day/generator) for each generator. Unleaded fuel is necessary to operate vector control equipment.

2.1.6 Shelter Systems

FDPMU operations and personnel billeting are housed in soft-walled, portable shelters. The number of FDPMU shelters needed is determined by mission and transportation constraints.

2.1.7 Request for Forces

As a Bureau of Medicine and Surgery (BUMED) capability, FDPUMs, as a BUMED entity, belong to the Secretary of the Navy (SECNAV). Capabilities that belong to the Service and are not allocated to a CCDR, such as a Navy FDPMU, are categorized as an unassigned force per current DOD Global Force Management (GFM) policy guidance. The following is a brief summary of the request for forces (RFF) process.

An RFF is required when a CCDR service component requests a Navy HSS capability. Component commanders will submit an RFF through their CCDR. The CCDR submits the RFF to the joint staff (JS). The JS validates the requirement and obtains approval from SecDef/National Command Authority, then sends the RFF to United States Joint Forces Command (USJFCOM). USJFCOM works with each of the services to develop a recommended sourcing solution. The Commander, United States Fleet Forces Command (USFFC) is the naval component commander to USJFCOM and the Navy's Global Force Manager. During this RFF process, USFFC coordinates with the Office of the Chief of Naval Operations (OPNAV) to assess the feasibility of sourcing with unassigned forces. USFFC then provides the sourcing solution to USJFCOM. USJFCOM develops and submits a sourcing solution to the JS based on each component's feasibility to source. The JS recommends the force allocation to SecDef for approval. Upon approval, the JS issues a Global Force Management Allocation Plan (GFMAP) modification. Based on the GFMAP modification, USJFCOM adds new requirements to the conventional forces annex (Annex A). For unassigned HSS forces, OPNAV will review Annex A and coordinate preparations for deployment with BUMED. USFFC issues deployment orders (DEPORDS) for assigned forces; OPNAV issues DEPORDS for unassigned forces.

2.1.8 Request for Support

A Service-to-Service request for support (RFS) is the request from a Navy component for capabilities in support of Navy requirements, which are usually short-duration requests (under 30 days) in support of deployments, operations, or exercises. To request HSS capability, a Navy component will submit an RFS to USFFC. USFFC will conduct an internal fleet review to validate the RFS and identify sourcing solutions. If Fleet support cannot be sourced, then USFFC and/or Commander, United States Pacific Fleet (USPACFLT) will forward the request to OPNAV to request sourcing from unassigned SECNAV forces. OPNAV will coordinate with BUMED to source the RFS.

2.2 FORWARD DEPLOYABLE PREVENTIVE MEDICINE UNIT CAPABILITIES**2.2.1 Organization and Staffing of the Forward Deployable Preventive Medicine Unit**

In basic configuration, the FDPMU consists of thirteen personnel, five officers, and eight enlisted persons distributed among the four primary components, one subcomponent (if requested), and one support module. Each component is coordinated by a team leader and deployable as a single unit/subset or in any combination of components. This enables the operational commander to request the specific FDPMU configuration to meet mission needs and the anticipated health threats. In addition, the basic configuration can be augmented by subject matter experts (SMEs), such as a radiation health officer and/or biochemist. Team members are sourced by Naval Medical Centers (NMCs) Portsmouth and San Diego from their respective Navy Environmental and Preventive Medicine Units (NEPMUs).

2.2.2 Specialty Capabilities of the Forward Deployable Preventive Medicine Unit**2.2.2.1 Preventive Medicine Component**

The preventive medicine component provides expert consultation to prevent or limit the impact of disease outbreaks. It also utilizes field sanitation expertise and assessment, epidemiological investigation of disease outbreaks, and theater surveillance data analysis to develop recommended interventions for prevention and control of deployment-related occupational and environmental illnesses, injuries, and diseases. Subfunctions include:

1. Health risk assessment/disease control measure analysis. Evaluates potential risk to force health (both short- and long-term) and readiness in the area of responsibility (AOR), prioritizes risk according to severity and likelihood, and recommends mitigating actions.
2. Disease and nonbattle injury (DNBI) analysis. Analyses provide consultation on reported DNBI data across all component commands.
3. HN population assessment. Interprets host nation/indigenous population health data, as needed, to support mission requirements.
4. Civil-military operations center (CMOC) coordination. CMOCs advise the joint task force (JTF) commander on relevant aspects of local population health, urgent needs, and requirements to satisfy those needs, including locally available assets and critical assets not available locally.
5. Theater-wide potable water analysis, field sanitation, and food safety consultation.

2.2.2.2 Chemical Component

The chemical component provides capabilities for identification and risk assessment of chemical warfare agents and environmental and occupational hazards. It maintains reachback capability to reference laboratories and other experts for chemical and environmental agent-related information. It also evaluates potential occupational health and environmental health risks for force health, both short- and long-term, and readiness in the AOR, and prioritizes risks according to severity of outcome and probability of occurrence. The chemical component provides recommendations to the operational commander to minimize health risks. Confirmation testing capability is available in the chemical component. Subfunctions of the chemical component include:

1. Chemical warfare (CW) agent detection and identification, which includes chemical components assessment, identification of CW agents, and exposures during deployments; and provides risk assessment and recommendations on potential threats based on current intelligence.
2. Toxic industrial chemical (TIC)/toxic industrial materiel (TIM) identification and potential exposures to hazardous materials (HAZMAT) are quantified as a preventive measure, providing recommendations to eliminate or minimize personnel exposure to these hazards.
3. An area-wide sampling of air, soil, and water based on the presence of complete or potentially complete exposure pathways for risk characterization.

2.2.2.3 Radiological Subcomponent

The radiological subcomponent assesses and identifies radioactive materiel, advises the operational commander of the hazard level, and recommends countermeasures. The radiological subcomponent also provides consultation for establishing an environmental dosimetry surveillance program and associated protective measures.

2.2.2.4 Microbiology Component

The microbiology component provides capabilities for detection, identification, and analysis of BW agents and disease threats that may be encountered during deployment. It also provides laboratory diagnosis of military-relevant infectious diseases endemic within the theater of operation. Confirmation testing capability is available in the microbiology component.

2.2.2.5 Disease Vector Component

The disease vector component provides strategies to protect deployed forces from vectorborne diseases, including surveillance and control of insects and animals that transmit diseases of military relevance. It does so through the collection and identification of specimens suspected of vectoring diseases.

2.2.2.6 Logistics Support Module

The logistics support module provides planning and coordination infrastructure through BOS to support the administrative, communication, and lift requirements of each primary component during predeployment, deployment, and postdeployment operations. The module also coordinates with BOS for the shipment of theater-wide samples and specimens collected by the team and, as directed, serves as the point of contact (POC) for the movement of HAZMAT in and out of theater. This module cannot be deployed independently.

2.2.3 Forward Deployable Preventive Medicine Unit Limitations

Upon deployment, the FDPMU is limited to 5 days of sustenance and 30 days of consumables supplies for sustaining operations. After 30 days, teams must integrate into the single integrated medical logistics manager (SIMLM) or theater lead agent for medical materiel (TLAMM) when functional. The FDPMU requires strategic lift. Once in theater, the unit can be fully operational within 12 hours of site off-load. Once deployed, the availability of BOS and logistic resupply can limit the effectiveness of the unit. The unit is dependent upon reagent-quality water, electrical load, refrigeration, and a responsive resupply system. It must also be accessible by air and ground transportation to ship and receive samples and specimens from throughout the theater of operation.

2.2.4 Civil Engineer Support Equipment

Civil engineering support equipment (CESE) is organic to the FDPMU for operating and maintaining the unit during deployment. CESE type and quantity are determined by mission and transportation constraints, and team size.

CHAPTER 3

Command, Control, and Communications

3.1 OVERVIEW

When deployed, operational control (OPCON), tactical control (TACON), and administrative control (ADCON) are established, as appropriate. Paragraph 3.2 delineates chain-of-command relationships.

3.1.1 Bureau of Medicine and Surgery

Upon receipt of the deployment order (DEPOD) from OPNAV, BUMED tasks the medical region(s) to identify and assign NMCs Portsmouth or San Diego to deploy the FDPMU.

3.1.2 Medical Region(s)

The medical region monitors and coordinates with NMC personnel and training readiness. It also coordinates training requirements with the Naval Expeditionary Medical Training Institute (NEMTI). Battle skill training is conducted along with training in the use of field gear and personal protective equipment (PPE). Upon receipt of the DEPOD, the medical region develops a staffing solution using the readiness category process as detailed in BUMEDINST 6440.5 (series), *Health Services Augmentation Program (HSAP)*. The medical region resolves personnel shortfalls and submits a staff solution to BUMED for approval.

3.1.3 Medical Fleet Response Plan

The HSAP identifies the surge capacity of the Medical Fleet Response Plan (MFRP), which is drawn from capability sets within the active-duty environmental preventive medicine unit. Because of the task organization and modular scalability of the FDPMU, equipment components or skill sets may be deployed independently for a specific disease vector component or may be augmented to enhance current FDPMU capabilities.

3.1.3.1 Routine Deployable

Two FDPMUs maintain ready FDPMU status on a 6-month rotating basis. The routine deployable FDPMU is able to deploy within days of notification.

3.1.3.2 Surge Ready

Two FDPMUs are maintained in the surge ready status. They are in the predeployment training phase for 6 months prior to designation as routine deployable. A surge-ready FDPMU is able to deploy within 30 days of notification.

3.1.3.3 Emergency Surge

Two FDPMUs are in emergency surge status after completing their duty as ready FDPMU. An emergency surge FDPMU is able to deploy within 60 days of notification.

3.1.4 Navy Medical Centers

NMCs ensure that FDPMU personnel are prepared to deploy and report any shortfalls to the Medical Region. The NEPMU reports to the NMC's Director of Public Health. All FDPMU issues and concerns are addressed by the NMC and then forwarded to the medical region. The NEPMU conducts ongoing training according to the FDPMU Navy Training System Plan (NTSP).

3.1.5 Navy Expeditionary Medical Support Command

NEMSCOM is responsible for FDPMU equipment set logistics and platform maintenance prior to activation. Its mission is to carry out policy developed by the program manager for the design, acquisition, receipt, assembly, integration, storage, shipment, maintenance, and life-cycle support of FDPMU equipment sets. NEMSCOM prepares FDPMU equipment, CESE, and ships to the port of debarkation (POD). If the DEPORD requires weapons, the FDPMU team deploys with 9 mm pistols.

3.1.6 Naval Reserve

Prior to activation, the Commander, Naval Reserve Force (COMNAVRESFOR) is responsible for ADCON of selected reserve personnel assigned to naval reserve FDPMUs.

3.2 CHAIN OF COMMAND

3.2.1 Deployed

Command relationships for OPCON, TACON, and ADCON are defined by the FDPMU DEPORD.

3.2.1.1 Organization Command and Control

Organization command and control (C2) has several components consisting of OPCON, TACON, and ADCON. OPCON is transferable command authority that can be exercised by commanders at echelons at or below the level of the CCDR through component commanders and organizational unit commanders. TACON is the command authority over assigned forces, attached forces, or commands, which are limited to the detailed direction and control of movements or maneuvers within the operational area necessary to accomplish assigned missions or tasks. TACON is inherent in OPCON.

3.2.1.2 Administrative Control

ADCON, vested primarily in the military department/Service chain of command, is the exercise of authority over subordinate organizations in respect to administration and support, including Service forces, resources and equipment, personnel management, unit logistics, training, readiness, mobilization, demobilization, discipline, and other matters not included in the operational missions of the subordinate or other organizations.

ADCON includes organization of Service forces, control of resources and equipment, personnel management, unit logistics, individual and unit training, readiness, mobilization, demobilization, discipline, and other matters not included in operational missions of the subordinate or other organizations. ADCON is always subject to the command authority of the combatant commander. Its responsibilities include:

1. Personnel (including postal and personnel accounting)
2. Finance (including commercial or vendor services)
3. Medical and dental
4. Legal services

5. Logistics
6. General engineering (including public works)
7. Chaplain and religious activities.

3.2.1.3 Forward Deployable Preventive Medical Unit Operational Control

FDPMU OPCON and TACON can be transferred from the CCDR to a Service component commander (SCC). In support of OIF, Marine Corps and Army component commanders have been assigned OPCON and TACON of FDPMUs. Using this scenario, the SCC assumes responsibility to employ the FDPMU to accomplish assigned missions. Historically, the Navy component commander (NCC) has retained ADCON of the FDPMU.

3.2.2 Command and Control Responsibilities

3.2.2.1 Prior to Deployment

Prior to deployment, the sourcing medical treatment facility (MTF) has ADCON responsibilities. Predeployment ADCON for equipment sets logistics is the responsibility of BUMED through NEMSCOM. When activated for a mission other than war, funding of the mission is a key concern to be addressed prior to activation.

3.2.2.2 Deployment

When an FDPMU is deployed in a theater of operation, the NCC is responsible for ADCON. The SCC or the designated operational commander exercises OPCON over the FDPMU and is responsible for funding FDPMU operating costs. The deployed FDPMU coordinates with its operational commander to receive operational tasking.

3.2.3 Operational Commander's Responsibilities

Operational commanders have several predeployment and postdeployment responsibilities to the FDPMU: administrative, base operating, financial, and medical support.

3.2.3.1 Predeployment/Postdeployment

Operational commanders have the following predeployment and postdeployment responsibilities:

1. Selecting the operational site. This includes the completion of an environmental site survey to avoid inappropriate placement of the FDPMU and to decrease the risk of adjacent units.



Due to the potential for environmental contamination during specimen processing, the FDPMU should be placed downwind from adjacent facilities.

2. Preparing the operational site. This includes gross site preparation prior to the arrival of FDPMU materiel at the operational site. Operational commanders consider:
 - a. Funding to transport personnel and materiel from the sourcing NMC and repositioned site to the operational site.

NTTP 4-02.8

- b. Ensuring transport of FDP MU materiel and personnel from the POD to the operational site. (Organic rolling stock supports requirements only during the FDP MU's operational phase.)
- c. Ensuring transport of FDP MU materiel and personnel from the operational site to the port of entry after deactivation.

3.2.3.2 Administrative

The NCC has ADCON over all deployed Navy forces, including medical, including:

1. Disbursing support provided by the Navy personnel support activity (PSA)
2. Supporting personnel support detachment provided by the Navy PSA
3. Maintenance and logistic organizations, including replacement/repair and periodic preventive maintenance/recalibration of medical unique equipment
4. Morale, welfare, and recreation support.

3.2.3.3 Base Operating Support

Operational commanders have the following BOS responsibilities:

1. External secure communications
2. External security to include perimeter security
3. Flammables and compressed gas support
4. Firefighter service
5. Laundry
6. Nuclear, biological, and chemical (NBC) decontamination support
7. Petroleum, oils, and lubricants
8. Potable water supply
9. Road maintenance, including snow removal
10. Waste disposal, including HAZMAT and biomedical wastes
11. CESE vehicle maintenance
12. Medical outpatient services
13. Logistic support to include nonfederal stocked items.

Note

Several base operating functions may be fulfilled by contracted organizations managed by the operational commander.

3.2.3.4 Financial

Operational commanders have the following financial responsibilities:

1. Contracting support for contracts above the dollar limits of the FDP MU officer in charge (OIC) authority
2. Coordinating opening target establishment during the activation phase.

3.3 COMMUNICATIONS

FDP MUs do not have external communication equipment or technical expertise. Prior to deployment, medical planners determine the communication requirements, and operational commanders provide equipment and technical support. At a minimum, FDP MUs must have Internet access, Internet connection, and nonsecure and secure telephone service.

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CHAPTER 4

Organization and Administration

4.1 ORGANIZATION

4.1.1 Responsibility and Authority of the Forward Deployable Preventive Medicine Unit

The FDPMU is led by an OIC when deployed, who is obligated to conform to and carry out the policies and procedures of the FDPMU set forth by higher command, including BUMED and the supported operational commander. While deployed, the OIC reports all significant matters pertaining to FDPMU operations to the operational chain of command, such as the operational commander, and coordinates administrative issues through the NCC. With approval of the operational chain of command, the OIC may provide informational reports to the Navy and Marine Corps Public Health Center (NMCPHC).

4.1.2 Internal Organization of the Forward Deployable Preventive Medicine Unit

The generic organization of the FDPMU consists of the OIC, an assistant OIC, a senior enlisted leader, and component team leaders.

4.2 STANDARD OPERATING PROCEDURES AND INSTRUCTIONS

The FDPMU has standard operating procedures (SOPs) developed, provided, and maintained by the NMCPHC. The NMCPHC developed the Navy Training System Plan for the FDPMU module, which identifies requirements for manpower, personnel, and training in conjunction with the FDPMU SOPs. Adjustments to the SOPs are based on the operating environment, assigned mission, and unit capability. Recommended revisions to the SOPs are made by the NMCPHC. SOPs are developed for the following functional areas: administrative, preventive medicine, radiological, microbiological, disease vector, logistics support, water sampling, and environmental site assessments.

4.3 MANUALS

FDPMUs use three types of manuals:

1. Initial outfitting manuals, including administrative/nontechnical publications and instructions
2. Technical manuals stored with prepositioned units that are provided electronically at the time of activation
3. Other technical manuals about air operations; chemical, biological, radiological, nuclear, and high-yield explosives manuals; communications manuals; and specifically, NWP 4-02; Navy Tactics, Techniques, and Procedures (NTTP) 4-02.1, *Medical Logistics*; and Marine Corps Warfighting Publication (MCWP) 4-11.1, *Health Service Support Operations*.

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CHAPTER 5

Security and Safety

5.1 SECURITY AND SAFETY

5.1.1 External Security

The FDPMU has limited organic security capability; therefore, operational commanders must provide security support. The deployed FDPMU security plan must address security precautions, threat response, and disaster recovery. FDPMU security assets only cover internal security requirements and must rely on the operational commander to provide external security, such as perimeter security.

5.1.2 Firefighting Capabilities

The FDPMU has limited organic handheld firefighting capability and must coordinate with the operational commander on the firefighting plan.

5.1.3 Safety in Country

When deployed, FDPMUs should develop an appropriate safety plan that addresses the customs, laws, regulations, and geographic areas of the HN that are potential or actual threats to staff safety.

5.2 SAFETY

The FDPMU must address safety issues equivalent to those in commercial biological/chemical laboratories, as well as safety concerns inherent in operational units. The FDPMU follows the same OPNAV safety program that other operational units follow. FDPMU OICs are responsible for establishing safety programs and internal organizations to address safety issues.

FDPMU personnel are trained in biosafety procedures, including receiving and processing chemical, biological, and radiological samples. A detailed description of biosafety procedures can be found in the FDPMU component's SOPs. Further information on standard biosafety procedures can be found in the fifth edition of *Biosafety in Microbiological and Biomedical Laboratories (BMBL)*. This publication can be found at <http://www.cdc.gov/OD/ohs/biosfty/bmb15/bmb15toc.htm>.

5.3 EMERGENCY EVACUATION AND RELOCATION OF A FACILITY

Security and safety plans should address emergency evacuation and relocation of the FDPMU. Nonemergent relocation is handled according to the procedures established in the deactivation, deployment, and assembly phases. Emergency plans should also address:

1. Distribution of supplies, equipment, classified materials, and contaminated samples
2. Chain of command for nonevacuated personnel
3. Transportation procedures for evacuation
4. Facility reconstitution plans.

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CHAPTER 6

Logistics

6.1 GENERAL CONCEPTS

The FDPMU relies on logistics support to provide the organizational infrastructure that encompasses logistic services, materiel, and transportation required to support all predeployment, deployment, and postdeployment operations. Logistics support addresses design and development, procurement, storage, movement, distribution, maintenance, and disposal of materiel. It also includes supplies, equipment, and services, as well as maintenance and operation. Logistics support ranges from acquiring raw material, to ensuring that supplies are delivered to a field setting. Logistics deals with design and development, procurement, storage, movement, distribution, maintenance, evacuation, and distribution of materiel. It also consists of construction, maintenance and operation, disposition of facilities, and procurement or furnishing of services. FDPMU supply operations are conducted in accordance with Naval Supply Systems Command (NAVSUP) P-485, *Afloat Supply Procedures*. The operational commander with OPCON of the FDPMU provides operating target funds in accordance with NAVSUP publications and established directives. Early planning is required for logistics support when the FDPMU is supporting other services.

Logistics support also provides planning and coordination infrastructure through BOS to support the administrative, communication, and lift requirements of each primary FDPMU component during predeployment, deployment, and postdeployment operations. Logistics support coordinates with BOS for the shipment of theater-wide samples and specimens collected by the team and serves as the focal point for the movement of HAZMAT in and out of theater. Logistics support is inherent to FDPMU capabilities and cannot be deployed independently.

6.1.1 Operational Responsibilities

In joint operations, logistic responsibilities are outlined in the OPLAN. A joint operation may include the assignment of a SIMLM.

6.1.2 Forward Deployable Preventive Medicine Unit Concept of Logistics Support

6.1.2.1 Sustainment

The FDPMU requires outside support for all supply items specified in the operational commander's OPLAN. Most medical items found in an FDPMU are standard stock medical supplies. In a joint operation, the TLAMM is the FDPMU's primary source for medical supplies. Nonmedical supply items are requisitioned from theater supply activities and CONUS inventory control points (ICPs) as outlined in the OPLAN and in accordance with procedures outlined in NAVSUP P-485. Medical and nonmedical supplies are delivered through various transportation channels. The FDPMU coordinates with its operational commander for receipt and distribution of assets.

6.1.2.2 Priorities

Materiel is assigned requisition priorities, or urgency-of-need designations, in accordance with NAVSUP P-485 and theater directives.

6.1.2.3 Design Concepts

The FDPMU equipment set design is based on flexibility, modularity, and ease of assembly, disassembly, and movement. FDPMU equipment sets are produced and immediately deployed to an activation site or are prepositioned at NEMSCOM. Once the FDPMU staff prepares the site, the facility is assembled and operational within 12 hours. FDPMUs are self-sustaining facilities with supplemental support from logistics and the operational or task force commander.

6.2 SINGLE INTEGRATED MEDICAL LOGISTICS MANAGER

The SIMLM is mission-assigned as required by a CCDR to a SCC or a joint medical task force to provide medical logistics support to other Services and designated coalition partners. As such, it is a scalable medical logistics element responsible for planning, synchronizing, and performing joint support to deployed US forces, and it is assigned to promote supply chain efficiency and to minimize the theater medical logistics footprint. The SIMLM is usually activated in time of war or contingency. FDPMU OICs coordinate requirements for medical logistics support from the SIMLM through operational commanders.

6.2.1 Theater Lead Agent for Medical Materiel

A TLAMM may be designated by the DOD executive agent in coordination with the CCDR. The TLAMM is a designated organization or unit that serves as a major theater medical distribution node and provides a resource to the customer for medical logistics and supply chain management. It functions in peacetime and wartime and can be an existing organization that provides routine medical materiel support to theater HSS operations. The TLAMM supports all military Service components and designated coalition and nongovernmental customers. It serves as a single POC between supported customers and national industry partners. It stores and manages the distribution of medical materiel through close coordination with theater transportation assets, and is responsible for the provision of core medical logistics functions required to support joint FHP and HSS operations.

6.2.2 Theater Medical Materiel Management Center

The theater medical materiel management center is an Army system that has responsibility for theater-level management of medical logistics and contracting support for all Services when tasked by the CCDR.

6.2.3 Operation Plan Requirements

Component medical planners shall include FDPMU medical logistics requirements in OPLANs and concept plans (CONPLANs) and shall communicate these requirements to the SIMLM and TLAMM.

6.2.4 Peacetime Operations

Joint peacetime operations involve the TLAMM concept. The CCDR's OPLAN shall designate both the SIMLM and TLAMM.

6.3 NAVY–MARINE CORPS HEALTH SERVICE SUPPORT LOGISTICS

6.3.1 General

Naval medical units are categorized into four platforms: hospital ships, EMFs, Marine Corps units, and Navy units afloat, each with its own logistics support. Except for standard stock item usage, few operational concepts and processes are common to all four. Planning for FDPMU logistics support for a Navy–Marine Corps operation should be included in the task force commander's OPLAN, which designates the supply source. The FDPMU OIC ensures that all logistical support requirements are identified in the OPLAN and applicable annexes.

6.3.2 Repair Parts Allowance

The FDPMU must coordinate with the operational commander and supply system to facilitate CESE and scientific equipment maintenance and repairs while deployed.

6.3.3 Supply Support through Navy Channels

The FDPMU transmits supply requisitions to the Defense Automatic Addressing System; the requisitions are then forwarded to an ICP, such as the Defense Supply Center. The ICP fills the requisition and ships the materiel to a collection source located at an airfield and/or port designated by the Naval Operational Logistics Support Center (NOLSC) for materiel destined for that FDPMU while deployed in theater. The materiel is then transported from the collection source to the operational area. The CCDR's OPLAN delineates how materiel entering the area is to be received, stored, and distributed to operational units, including the FDPMUs.

6.4 HOST-NATION SUPPORT

6.4.1 Definition

Host-nation support (HNS) is the civil and/or military assistance rendered by a nation to foreign forces within its territory during peacetime, crises, emergencies, and war, and is based on mutual agreements between nations.

6.4.2 Cross-Service Support Agreements

HN and cross-Service support agreements exist between the United States and numerous countries that permit acquisitions and transfers of certain categories of logistic support to take advantage of existing stocks in the supply systems of the United States and allied nations. The usefulness of support agreements may have limited application with the HN. Logistics support items may be acquired and transported to use in the operational area from any nation with whom the United States has an acquisition cross-Service agreement. Planners and contracting officers must consider acquisition pursuant to these agreements as possible alternatives to support by contracts and should incorporate and/or reference these agreements in the OPLANs and operation orders (OPORDs).

6.5 LOGISTIC SUPPORT ELEMENT

The logistic support element (LSE), a CCDR asset, is another possible source of logistic support for FDPMUs in a joint operation. LSEs are part of the Army Theater Support Command (TSC). During an operation, LSEs provide logistic services using Army-civilian employees and contractors to fill the gap between logistic requirements and capabilities in theater.

6.6 EQUIPMENT MANAGEMENT

6.6.1 Equipment Accounting

Upon deployment, NEMSCOM provides a master inventory of equipment and supplies contained in the shipped equipment set, which is verified before deployment. Each container also has a packing list of the container's contents. These container packing lists (inventories) correspond to items listed on the master inventory. The FDPMU equipment set assembly process utilizes definable color codes and alphanumeric codes to identify the FDPMU component modules. Activated FDPMUs adhere to the same rules and regulations followed by other operational units, including regulations governing equipment accountability and recordkeeping requirements contained in NAVSUP P-485 and in the Comptroller of the Navy (NAVCOMPT) manuals. The FDPMU OIC is responsible and accountable for the proper care and use of all FDPMU materiel.

6.6.2 Equipment Maintenance

FDPMU personnel are assigned responsibility for preventive maintenance to ensure CESE and scientific equipment remains serviceable throughout the duration of the deployment. Higher echelons of vehicle maintenance requirements above the operator's level require establishing support relationships with deployed units capable of providing the appropriate level of service. The FDPMU can provide basic user-level maintenance to medical equipment. Additional medical equipment maintenance requires shipment of the equipment to NEMSCOM or the manufacturer.

6.7 TRANSPORTATION CAPABILITIES

The FDPMU is equipped with organic transportation assets sufficient to satisfy limited internal needs. FDPMU OICs coordinate additional requirements for transportation with operational commanders.

6.8 HAZARDOUS MATERIALS TRANSPORTATION CAPABILITIES

FDPMU's logistics support coordinates with BOS for the shipment of theater-wide samples and specimens collected by the team and, as directed, serve as the focal point for the movement of HAZMAT in and out of theater.

6.9 THE THEATER MEDICAL INFORMATION PROGRAM

The Theater Medical Information Program (TMIP) integrates medical systems at the theater level to support deployed forces to enhance their capability to collect, process, and disseminate an uninterrupted flow of information, and to allow more efficient protection of lives and resources. FDPMU OICs coordinate requirements for logistics information systems with operational commanders. TMIP is a joint system that provides information to deployed medical forces to support all medical functional areas, including:

1. C2
2. Medical logistics
3. Blood management
4. Patient regulation and evacuation
5. Medical threat/intelligence
6. Healthcare delivery
7. Manpower and training
8. Medical capability assessment and sustainment analysis.

CHAPTER 7

Personnel

7.1 MANNING CONCEPTS

7.1.1 General

FDPMU personnel are treated separately from equipment and supplies, a situation that is unique to the Navy. NEMSCOM coordinates the staging and movement of the FDPMU equipment sets and the supplies for deployment to theater. Active duty FDPMU staffing is drawn from a designated naval medical center. The FDPMU is assigned from teams within the NEPMU, which falls under the Director, Public Health at the NMC. Designated reserve FDPMU staffs are sourced from the designated reserve FDPMU. The prepositioned equipment and supplies have a unit identification code (UIC); the activated FDPMU assumes this UIC number so that the equipment and supplies belong to it.

7.1.2 Staffing Levels

The staffing levels and composition of the FDPMU are subject to change based on mission requirements. Task-organized FDPMU staffing must be developed and authorized by the Director, Medical Resources, Plans, and Policy (OPNAV N931). The typical manning structure for each component follows:

1. Preventive Medicine Component
 - a. 1 preventive medicine officer (PMO) (NOBC-0160)
 - b. 1 environmental health officer (EHO) (NOBC-0861)
 - c. 2 preventive medicine technicians (PMTs) (NEC-8432).
2. Chemical Component
 - a. 1 industrial hygiene officer (IHO) (NOBC-0862)
 - b. 2 PMTs (NEC-8432)
 - c. 1 biochemist (BIOCHEM) (NOBC-0840), available as augmentee.
3. Radiological Subcomponent
 - a. 1 IHO (NOBC-0862), chemical component IHO (dual-hatted)
 - b. 1 radiation health officer (RHO) (NOBC-0845), available as augmentee only.
4. Microbiology Component
 - a. 1 microbiologist (MICRO) (NOBC-0841)

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- b. 1 medical laboratory technician (MLT) (NEC-8506)
 - c. 1 BIOCHEM (NOBC-0840), available as augmentee only.
5. Disease Vector Component
- a. 1 entomologist (ENTO) (NOBC-0860)
 - b. 2 PMTs (NEC-8432); one also serves in the Logistics Support Module.
6. Logistics Support Module.
- a. 1 general duty corpsman (NEC-0000)
 - b. 1 PMT (NEC-8432); primary assignment is to the Disease Vector Component.

7.1.3 Forward Deployable Preventive Medicine Unit Type Codes

The Chief Naval Officer (N931), in conjunction with Navy and Marine Corps Public Health Center staff, has developed the following FDPMU unit type codes (UTCs). Figure 7-1 shows the FDPMU UTCs.

Note

Personnel set UICs have not been developed and are not currently validated; nor are the associated equipment sets, although the FDPMU component structure lends itself to deployment as UTCs.

UTC	UTC NAME	PERSONNEL
FNPUA	Forward deployable preventive medicine unit advanced	16 personnel
FNPUB	Forward deployable preventive medicine unit with equipment	13 personnel
FNEHS	Environmental health assessment team with equipment	EHO, IHO, ENTO, 2 PMTs
FNEHU	Environmental health module with equipment	EHO, PMT
FNMPM	Preventive medicine module with equipment	PMO, PMT
FNMDV	Vector module with equipment	ENTO, PMT
FDPMB	Microbiology laboratory with equipment	MICRO, MLT
FNPMA	Microbiology laboratory with biological warfare detection	BIOCHEM, MLT
FNCBR	Chemical module with CW, TIC, TIM, basic radiation detection	RHO

Figure 7-1. Forward Deployable Preventive Medicine Unit Type Codes

7.2 ORDERS

Temporary additional duty orders are issued by the members' sourcing command. DEPORDs are issued for 179 days or until the mission is complete.

7.3 REPLACEMENT

The NMCPHC can assist FDPUMs in identifying alternate military personnel in the event of illness, administrative or professional disqualification, temporary absence, and unplanned personnel losses absorbed by the primary team. Alternate personnel may also be required to fill billet gaps and shortages in manning. If so, alternate team members must be included in all applicable FDPMU training evolutions when participation is not considered detrimental to other operations of the activity. If possible, replacement members should be identified and begin integration into the team several months before the loss of primary team members.

7.4 FITNESS REPORTS/EVALUATIONS

The Bureau of Naval Personnel Instruction (BUPERSINST) 1610.10 (series), *Navy Performance Evaluation System*, provides concurrent fitness reports and evaluations for deployed personnel. Fitness reports should be completed according to the normal fitness report schedules.

The FDPMU OIC does not have signature authority for fitness reports or enlisted evaluations prepared on behalf of their FDPMU team members. The FDPMU OIC should decide upon the most appropriate course of action to pursue regarding the preparation and submission of team member fitness and evaluation reports.

7.5 PERSONNEL READINESS

Activities responsible for monitoring the readiness of personnel assigned to FDPMU billets include BUMED for active duty and COMNAVRESFOR for reserve personnel. Permanent commands for these personnel are responsible for assuring that personnel maintain their readiness status. Sourcing commands should include required personnel readiness information in the Expeditionary Medicine Platform Augmentation Readiness and Training System (EMPARTS) as directed by BUMEDINST 6440.5 (series), *Health Services Augmentation Program (HSAP)*.

7.6 COORDINATION OF PERSONNEL SUPPORT FUNCTIONS

The FDPMU must coordinate personnel support functions with the Navy component commander. These services are provided by the area personnel support activity.

7.7 UNIFORMS/GEAR ISSUE

Active duty naval personnel assigned to FDPUMs receive an issue of organizational clothing from their parent command. Uniforms for reserve personnel are the responsibility of BUMED or COMNAVRESFOR. The OPORD or DEPORD states the uniform and PPE requirements.

7.8 RECORDS

The CCDR and SCC dictate which records personnel should bring with them on deployment.

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CHAPTER 8

Training

8.1 RESPONSIBILITIES

BUMED is responsible for monitoring the training of active duty personnel assigned to FDPMU billets. Prior to activation, COMNAVRESFOR is responsible for overseeing the training of reserve personnel assigned to reserve FDPUMs. While operational, the FDPMU OIC is responsible for all training of assigned personnel. During periods of nonmobilization billets — such as peacetime, surge ready, and emergency surge — individual commands are responsible for ensuring that personnel receive required readiness training, including FDPMU NTSP required training. The NMCPHC has developed the FDPMU NTSP. The NTSP identifies manpower, personnel, and training requirements to support the FDPMU.

8.2 PREMOBILIZATION TRAINING

8.2.1 Unit Training

Relevant, timely, and efficient training is essential to ensure optimal team readiness. Newly assigned FDPMU members average about 40 days of training to meet all training objectives, depending on their specialty. This training follows a competency-based and proficiency-driven approach aligned with the master training plan, including component-specific task lists, a proficiency aptitude test, and specialty-specific requirements outlined in the FDPMU NTSP. Ongoing training sustainment requires a concerted effort to plan and fund continuous individual and team-focused training evolutions. This approach targets team and individual proficiencies to ensure knowledge and skill levels are sufficient to support the newest technologies inherent to the FDPMU. Individual training standards and operational readiness evaluations are an integral part of this workup process for deployment. Cross-training, in addition to on-the-job training, is emphasized to expedite member integration, promote continuity, establish trust, and enhance team cohesiveness.

For operational readiness purposes, NMCs Portsmouth and San Diego are the sources for six active duty FDPMU teams. Three are located at NEPMU-2, two at NEPMU-5, and one at NEPMU-6. Two reserve FDPMU teams are also maintained, one each at NEPMU-2 and NEPMU-5. These units cycle through a three-tier, 18-month training and operational readiness rotation to cover each 6-month routine deployment phase, predeployment training phase, and postdeployment maintenance phase.

8.2.2 Training Readiness

FDPMU training courses are identified in the FDPMU NTSP. Each team member completes mandatory training comprising core mandatory training required for the FDPMU, in addition to specialized training, which includes specialty pipeline training, such as Category 8 Public Health Pesticide Applicator Certification for entomologists and PMTs.

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CHAPTER 9

Chemical, Biological, Radiological, and Nuclear

9.1 CONCEPT OF OPERATIONS

FDPMU personnel are trained to handle, process, and analyze biological and chemical warfare agents and toxic industrial chemicals capable of creating environments that are immediately dangerous to life and health. Due to the potential for environmental contamination during specimen processing, the FDPMU should be placed downwind from adjacent facilities, equipment, and personnel.

9.2 CHEMICAL, BIOLOGICAL, RADIOLOGICAL, AND NUCLEAR CAPABILITIES/LIMITATIONS

9.2.1 Mission-Oriented Protective Posture Gear

At the operational commander's direction, mission-oriented protective posture (MOPP) gear is distributed to the staff prior to deployment to be worn as protection from a chemical attack. MOPP gear allows personnel to perform clinical tasks and patient management for the unit to accomplish its mission. Chemical and biological collective protection (CP) systems available in the FDPMU program inventory are used to create a protective environment in which MOPP gear can be safely removed with minimal disruption to the performance of mission tasks. FDPMU OICs shall coordinate requirements for additional CP systems with operational commanders.

9.2.2 Collective Protection System

The CP system is incorporated into the FDPMU shelter system. The CP system uses filtered positive pressure to remove agents and particulates.

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CHAPTER 10

Foreign Humanitarian Assistance Missions

10.1 CONCEPT OF OPERATIONS

The FDPMU provides robust preventive medicine/public health support during missions as an HSS element of adaptive force packages. Humanitarian and civic assistance (HCA), a subset of FHA, is the primary Navy activity for providing proactive humanitarian assistance. Its mission is to improve poor existing humanitarian conditions.

10.1.1 Foreign Humanitarian Assistance Support

FDPMUs are responsible for supporting the joint force maritime component commander (JFMCC) and the JTF during FHA missions. The FDPMU:

1. Identifies potential health consequences for both military forces and the HN population by conducting environmental health risk and/or site assessments
2. Evaluates and disseminates preventive medicine/public health information, including epidemiologic assessments
3. Provides capacity-building public health initiatives tailored for the HN to include training/education opportunities
4. Collaborates with NGOs and integrates with existing public health initiatives.

10.1.2 Forward Deployable Preventive Medicine Unit Foreign Humanitarian Assistance Tasks

Based on lessons learned and current requirements, FDPMU component managers developed the following list of FHA tasks:

1. Preventive medicine
 - a. Advise about health risks and recommend interventions.
 - b. Advise on communicable disease control.
 - c. Conduct disease and nonbattle injury analysis.
 - d. Conduct epidemiological surveillance.
 - e. Conduct inspections of berthing areas.
 - f. Conduct inspections of general camp areas.
 - g. Conduct outbreak investigations.
 - h. Develop and implement mitigation strategies/plans.

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- i. Create/distribute public health education pamphlets.
 - j. Develop and conduct training.
 - k. Evaluate waste management practices.
 - l. Conduct water quality analysis.
 - m. Inspect food service areas.
 - n. Monitor/report heat/cold stress index.
2. Disease vector
- a. Advise about health risks and recommend interventions.
 - b. Develop and implement pest/vector surveillance plan.
 - c. Develop and implement pest/vector control plan.
 - d. Develop and implement mitigation strategies/plans.
 - e. Create/distribute education pamphlets.
 - f. Develop and conduct training.
3. Microbiology
- a. Advise about health risks and recommend interventions.
 - b. Identify bacteria from culture or direct specimen.
 - c. Perform antibiotic sensitivity panels.
 - d. Identify specific pathogen threats (bacteria, viruses, and parasites).
 - e. Collect and distribute potential biological samples for higher-echelon screening.
 - f. Develop and implement mitigation strategies/plans.
 - g. Create/distribute education pamphlets.
 - h. Develop and conduct training.
4. Chemical.
- a. Advise about health risks and recommend interventions.
 - b. Develop chemical sampling and analysis plan.
 - c. Develop and implement mitigation strategies/plans.
 - d. Create/distribute education pamphlets.
 - e. Develop and conduct training.

10.1.3 Notional Forward Deployable Preventive Medicine Unit Configuration

1. Personnel

- a. Predeployment site survey team (preventive medicine component) not accompanied with equipment set
 - (1) PMO (NOBC-0160)
 - (2) EHO (NOBC-0861)
- b. FHA team (preventive medicine/disease vector)
 - (1) PMO (NOBC-0160)
 - (2) EHO (NOBC-0861)
 - (3) ENTO (NOBC-0860)
 - (4) Three PMTs (NEC-8432)
 - (5) IHO (NOBC-0862) and/or MICRO (NOBC-0841), available as augmentee.

2. Equipment.

- a. Preventive medicine (500 lb/65 ft³)
- b. Disease vector (2,030 lb/180 ft³)
- c. Logistics support module (3,810 lb/675 ft³)
- d. Two soft shelters
- e. CESE quantities and tents to be determined based on team size
 - (1) 35 kW
 - (2) Trailer
 - (3) Truck (cargo).

10.2 FOREIGN HUMANITARIAN ASSISTANCE CONSIDERATIONS

10.2.1 Coordination

Effective coordination is a key element to HSS provision. Effective coordination involves:

1. Interfacing with the Department of State (DOS) regional medical officer, who is a valuable source of regional medical information and coordination.
2. Coordinating the liaison with NGOs and international organization (IO) medical personnel through the CCDR before commencing the operation. Early identification of needs and cooperation by all or most of the parties involved increases efficiency and reduces redundancy.

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3. Utilizing the JTF coordination cell to coordinate preventive medicine requirements with nonmilitary organizations. The humanitarian operations center and the CMOC are both logical places for coordination to occur. Differing policies and cultures of individual NGOs and international organizations, military capabilities and procedures, and the affected country's needs require dedicated coordination to ensure unity of effort among all participants.

10.2.2 Communications

Effective operations require a constant effort to avoid gaps and redundancies in services. Uninterrupted communications among military elements, NGOs, IOs, and affected country personnel help to eliminate unnecessary suffering and more effectively apply resources to the operation.

10.2.3 Preventive Medicine

In any FHA operation, preventive medicine is a critical consideration. Individual personal hygiene practices and procedures are key elements of a sound preventive medicine program. The provision of adequate food service sanitation, potable water supplies, vector control, DNBI prevention, and waste disposal facilities all contribute to the maintenance of a healthy and fit force.

10.2.4 Disease Prevention

Natural and man-made disasters frequently give rise to substantial increases in endemic disease. While no parts of the world are immune to increases in diseases, regions of the developing world are more susceptible to diseases than others and are impacted at devastating levels. Contributing factors to the spread of disease in epidemic proportions during disasters include disruption of sanitation services, food and water contamination, and increased rodent and arthropod breeding grounds.

10.2.5 Disease Control

The risk of communicable diseases is increased in an FHA environment due to overcrowding, poor environmental conditions, and poor public health. There is, for example, a close association between malnutrition and the effects of communicable diseases, particularly childhood diarrhea. The FDP MU provides expert advice on the control of communicable disease and the management of epidemics. Some communicable diseases have a seasonal pattern, and timely measures must be taken to prevent a rapid increase in cases. The following are central to disease control:

1. Personal hygiene measures
2. Proper disposal of sewage and refuse
3. Vector control (pestilence control)
4. General public health education and awareness
5. Medical surveillance.

CHAPTER 11

Deployment, Life Cycle, and Redeployment

11.1 INTRODUCTION

The FDPMU equipment set has a life cycle consisting of the following eight phases:

1. Prepositioning and preparation (training and equipment)
2. Activation
3. Deployment
4. Assembly
5. Operation
6. Relocation
7. Deactivation and rehabilitation
8. Redeployment.

Beginning in a prepositioned state, the FDPMU equipment set proceeds through each phase until it completes a full circle and returns to its prepositioned state. It can go through an unlimited number of life cycles until its removal from the FDPMU inventory. Each phase serves a distinct purpose and comprises a unique set of tasks and processes.

11.2 PREPOSITIONING AND PREPARATION PHASE

11.2.1 General

In the prepositioning phase, the FDPMU equipment set is in inactive status. Materiel, equipment, and consumables are stored at NEMSCOM.

11.2.2 Preservation/Packaging

Except for CESE, FDPMU components are packaged in portable shipping containers to support both air and sea shipment and to ease off-load and further movement. Materiel, supplies, and equipment are preserved and packaged in accordance with military standard requisitioning and issue procedures (MILSTRIP). Electronic materiel subject to damage from electrostatic discharge is preserved and packaged in accordance with military standards. Equipment requiring preventive maintenance while in storage and when prepositioned is returned to Level A preservation and packaging upon completion of maintenance. Vehicles receive corrosion control treatment in accordance with applicable military standards prior to storage.

11.2.3 Marking

Equipment, components, repair parts, and shipping containers destined for storage and/or prepositioning are marked in accordance with military standards. The 49 Code of Federal Regulations (CFR), *Transportation*, is the governing specification and standard for marking hazardous materials. Packages containing petroleum products are marked in accordance with military standards. Electronic components subject to damage from electrostatic discharge are marked as specified by military standards.

11.2.4 Materiel Requiring Special Handling

Sensitive items and/or pilferable materiel are handled in accordance with current NAVSUP and BUMED instructions. Hazardous materials and hazardous waste must comply with local and state regulations and DOD, Department of Transportation (DOT), and Environmental Protection Agency (EPA) regulations. Physical security measures for safeguarding materiel requiring special handling must meet the requirements of current Navy instructions and Title 21, United States Code (USC), *Food and Drugs*.

11.2.5 Packaging Materiel Reuse

All containers and packaging materiel used in the prepositioning phase, and those from nonconsumables, are retained for reuse. This practice preserves and enhances FDP MU equipment set relocation capabilities.

11.2.6 Operational Reporting

Camp assessments and routine reporting should be in compliance with theater requirements. Specific reporting procedures should be determined with the operational commander. At a minimum, a weekly preventive medicine summary/situational report should be submitted to the operational commander with an electronic copy submitted to the NMCPHC. This report should address key weekly issues and provide the ground commander with an overview of significant problem areas. A sample report provided in the FDP MU Administration SOP, Appendix FF, should be used as the format for these reports.

The US Army Center for Health Promotion and Preventive Medicine's (USACHPPM) deployment environmental surveillance program has been designated as the lead agent required by DOD and the Joint Chiefs of Staff (JCS) to archive all deployment occupational and environmental health surveillance (OEHS) reports and/or data submissions in the DOD data repository. USACHPPM routinely posts them to secure and nonsecure networks, allowing data access to units reporting the deployment OEHS data and to other DOD agencies.

11.2.7 Operational Planning

Effective use of FDP MUs requires thorough operational planning during the prepositioning phase. A product of Navy and joint operational planning is in the CC DR's OPLAN and supporting time-phased force deployment data list (TPFDDL). These documents contain information on the FDP MU's operational scenario, employment and support, and important events and times, such as movement dates. FDP MU OICs should review all planning documents, such as OPLANs and TPFDDLs, and work with responsible medical planners to ensure plans and documents contain realistic time frames, FDP MU capabilities, and support requirements.

11.2.8 Type Unit Characteristics File

The type unit characteristics file (TUCHA) provides standard planning data on movement characteristics for unit personnel, equipment, and accompanying supplies associated with type units of fixed composition. They are used to develop and review unit movement requirements in support of OPLANs. A UTC uniquely identifies each unit in the file. For every UTC, the file contains the weight and cube of selected cargo categories, physical characteristics of the cargo, and the number of personnel requiring nonorganic transportation. OPNAV (N931) is responsible for TUCHA data. Each FDP MU has its own set of related UTCs and TUCHA data used to build a TPFDDL.

11.3 ACTIVATION PHASE

The activation phase commences when the FDPMU's command authority issues an activation order. The activation phase continues through the deployment phase. Upon receipt of the activation order, OPNAV (N931) is responsible for the selection and activation of the appropriate platform. The NMCPHC selects the platform configuration based on mission requirements. OPNAV (N931) will notify BUMED for the selection of the personnel package to augment the platform. The activation phase entails administrative and training tasks. Unit-level training is conducted throughout the readiness cycle; the 96 hours before deployment is insufficient time to prepare. Personnel assigned to FDPMU OIC billets should be aware of these requirements and ensure that a plan is developed during the prepositioning phase that addresses the administrative and training requirements of activation and deployment. Global sourcing is highly discouraged; the team's ability to extend its reach and productivity through cross-training is significantly degraded when members do not train with the team. The parent command is responsible for ensuring that personnel are prepared to deploy to the operational theater, including administrative preparation, such as acquiring dog tags, updating immunizations, placing legal affairs in order, and outfitting personnel.

11.3.1 Responsibilities

During the activation phase, a clear chain of command is essential. The FDPMU coordinates with the gaining operational commander to establish an operating target for the FDPMU. This facility covers future administration, predeployment site surveys, training, and transportation costs of moving personnel to and from the operational area. COMNAVRESFOR oversees the mobilization of reserve personnel and administrative and training requirements during the activation phase. The sourcing NMC oversees administrative and training requirements of active duty personnel. NEMSCOM is responsible for shipment of the FDPMU equipment set. BUMED advises the sourcing NMC, NEMSCOM, and OPNAV, and assists as requested by COMNAVRESFOR.



Due to the potential for environmental contamination during specimen processing, the FDPMU should be placed downwind from adjacent facilities, equipment, and personnel.

The operational commander is responsible for preparation of the operational site for the FDPMU. Site selection is a tactical decision that should consider proximity to the forward line of the commander's own troops, topography, endemic disease, disease vectors, existing infrastructure, soil conditions, climate, logistic support, and perimeter security. Site preparation involves a rough site survey, clearing the site, rough and smooth grading, and disposal of any ordnance found. Construction support and public works support are provided by the Naval Facilities Engineering Command (NAVFAC).

11.3.2 General Guidance

The plan developed during the prepositioning phase should follow the logistic support mobilization plan format. It should address the staging and mobilization of reserve personnel, staging location, berthing, food, training, and other support requirements. Public affairs issues during this phase are critical. Early in the prepositioning phase, reservists should be entered into the defense eligibility enrollment and reporting system to facilitate military privileges for dependents. The FDPMU OIC should visit NEMSCOM to receive briefings and materiel prior to deployment.

11.4 DEPLOYMENT PHASE

The deployment phase begins when personnel and materiel begin movement from the sourcing NMC (for active duty), the predeployment mobilization site (for reservists), or the prepositioning site (for materiel). The

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deployment phase follows and often overlaps the activation phase. It ends when materiel and personnel arrive in theater. The FDPMU OIC coordinates with the SCC to ensure the following tasks are completed during the deployment phase:

1. Sourcing transportation from the mobilization-staging site
2. Transporting personnel and materiel from the POD in theater to the assembly site
3. Coordinating ship off-loading of materiel.

The FDPMU OIC coordinates with the operational commander and ensures the availability of petroleum, oil, lubricants, water, and waste disposal at the site prior to arrival of any FDPMU personnel.

11.4.1 Time-Phased Force Deployment Data List

The OPLAN, especially the TPFDDL, is critical to a successful deployment phase. The TPFDDL details the movement of personnel and materiel from prepositioning sites to the theater of operations. It contains required and updated delivery dates for in-theater arrivals and ports of entry and PODs. After the CCDR transmits the activation order, the Navy component commander sends a message to United States Transportation Command (USTRANSCOM) providing POCs for every UTC being air-moved.

The Headquarters (HQ) Air Mobility Command (AMC) requirements cell contacts the POCs for final verification of the TPFDDL's UTC with a seven-day window in which the aerial port of embarkation departure date falls. Minor changes may be made at this time. While the size of a change depends on the size of a particular scheduled movement, general guidance is that a change of 5 short tons or 15 passengers is acceptable. Significant changes must be coordinated through the appropriate CCDR. If changes are made directly with the HQ AMC requirements or flow planning cells, the requirement will be canceled and the request must be resubmitted. The CCDR exercising operational command establishes theater aerial and water PODs with the Navy Material Transportation Office (NAMTO), Norfolk, Virginia, sending the message for the deploying FDPMU to ensure an expeditious flow of resupply materiel and mail.

11.4.2 Personnel Deployment

Deployment of personnel and materiel typically occurs concurrently. Materiel arrives in theater to coincide with the arrival of FDPMU personnel for immediate setup. The deployment of FDPMU materiel is the responsibility of NEMSCOM and proceeds according to the dates established in the TPFDDL. Materiel arrives in theater from its prepositioning site, or from NEMSCOM, as a single unit.

USTRANSCOM, the command responsible for transporting FDPMU personnel, has time windows for transporting TPFDDL units to the operational theater. FDPMU personnel deploy with a complete issue of uniforms and infantry gear. Reserve personnel are issued uniforms through the Navy mobilization processing site (NMPS).

11.5 ASSEMBLY PHASE

Once activated and positioned, and when the site is prepared, the FDPMU can be fully functional within 12 hours. The assembly phase encompasses these stages:

1. Unpacking FDPMU materiel from the shipping containers
2. Storing containers and packing material for repackaging
3. Assembling components into structures for housing personnel and equipment.

11.5.1 Stage of Assembly

FDPMU shelters are easy to construct and provide maximum flexibility and functionality. Each shelter model door opening can be connected to any other door opening of another shelter, whether end door to end door, side door to side door, or end door to side door.

11.5.2 Organization

The FDPMU personnel's goal should be to complete the assembly phase as soon as possible. Adequate training in assembling FDPMU structures and establishing and organizing efficient task accomplishment are critical factors.

11.5.3 Layout of Structures

The FDPMU's general design configuration consists of eight soft shelters, five large shelters, and three small shelters. These shelters are configured to promote maximum FDPMU layout optimization. The five large shelters comprise the working spaces for the various components represented by the full team concept, including the logistics and administration support module. The additional two large shelters are made up of separate male and female berthing compartments. The three small shelters have a vestibule for berthing, admin/logistical, and chemical spaces. Three trailer-mounted 35kW generators, equipped with environmental control units, provide heating and air conditioning services throughout the design.

11.6 OPERATION PHASE

The FDPMU OIC must notify the chain of command when the operation phase begins and while the assembly phase is still in process. The primary tasks during the operation phase are to rapidly assess, prevent, and control health threats in theaters of operation by threat characterization and enhancement; and to receive, treat, and evacuate patients—tasks that continue until the theater commander issues a deactivation order.

11.7 SUSTAINMENT

The FDPMU can be task-organized and scaled to fit operational requirements identified by the CCDR. Although there is a notional table of organization for the FDPMU, task organization allows medical planners to build a customized FDPMU to support the specific mission and environment. Depending on the CCDR mission, Service package capabilities may be reduced or customized to decrease the theater-logistic footprint when they can be provided by other Services or contracted vendors.

11.8 RELOCATION PHASE

Relocation occurs when an FDPMU must be moved from one operational site to another. The relocation phase combines the deactivation, deployment, and assembly phases, and results in a new operation phase.

11.9 DEACTIVATION AND REHABILITATION PHASE

An FDPMU deactivation occurs once the CCDR issues the order to cease operations, disassemble, and be ready for shipment to a scheduled point of entry. The FDPMU coordinates all phases of deactivation and completes the process of deactivation, including disestablishment, agricultural inspections, washdowns, containerization, and transportation for retrograde to the point of entry. The FDPMU equipment set is shipped back to NEMSCOM for an integrated logistics overhaul. It is critical that the FDPMU OIC become involved in deactivation planning with theater medical planners in the chain of command.

Once the FDPMU equipment set is retrograded to the assigned site in the rear echelon, FDPMU personnel are under the theater CCDR's time line for retrograde back to the United States.

11.10 REDEPLOYMENT PHASE

Redeployed personnel are either used to staff the FDPMU at its new operational site, sent back to their sourcing active duty MTFs, or sent to their postmobilization reservist sites. Materiel is used either in the FDPMU at a new operational site or retrograded back for rebuild/refurbishment. The repacked FDPMU equipment set is transported to a point of entry for shipment. Transportation for personnel follows theater guidelines. Transportation and security for personnel awaiting redeployment, and for materiel, are the responsibility of the CCDR. The redeployment phase ends when all personnel and materiel have reached their next destination. At this point, either the prepositioning phase or the assembly phase begins again.

CHAPTER 12

After Action Reviews and Lessons Learned

12.1 GENERAL

The Naval Operational Medical Lessons Learned Center (NOMLLC) collects, analyzes, manages, and disseminates relevant medical observations, insights, and lessons learned in support of FDPMU operations. Information gathered from the deployment, operation, and exercise of FDPMUs is used to confirm existing tactics, techniques, and procedures (TTP), and to identify areas in need of improvement. FDPMU personnel submit lessons learned throughout the course of deployment and conduct an after action review (AAR) following each major portion of the evolution.

12.2 AFTER ACTION REVIEW

FDPMU personnel conduct AAR assessments during the phases of FDPMU deployments, operations, and exercises. Operational commanders and Navy Medicine use AAR results to identify and evaluate, and to learn from the reported events. They then generate ideas and suggestions for the improvement of future evolutions. The early capture of observations and lessons learned into the NOMLLC lessons management system (LMS) impacts predeployment training and the effectiveness of follow-on units.

12.3 LESSONS LEARNED

Collecting and analyzing lessons and observations improves the decision-making process and effects needed changes to the FDPMU using the doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) format. FDPMU personnel prepare lessons learned in accordance with BUMEDINST 3500.3 (series) and with NOMLLs (naval operational medical lessons learned) for incorporation into the NOMLLC. All approved NOMLLs are to be submitted to the Navy Lessons Learned System (NLLS) or the Marine Corps Lessons Management System (MCLMS). Further Services' lessons learned guidance is provided in the OPNAVINST 3500.37 (series), Navy Lessons Learned System, MCO 3504.1, *Marine Corps Lessons Learned Program (MCLLP)*, and the *Marine Corps Center for Lessons Learned (MCCLL)*.

Note

For additional information about lessons learned, see the NOMLLC website at <https://mll.nomi.med.navy.mil>, as well as the MCCLL website at www.mccll.usmc.mil/nomi/index.cfm.

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APPENDIX A

Component Equipment List Online Basic Course Equipment Module

A.1 VECTOR CONTROL

EQUIPMENT	DESCRIPTION
Light Traps (incandescent and black light)	Captures/collects flying adult specimens of disease vectors and nuisance pests for identification, determination of control program effectiveness, and disease analysis.
Stihl Backpack Sprayer	Disperses liquid, dust, and granular pesticides and can be used in a variety of pest control operations requiring small- to medium-area treatment.
Stinger E-25 Electric Hydraulic Sprayer	Primarily for outdoor application and can be used to control both arthropods and vegetation over moderately sized areas.
Golden Eagle Thermal Fogger	Disperses a specific form of space spray; using heat, a liquid insecticide is dispersed into the air in the form of a fog consisting of droplets less than 50 microns in diameter to control disease vectors.
Terminator, Ultra Low Volume (ULV) Diesel	An effective vehicle-mounted pesticide application tool designed for temporary control of flying nuisance and disease vector arthropods. ULV pesticide spraying is a specific method of applying liquid insecticide into the air in the form of droplets less than 50 microns in diameter.
London Fog Medium Area Generator (MAG) ULV Fogger	A vehicle-mounted pesticide application tool designed for ULV dispersal to temporarily control flying nuisance and disease vector arthropods.
London Fog Colt Handheld ULV	Used to control flying insects. Handheld ULV foggers are ideal for indoor space treatments and for small areas outdoors where vehicle access is limited.
Clarke P-1 Handheld ULV Fogger	An effective pesticide application tool that can be used to control or eliminate nuisance and disease vector arthropods.
Hudson TEK® Hand Compressed Sprayer	Allows for vector/pest control via direct, controlled application of liquid pesticides and is especially useful in tight locations, such as crack and crevice treatment.

Figure A-1. Vector Control

A.2 CHEMICAL/RADIOLOGY

EQUIPMENT	DESCRIPTION
HAPSITE® Smart Chemical Identification System	Portable gas chromatograph/mass spectrometer (GC/MS) detects and compares results against the National Institute of Standards and Technology (NIST) library of 179,948 volatile organic compounds, and the Automated Mass Spectral Deconvolution and Identification System (AMDIS) library of 1,300 compounds, including CW agents, precursors, and TIC/TIM.
SensIR HAZMAT ID® Fourier Transform Infrared Spectrometer (FTIR)	Identifies solids and liquids, including nerve and blister agents, CWA precursors, 5000 TIC, white powders, and explosives.
Improved Chemical Agent Monitor (ICAM)	A handheld, Service member–operated postattack device for monitoring chemical agent contamination on personnel and equipment. The ICAM detects vapors of chemical agents and discriminates between vapors of nerve and mustard agents.
Eberline E-600 (Radiology)	A portable, effective, multifunction RADIAC for Alpha, Beta, and Gamma detection. The E-600 is generally used to detect radiological sources/contamination or to determine exposure levels during preliminary surveys, personnel/equipment decontamination, or when radionuclide dispersal is suspected.
IdentiFINDER (Radiology)	Identifies radiological sources/contamination or to determine exposure levels during surveys, personnel/equipment decontamination, or when radionuclide dispersal is suspected.
XRF Analyzer	A handheld, portable X-ray tube used to detect and quantify metals in soil and air samples. The XRF is generally employed in one of three ways: to perform in-situ soil testing, testing of bag soil samples, and analysis of prepared samples.
MultiRAE Plus	A combination photoionization and multigas detector used to detect volatile compounds in air and soil.
Mini Vol Portable Air Sampler/Deployable Particulate Sampler (DPS)	Collects total suspended solids, particulate matter less than 10 microns, and particulate matter less than 2.5 microns.
STAPLEX High Volume Particulate Air Sampler (Radiology)	Used in conjunction with the E-600 multifunction radiological survey meter and/or the IdentiFINDER Digital Spectrometer for radiological screening in the ambient environment.
USACHPPM Backpack Sampling Kit	A multimedia environmental sampling kit for air, water, and/or soil. The kits come equipped with all necessary supplies to complete basic environmental sampling.
MAC-51 Bx Magnetic Locator	Detects buried ferrous metals and energized power lines. Primary application is the location of buried waste drums and/or detection of buried energized power lines prior to collection of subsurface soil samples using the JMC Environmentalist’s Subsoil Probe described below.
JMC Environmentalist’s Subsoil Probe Hand-Operated Soil Sampler	Collects discrete or continuous soil samples as deep as 9 feet below the ground’s surface to detect contamination.

Figure A-2. Chemical/Radiology

A.3 MICROBIOLOGY

EQUIPMENT	DESCRIPTION
Ruggedized Advanced Pathogen Identification Device (RAPID™)	Conducts polymerase chain reaction detection and identification of biological warfare and terrorism (BW/BT).
Autoscan	Provides the minimum inhibitory concentration (MIC) of numerous antimicrobials, which helps clinicians determine the most suitable antimicrobial drug and the appropriate drug dose required to treat bacterial infections.

Figure A-3. Microbiology

A.4 PREVENTIVE MEDICINE

EQUIPMENT	DESCRIPTION
Hach Pocket Colorimeter II-Chlorine and pH Analysis System Field Portable Spectrophotometer	Measures pH and disinfectant levels in drinking water during sanitary surveys and water sample collection.
IDEXX Colilert-18® Analysis	Presence/absence method for detecting total coliform and <i>E-coli</i> in water. The defined substrate technology is easy to use and provides reliable microbiological screening results for drinking water supplies in 18 hours.
DR 5000 UV/VIS Spectrophotometer	Used in tandem with the portable GC/MS described above to provide enhanced in-theater water quality analysis (WQA) capability. The DR 5000 includes analytical methods for approximately 20 inorganic chemicals and pesticides regulated under the USEPA National Primary and Secondary Drinking Water Regulations.
SensION 156™ Meter	Field and laboratory instrument that measures pH, total dissolved solids, and dissolved oxygen in water. It is used primarily during enhanced drinking water testing.
P2100 Turbidimeter	Provides direct digital readout of water turbidity in nephelometric turbidity units (NTUs). The instrument is lightweight, field portable, and easy to use. It operates on 4 AA batteries and is capable of delivering laboratory-quality data with a measurement range of 0 to 1000 NTU.
QUESTemp (QT) 36 Wet-Bulb Globe Temperature (WBGT) Meter	A data-logging thermal environment monitor that employs WBGT sensing technology to measure thermal stress conditions. The instrument simplifies heat stress management by eliminating the need to carry charts, pocket guides, and lookup tables into the field.

Figure A-4. Preventive Medicine

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APPENDIX B

Permit Procedures

B.1 INTRODUCTION

Etiologic agents are microorganisms and microbial toxins, also referred to as infectious agents, that cause disease in humans and include:

1. Bacteria
2. Bacterial toxins
3. Viruses
4. Fungi
5. Rickettsiae
6. Protozoans
7. Parasites.

Arthropods and other organisms that transmit pathogens to animals (including humans) are called vectors. Etiologic agents, vectors, and materials containing etiologic agents are considered hazardous materials. Materials containing etiologic agents are regularly transported from one location to another by ground transportation and air carriers. Materials containing etiologic agents must be appropriately packaged to prevent breakage or leakage in order to avoid exposure to package handlers, transporters, and the general public. Materials containing etiologic agents must be packaged, labeled, and transported in accordance with all applicable regulations. A United States Public Health Service (USPHS) importation permit must accompany material containing etiologic agents imported into the United States.

B.2 UNITED STATES PUBLIC HEALTH SERVICE IMPORTATION PERMITS

The USPHS importation permits are issued only to the importer, who must be located in the United States. The importation permit, with the proper packaging and labeling, expedites the clearance of an infectious materials package through the USPHS Division of Quarantine and its release by United States Customs Service (USCS).

US-based importers are legally responsible for making sure that foreign personnel they are working with package, label, and ship infectious materials according to federal and international regulations. The USPHS issues the importers shipping labels with the universal biohazard symbol, the importer's address, the permit number, and the expiration date to the importer with the permit. The importer must send the labels and one or more copies of the permit to the shipper. The permit and labels inform the USCS and the US Division of Quarantine Personnel of the package contents.

B.3 FEDERAL REGULATIONS

The importation of etiologic agents is governed by 42 CFR, *Public Health, Part 71, Foreign Quarantine*, and *Part 71.54, Etiologic Agents, Hosts, and Vectors*. The regulation states that:

1. A person may not import into the United States, nor distribute after importation, any etiologic agent, or any arthropod or other animal host or vector of human disease, or any exotic living arthropod or other animal capable of being a host or vector of human disease, unless accompanied by a permit issued by the Director.
2. Any import coming within the provisions of this section will not be released from custody prior to receipt by the District Director of the USCS of a permit issued by the Director of the Centers for Disease Control and Prevention (CDC).

B.4 ITEMS REQUIRING PERMITS

B.4.1 Etiologic Agents

It is impractical to list all etiologic agents in this publication. In general, an import permit is needed for any infectious agent known or suspected to cause disease in humans.

B.4.2 Biological Materials

A permit is required to import unsterilized specimens of human and animal tissues, such as blood, body discharges, fluids, excretions, or similar material, containing an infectious or etiologic agent.

B.4.3 Hosts and Vectors

B.4.3.1 Animals

Importing animals known or suspected of being infected with an organism capable of causing disease in humans may require a permit issued by the CDC. The importation of live turtles of less than 4 inches in shell length and live nonhuman primates is regulated by the CDC, Division of Global Migration and Quarantine (www.cdc.gov/ncidod/dq/).

B.4.3.2 Bats

Importing live bats requires an import permit from the CDC and the US Department of the Interior (USDOI), Fish, and Wildlife Service. The application for a CDC import permit for live exotic bats is available on the CDC website at www.cdc.gov/ncidod/dq/.

B.4.3.3 Arthropods

Importing live insects or other live arthropods that are known to contain or suspected of containing an etiologic agent (human pathogen) requires a CDC import permit.

B.4.3.4 Snails

Importing snail species capable of transmitting a human pathogen requires a CDC import permit.

B.5 PACKAGING REQUIREMENTS

Infectious materials imported into the United States must be packaged to withstand breakage and leakage of contents and must be labeled as specified in the following federal regulations:

1. 42 CFR, *Public Health, Part 72, Interstate Shipment of Etiologic Agents*

2. 49 CFR, *Transportation, Part 173, Shippers—General Requirements for Shipments and Packagings*
3. For international shipments, the International Air Transport Association (IATA), Dangerous Goods Regulations, should be consulted.

B.6 OTHER PERMITS

United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), permits are required for infectious agents of livestock and biological materials containing animal material. Tissue culture materials and suspensions of cell-culture-grown viruses or other etiologic agents containing growth stimulants of bovine or other livestock origins are controlled by the USDA to prevent entry of exotic animal diseases into the United States.

Individuals wishing to import select agents and toxins must be registered with the CDC's Select Agent Program (SAP) in accordance with 42 CFR, *Public Health, Part 73, Select Agents and Toxins*, for the select agents and toxins that are listed on the import permit application. In addition, in accordance with 42 CFR, *Public Health, Part 73.16, Transfers*, an APHIS/CDC Form 2, Request to Transfer Select Agents and Toxins, must be completed and submitted to the SAP, which grants approval prior to the shipment of select agents or toxins under the import permit. (See Appendix D for CDC/APHIS websites that provide additional information on the shipment of select agents and toxins.)

B.7 PERMIT APPLICATION

FDPMU personnel are trained on the procedures for submitting permit applications. Additionally, information related to the completion of permit forms can be obtained from:

1. the Welcome to the USDA Service Center eForms at <http://forms.sc.egov.usda.gov/eforms/mainservlet>
2. the USDA APHIS at http://www.aphis.usda.gov/animal_health/
3. the CDC Frequently Asked Questions about Etiological Agent Import Permits at <http://www.cdc.gov/od/eaipp/faq.htm>.

B.7.1 Centers for Disease Control Contact Information

Centers for Disease Control and Prevention
 Mailstop A-46
 1600 Clifton Road
 Atlanta, GA 30333
 Telephone: (404) 718-2077

B.7.2 United States Department of Agriculture Contact Information

USDA-APHIS-VS-NCIE
 4700 River Road, Unit 40
 Riverdale, MD 20737
 Telephone: (301) 734-5960

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APPENDIX C

Medical Intelligence Products and Sources

C.1 MEDICAL INTELLIGENCE DEFINED

Medical intelligence is a result of the collection, evaluation, analysis, and interpretation of foreign medical, bioscientific, epidemiological, and environmental information used for strategic planning, military operations, and military medical planning. Produced by a recognized member of the national intelligence community, medical intelligence helps to conserve the fighting strength of friendly forces and to form assessments of foreign medical capabilities in military and civilian sectors.

C.2 SIGNIFICANCE OF MEDICAL INTELLIGENCE

Accurate and timely intelligence is a critical combat support tool for planning, executing, and sustaining military operations. It is equally important in achieving optimum planning, execution, and sustainment of HSS operations, the medical readiness of the command, and the overall combat readiness of the unit. Medical intelligence at the operational level focuses on Navy, Marine Corps, and joint operational planning by using current operations, exercises, and deliberate planning as the backdrop for intelligence production. At the tactical level, medical intelligence is oriented toward the specific operational area and a given operation in greater detail. When properly used and applied, medical intelligence is a powerful force multiplier providing the critical essential elements of information required to assist HSS staff in developing plans and strategies that:

1. Identify the medical threat.
2. Counter the medical threat.
3. Are responsive to the unique aspects of the particular theater.
4. Enable the commander to conduct operation.
5. Conserve the fighting strength of friendly forces.

C.3 INTELLIGENCE CYCLE

The intelligence cycle is the process by which information is levied into requirements, collected, converted into intelligence, and made available to users. There are six phases in the intelligence cycle:

1. Requirement, which includes the determination of intelligence requirements, preparation of a collection plan, and issuance of orders and requests for information collection
2. Collection, which includes the acquisition and dissemination of information to processing and production elements
3. Processing/exploitation, which includes the conversion of collected information into a form suitable for the production of intelligence

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4. Analysis/production, which includes the conversion of information into intelligence through integration, analysis, evaluation, and interpretation of all-source data and the preparation of intelligence products in support of known or anticipated user requirements
5. Dissemination/integration, which includes the conveyance of intelligence in a suitable form and the application of intelligence to appropriate missions, tasks, and functions
6. Evaluation/feedback, which includes the continuous assessment of intelligence operations during each phase of the intelligence cycle to ensure that the commander's intelligence requirements are being met.

C.4 INTELLIGENCE SOURCES

C.4.1 Operational Intelligence Sources

The CCDR's first place to search for timely, applicable intelligence at the operational and tactical levels is the joint intelligence support element (JISE) with geographic responsibility for the area where the JTF is being deployed. When properly facilitated by a plans, operations, and medical intelligence (POMI) officer assigned to the CCDR, the CCDR surgeon should be very familiar with:

1. Current intelligence for a region
2. Medical threats (epidemiological and environmental)
3. Medical capabilities and infrastructure
4. Industrial infrastructure posing health threats
5. Tactical military threats such as chemical, biological, radiological, and nuclear (CBRN)
6. Regional capabilities for CBRN medical countermeasures.

C.4.2 National Center for Medical Intelligence

The Defense Intelligence Agency (DIA) has oversight authority on the collection, interpretation, and dissemination of intelligence, including medical intelligence, supporting DOD operations to protect the United States at home and abroad in the war against terror. Finished all-source medical intelligence is produced by the National Center for Medical Intelligence (NCMI), Fort Detrick, Maryland. NCMI is a field activity of DIA and is the focal point in DOD for the production of finished intelligence on foreign military and civilian medical capabilities, including the health status of foreign military forces, and infectious disease and biomedical subjects of military importance.

NCMI is responsible for producing and disseminating finished intelligence products via studies, message traffic, compact disc read-only memory (CD-ROM), and online electronic systems. NCMI products commonly used by HSS planners fall into the category of recurring term finished intelligence.

These products include, but are not limited to:

1. Infectious disease risk assessment (IDRA).
2. Environmental health risk assessment (EHRA).
3. Industrial facility health risk assessment (IFHRA).
4. Toxic industrial chemical health risk assessment (TICHRA).

5. Industrial facility dispersion modeling and risk assessment (Tier III).
6. Health service assessment (HSA). HSAs are designed to provide customers the bottom-line assessment of the health service capabilities of a country, with limited descriptive data and examples relating only to critical elements of the civilian military health systems. The studies are produced on countries with a validated production requirement by an intelligence consumer, or with a high potential for US force deployment.
7. Medical, environmental, disease, intelligence, and countermeasures (MEDIC). CD-ROMs are updated regularly and provide worldwide infectious disease and environmental health risks hyperlinked to the joint Service-approved countermeasure recommendations, military and civilian health-care delivery capabilities, operational information, disease vector ecology information, and reference data.
8. Medical intelligence note (MIN). MINs are current intelligence documents, presenting analysis of newly reported information of potential interest to consumers. MINs are produced periodically, generally on topics of immediate interest to deployed or deploying forces.
9. Infectious disease alert (IDA). IDAs provide time-sensitive updates to the IDRAs and are published daily or as required. Classification is subject to content of the alert.
10. Request for information (RFI). NCMI's quick reaction support response to time-sensitive, quick-reaction intelligence production and support requests for operational contingencies is made in the form of RFIs. NCMI accepts RFIs as long as it can complete the requirements of the task within 40 personnel hours of analytical work. NCMI accepts RFIs by telephone (open and secure communications), by direct correspondence, and by message format. Whenever possible, formal methods of communication are encouraged. Navy medical personnel should request intelligence through the intelligence shop, when applicable. RFIs can be submitted to the following NCMI mailing and message traffic addresses:

National Center for Medical Intelligence (NCMI)
 Defense Intelligence Agency (DIA)
 Bldg 6000
 ATTN: NCMI Operations
 Washington, DC 20340-5100

Director, National Center for Medical Intelligence (DIRNCMI) (Operations)
 1607 Porter St.
 Fort Detrick, MD 21702-5004
 Watch desk: Comm: (301) 619-7574 (STE-Capable); DSN: 343-7574

C.5 OTHER SOURCES OF MEDICAL INTELLIGENCE

C.5.1 Defense Pest Management Information Analysis Center

The Defense Pest Management Information Analysis Center (DPMIAC) is responsible for publishing a series of disease vector ecology profiles (DVEPs) of foreign countries and regions of the world. DVEPs include disease risks, infectious agents, modes of transmission, geographic and seasonal incidence, and prevention and control recommendations. Some of the Center's other publications and a website to request CD-ROMs of operational entomology references are available at <http://www.afpmb.org>.

C.5.2 Walter Reed Army Institute of Research

The Walter Reed Army Institute of Research (WRAIR) conducts biomedical research that is responsive to DOD and Army requirements and delivers lifesaving products including knowledge, technology, and medical materiel that sustain the combat effectiveness of the warfighter. Additionally, the WRAIR quickly responds to ad hoc

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queries and provides timely regional medical assessments. (See Appendix D for websites that support the WRAIR research mission and DOD medical intelligence.)

C.5.3 United States Army Research Institute of Environmental Medicine

The United States Army Research Institute of Environmental Medicine (USARIEM) publishes a series of deployment manuals that address soldier health and performance in a wide variety of environments. These publications are available online at <http://www.usariem.army.mil/DOWNLOAD.HTM>.

C.5.4 Department of State

The Department of State (DOS) publishes *Background Notes*, a series of publications on selected countries and regions. These publications are available online at <http://www.state.gov/r/pa/ei/bgn/>.

C.5.5 Centers for Disease Control and Prevention

The Centers for Disease Control and Prevention (CDC) publishes *Health Information for International Travel*, a document often referred to as the *Yellow Book*, which identifies current vaccination requirements, immunization and prophylaxis recommendations, and regional health hazards. This information is available online at <http://www.cdc.gov/Features/YellowBook/>.

C.5.6 World Health Organization

The World Health Organization (WHO) publishes *International Travel and Health*, a biannual report, similar to the *Yellow Book*, which provides information on the main health risks to travelers, and the *Weekly Epidemiological Record (WER)*. These publications are available online at <http://www.who.int/ith/en/> and <http://www.who.int/wer/en/> respectively.

C.5.7 United States Army Center for Health Promotion Preventive Medicine

USACHPPM provides worldwide technical support for implementing preventive medicine, public health, and health promotion/wellness services into all aspects of the Army, anticipating and rapidly responding to operational needs and adapting to a changing world environment.

C.5.8 Pan American Health Organization

The Pan American Health Organization (PAHO) is an international public health agency aligned with the United Nations (UN) system, serving as the regional office for the Americas of WHO, and as the health organization of the Inter-American System. The PAHO provides access to the PAHO HQ Library and Information Services and the Virtual Health Library. The PAHO HQ Library and Information Services provide a wide variety of professional and technical reference and information services covering a broad range of subject areas within the biomedical and public health field. The Virtual Health Library promotes equitable, universal, modern, and efficient access to relevant information generated by dynamics of public health in the region.

C.5.9 Navy and Marine Corps Public Health Center

The NMCPHC is the Navy and Marine Corps center for public health services that coordinates and provides centralized support and services to medical activities, afloat and ashore, in the areas of occupational health; environmental health; preventive medicine; health promotion; population health; deployment health surveillance; chemical, biological, radiological, and nuclear defense (CBRND); and drug screening.

C.6 MEDICAL THREAT

C.6.1 General

The medical threat is the composite of all ongoing or potential enemy actions and environmental conditions that could adversely affect force health. These actions and conditions produce wounds, injuries, or disease. An example of a significant medical threat is prolonged or intense periods of combat operations that may lead to high incidents and levels of combat stress. Throughout military history, disease has accounted for more force attrition during periods of conflict than battle or nonbattle injuries.

C.6.2 Threat Analysis

Intelligence and threat are not synonymous. Intelligence agencies and intelligence staffs produce finished and unfinished intelligence information on foreign areas and situations. Intelligence preparation of the battlespace (IPB) aids in the accurate comparison of friendly and enemy capabilities, describes the medical situation in the AO, and enables the HSS staff to see areas of potential weakness in medical readiness.

C.6.3 Modern Warfare and Medical Threat

C.6.3.1 Characteristics

Characteristics of modern warfare that define medical threat include:

1. The level of combat intensity, heavy use of supplies, and the ever-increasing range and lethality of indirect fire weapons.
2. The enhanced lethality, wounding capability, and destructive properties of munitions.
3. The collateral and residual effects of conventional or NBC weapons.
4. Infectious diseases that pose a major threat to combat forces. These diseases may be in the form of naturally occurring diseases or diseases introduced by a biological weapon.
5. Environmental factors such as extremes in temperature and altitude and the presence of poisonous animals, plants, and insects. These factors are important considerations as causative agents of disease and injury casualties.

C.6.3.2 Risk to Medical Organizations

Although a premeditated attack upon medical organizations, personnel, or Class VIII materiel may not be a primary attack, it should not be ignored. A steady erosion of battlefield medical resources will result from the following:

1. Significant increases in wounded casualties beyond the capability of the HSS system to provide timely medical care.
2. Enemy combat operations in friendly rear areas interdicting lines of communication, disrupting vital combat support and combat service support activities. These types of attacks can seriously impact the ability of HSS personnel to retrieve, evacuate, and care for wounded, sick, and injured personnel.
3. Prolonged periods of intense, continuous operations under all types of conditions that can tax sailors and Marines to the limits of their physiological and emotional endurance.
4. Actions of terrorists (individuals or groups) directed against hospitals and medical facilities.

C.6.3.3 Technological Applications

Application of advanced technologies to enhance existing weapons and munitions and development of new weapon systems may provide the HSS system with new diagnostic and treatment challenges. Examples of technology-driven developments that may be confronted include:

1. Engineered biochemical compounds used as biological warfare agents
2. Genetically engineered microorganisms used as biological warfare agents
3. Directed-energy weapons consisting of high- and low-energy lasers, high-energy microwave, radio frequency, and particle weapons
4. Enhanced blast effect weapons used against personnel
5. New flame and incendiary compounds and munitions
6. Enhanced nuclear weapons with increased lethality from radiation
7. Possible mind-altering agents.

C.6.4 Elements of the Medical Threat

C.6.4.1 Threat Elements to Health Service Support Personnel

Threat elements with the greatest potential for medical personnel degradation include:

1. Battle injuries caused by artillery, small arms, and fragmentation weapons
2. Casualties due to combat stress
3. CBRN and combined casualties
4. Premeditated attack upon medical organizations, personnel, or Class VIII supplies
5. The continually increasing range of indirect weapons fire
6. The enhanced wounding capability and destructiveness of weapon systems
7. The collective effects of conventional and CBRN weapons
8. Increases in casualty densities causing local or general overloads of the HSS system
9. Infectious diseases and environmental extremes.

C.6.4.2 Enemy Operations

Note

For the purposes of this publication, enemy combat operations are not considered to be medical threats, although they may threaten the survival of HSS.

Enemy combat operations in friendly rear areas can interdict lines of communications and disrupt necessary logistics activity. This can produce serious negative effects on the ability of personnel to conduct health-care operations.

C.6.4.3 Health Service Support Personnel Limitations

Prolonged periods of intense, continuous operations can tax HSS personnel to the limit of their physical, psychological, and emotional endurance. This can cause degradation in the ability of the HSS system to deliver health care at a sustained level.

C.6.4.4 Health Service Support Organizations as Enemy Targets

HSS organizations are not expected to be the primary target for biological and chemical attacks; however, logistics base complexes can be prime candidates for such enemy operations. As elements of logistics complexes, medical organizations must anticipate collateral contamination from attacks on adjacent facilities. Forward HSS assets have an even higher probability of being contaminated by biological and/or chemical weapons.

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APPENDIX D

Useful Websites

ORGANIZATION	WEBSITE
Armed Forces Health Surveillance Center (AFHSC)	http://afhsc.army.mil/
Armed Forces Pest Management Board	http://www.afpmb.org/
Assistant Secretary of Defense (Health Affairs)	http://www.ha.osd.mil/
Centers for Disease Control and Prevention (CDC)	http://www.cdc.gov/ncidod/dq/
Center for Infectious Disease Research and Policy	http://www.cidrap.umn.edu/index.html
Department of State	http://www.state.gov/r/pa/ei/bgn/
Emerging Infectious Diseases Free journal from the CDC	http://www.cdc.gov/ncidod/EID/index.htm
Eurekalert AAAS publishers of the journal <i>Science</i>	http://www.eurekalert.org/bysubject/index.php
GIDEON This site requires a subscription for full access.	http://www.gideononline.com/index.htm
HealthMap	http://www.healthmap.org/en
Joint Center for Lessons Learned	http://www.jfcom.mil/about/fact_jcoa.htm
Marine Corps Center for Lessons Learned (MCCLL)	https://www.mccl.usmc.mil/
Medical Deployers under Navy Knowledge Online Library	https://www.nko.navy.mil/
Medical Officer of the Marine Corps	http://hqinet001.hqmc.usmc.mil/hs/staffhtm.htm
Naval Electronic Directives System (Online Database of SECNAV and OPNAV issuances)	http://doni.daps.dla.mil/
Naval Expeditionary Medical Training Institute (NEMTI)	http://www.nomi.med.navy.mil/NEMTI/index.htm
Naval Health Research Center	http://www.nhrc.navy.mil/
Naval Medical Education and Training Command	http://nshs.med.navy.mil
Naval Medical Information Management Center	http://navymedicine.med.navy.mil/nmimc/
Naval Medical Logistics Command	http://www.nmlc.med.navy.mil
Naval Medical Research Center	http://www.nmrc.navy.mil
Naval Operational Medical Lessons Learned Center (NOMLLC)	https://mll.nomi.med.navy.mil
Naval Operational Medicine Institute	http://www.nomi.med.navy.mil/

Figure D-1. Useful Websites (Sheet 1 of 2)

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ORGANIZATION	WEBSITE
Navy and Marine Corps Public Health Center	http://www-nehc.med.navy.mil/
Navy Lessons Learned System	http://www.nwdc.navy.mil/
Navy Medicine Online (Digital Health Services Library)	http://navymedicine.med.navy.mil/
ProMED-mail	http://www.promedmail.org/pls/otn/f?p=2400:1000:
The National Institute of Allergy and Infectious Diseases (NIAID)	http://www3.niaid.nih.gov/news/newsreleases/2008/
United States Army Research Institute of Environmental Medicine	http://www.usariem.army.mil/DOWNLOAD.HTM.
United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS)	http://www.aphis.usda.gov/animal_health/
Walter Reed Army Institute of Research (WRAIR)	wrair-www.army.mil/
World Health Organization (WHO) WHO Epidemic and Pandemic Alert and Response (EPR)	http://www.who.int/ http://www.who.int/csr/don/en/

Figure D-1. Useful Websites (Sheet 2 of 2)

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The development of NTTP 4-02.8 (SEP 2008) is based upon the effective edition of the following sources.

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2. MCWP 4-11.1, *Health Service Support Operations*.

NAVY PUBLICATIONS AND CONCEPT PAPERS

3. BUMEDINST 6440.5 (series), *Health Services Augmentation Program (HSAP)*.
4. BUPERSINST 1610.10 (series), *Navy Performance Evaluation System*.
5. *Fleet Operational Health Concept of Operations*.
6. *Naval Force Health Protection for the 21st Century (NFHP-21)*.
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11. OPNAVINST 3500.38B/MCO 3500.26A/USCG COMDTINST 3500.1B, *Universal Naval Task List (UNTL)*.

OTHER PUBLICATIONS

12. 42 CFR, *Public Health, Part 71, Foreign Quarantine*.
13. 42 CFR, *Public Health, Part 71.54, Etiologic Agents, Hosts, and Vectors*.
14. 42 CFR, *Public Health, Part 72, Interstate Shipment of Etiologic Agents*.
15. 42 CFR, *Public Health, Part 73, Select Agents and Toxins*.
16. 42 CFR, *Public Health, Part 73.16, Transfers*.
17. 49 CFR, *Transportation*.
18. 49 CFR, *Transportation, Part 173, Shippers-General Requirements for Shipments and Packagings*.
19. AJP 4-10, *Allied Joint Medical Support Doctrine*.
20. Chosewood, L. Casey, and Deborah E. Wilson, *Biosafety in Microbiological and Biomedical Laboratories (BMBL)*, 5th Edition, Washington: U.S. Government Printing Office, 2007.

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21. CJCSM 3500.03 (series), *Joint Training Manual for the Armed Forces of the United States*.
22. Department of State (DOS), *Background Notes*.
23. IATA, *Dangerous Goods Regulations*.
24. Title 21, USC, *Food and Drugs*.
25. World Health Organization, *International Travel and Health 2008*.
26. World Health Organization, *Weekly Epidemiological Record (WER)*.

LIST OF ACRONYMS AND ABBREVIATIONS

AAR	after action review
ABFC	advanced base functional component
AC	alternating current
ADCON	administrative control
AJP	allied joint publication
AMC	Air Mobility Command
AMDIS	Automated Mass Spectral Deconvolution and Identification System
AOR	area of responsibility
APHIS	Animal and Plant Health Inspection Service
BIOCHEM	biochemist
BOS	base operating support
BT	biological terrorism
Btu	British thermal unit
BUMED	Bureau of Medicine and Surgery
BUPERSINST	Bureau of Naval Personnel instruction
BW	biological warfare
C2	command and control
CBR	chemical, biological, and radiological
CBRN	chemical, biological, radiological, and nuclear
CBRND	chemical, biological, radiological, and nuclear defense
CCDR	combatant commander
CDC	Centers for Disease Control and Prevention
CD-ROM	compact disc read-only memory
CESE	civil engineering support equipment

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CFR	Code of Federal Regulations
CJCSM	Chairman of the Joint Chiefs of Staff manual
CM	consequence management
CMO	civil-military operation
CMOC	civil-military operations center
COMDTINST	Commandant, United States Coast Guard instruction
COMNAVRESFOR	Commander, Naval Reserve Force
CONPLAN	concept plan
CONUS	continental United States
CP	collective protection
CW	chemical warfare
DC	direct current
DEPORD	deployment order
DIA	Defense Intelligence Agency
DNBI	disease and nonbattle injury
DOD	Department of Defense
DOS	Department of State
DOT	Department of Transportation
DOTMLPF	doctrine, organization, training, materiel, leadership and education, personnel, and facilities
DPMIAC	Defense Pest Management Information Analysis Center
DPS	deployable particulate sampler
DVEP	disease vector ecology profile
ECU	environmental control unit
EHO	environmental health officer
EHRA	environmental health risk assessment
EHSA	environmental health site assessment
EMPARTS	Expeditionary Medicine Platform Augmentation Readiness and Training System

ENTO	entomologist
EPA	Environmental Protection Agency
FDL	forward deployable laboratory
FDPMU	forward deployable preventive medicine unit
FHA	foreign humanitarian assistance
FHP	force health protection
FTIR	Fourier Transform Infrared Spectrometer
GFM	Global Force Management
GFMAP	Global Force Management Allocation Plan
GWOT	Global War on Terrorism
HAZMAT	hazardous materials
HCA	humanitarian and civic assistance
HN	host nation
HNS	host-nation support
HQ	headquarters
HSA	health service assessment
HSAP	Health Services Augmentation Program
HSS	health service support
Hz	hertz
IATA	International Air Transport Association
ICAM	improved chemical agent monitor
ICP	inventory control point
IDA	infectious disease alert
IDRA	infectious disease risk assessment
IFHRA	industrial facility health risk assessment
IHO	industrial hygiene officer
IO	international organization
IPB	intelligence preparation of the battlespace

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JCS	Joint Chiefs of Staff
JFMCC	joint force maritime component commander
JISE	joint intelligence support element
JOA	joint operations area
JP	jet propellant
JS	joint staff
JSCP	Joint Strategic Capabilities Plan
JTF	joint task force
KW	kilowatt
LMS	lessons management system
LSE	logistic support element
MAG	medium area generator
MCCLL	Marine Corps Center for Lessons Learned
MCLLP	Marine Corps Lessons Learned Program
MCLMS	Marine Corps Lessons Management System
MCO	Marine Corps order
MCT	Marine Corps task
MCTL	Marine Corps task list
MCWP	Marine Corps warfighting publication
MEDIC	medical, environmental, disease, intelligence, and countermeasures
MET	mission-essential task
MFRP	Medical Fleet Response Plan
MHS	military health system
MIC	minimum inhibitory concentration
MICRO	microbiologist
MILSTRIP	military standard requisitioning and issue procedure
MIN	medical intelligence note
MLT	medical laboratory technician

MMART	mobile medical augmentation readiness team
MOPP	mission-oriented protective posture
MTP	medical treatment facility
NAMTO	Navy material transportation office
NATO	North Atlantic Treaty Organization
NAVCOMPT	the Comptroller of the Navy
NAVFAC	Naval Facilities Engineering Command
NAVSUP	Naval Supply Systems Command
NBC	nuclear, biological, and chemical
NCC	Navy component commander
NCMI	National Center for Medical Intelligence
NEC	Navy enlisted classification
NEMSCOM	Navy Expeditionary Medical Support Command
NEMTI	Naval Expeditionary Medical Training Institute
NEPMU	Navy Environmental and Preventive Medicine Unit
NFL	Navy forward laboratory
NGO	nongovernmental organization
NIST	National Institute of Standards and Technology
NLLS	Navy Lessons Learned System
NMC	Naval Medical Center
NMCPHC	Navy and Marine Corps Public Health Center
NMPS	Navy mobilization processing site
NOBC	Navy officer billet classification
NOLSC	Naval Operational Logistics Support Center
NOMLL	Naval Operational Medical Lessons Learned
NOMLLC	Naval Operational Medical Lessons Learned Center
NTA	Navy tactical task
NTSP	Navy Training System Plan

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NTTL	Navy tactical task list
NTTP	Navy tactics, techniques, and procedures
NTU	nephelometric turbidity unit
NWP	Navy warfare publication
OCONUS	outside the continental United States
OEHS	occupational and environmental health surveillance
OIC	officer in charge
OIF	Operation IRAQI FREEDOM
OP	operational
OPCON	operational control
OPLAN	operation plan
OPNAV	Office of the Chief of Naval Operations
OPNAVINST	Chief of Naval Operations instruction
OPORD	operation order
PAHO	Pan American Health Organization
PDSS	predeployment site survey
PMO	preventive medicine officer
PMT	preventive medicine technician
POC	point of contact
POD	port of debarkation
POMI	plans, operations, and medical intelligence (officer)
PPE	personal protective equipment
PSA	personnel support activity
QT	QUESTemp
RAPID	ruggedized advanced pathogen identification device
RFF	request for forces
RFI	request for information
RFS	request for support

RHO	radiation health officer
ROMO	range of military operations
SAP	Select Agent Program
SCC	Service component commander
SecDef	Secretary of Defense
SECNAV	Secretary of the Navy
SIMLM	single integrated medical logistics manager
SME	subject matter expert
SN	strategic-national
SOP	standard operating procedure
ST	strategic-theater
TACON	tactical control
TIC	toxic industrial chemical
TICHRA	toxic industrial chemical health risk assessment
TIM	toxic industrial materiel
TLAMM	theater lead agent for medical materiel
TMIP	Theater Medical Information Program
TPFDDL	time-phased force deployment data list
TSC	theater support command
TTP	tactics, techniques, and procedures
TUCHA	type unit characteristics file
UIC	unit identification code
UJTL	Universal Joint Task List
ULV	ultra low volume
UN	United Nations
UNTL	Universal Naval Task List
USACHPPM	US Army Center for Health Promotion and Preventive Medicine
USARIEM	United States Army Research Institute of Environmental Medicine

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USC	United States Code
USCS	United States Customs Service
USDA	United States Department of Agriculture
USDOI	US Department of the Interior
USFFC	United States Fleet Forces Command
USJFCOM	United States Joint Forces Command
USPACFLT	United States Pacific Fleet
USPHS	United States Public Health Service
USTRANSCOM	United States Transportation Command
UTC	unit type code
V	volt
WBG	wet-bulb globe temperature
WER	Weekly Epidemiological Record
WHO	World Health Organization (UN)
WQA	water quality analysis
WRAIR	Walter Reed Army Institute of Research

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