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PREVENTIVE MEDICINE SERVICES

HEADQUARTERS, DEPARTMENT OF THE ARMY

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PREVENTIVE MEDICINE SERVICES

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PREFACE

This field manual (FM) provides information on the mission, organization, and responsibilities for preventive medicine (PVNTMED) support operations throughout the operational continuum. It is directed toward the commanders at all levels of deployment, their staffs, the command surgeons, the PVNTMED planning staffs at the Army, joint, combined, allied, and coalition staff levels, and to the individual soldier and unit leaders on their role in the application of preventive medicine measures (PMM). It further defines each staff element of PVNTMED and lists the functions, capabilities, and management requirements associated with each. It provides procedures for directing, controlling, and managing PVNTMED assets within the area of operations (AO).

This publication outlines the functions and operations of each PVNTMED section and how it integrates its activities in support of those operations.

This publication contains tactics, techniques, and procedures relative to PVNTMED support in the following specific areas:

Unit and area PVNTMED support to the sustaining base, the combat zone (CZ), and at echelons above corps (EAC).

The organization, mission, functions, capabilities, and employment of PVNTMED units and tables of distribution and allowances (TDA) activities.

Preventive medicine support in disaster relief.

Preventive medicine staff functions.

The relationship between PVNTMED staffs and the surgeons at each level of command.

The command and technical relationship to supported and supporting units.

The PVNTMED role in civil-military operations (CMO).

Preventive medicine mobilization procedures.

Preventive medicine support in stability operations and support operations.

This publication is in agreement with the following North Atlantic Treaty Organization (NATO) Standardization Agreements (STANAGs) and American, British, Canadian, and Australian (ABCA) International and Quadripartite Standardization Agreements (QSTAGs):

NATO STANAG	ABCA QSTAG	TITLE
2037		Vaccination of NATO Forces
2048		Chemical Methods of Insect and Rodent Control AMedP-3
2050		Statistical Classification of Diseases, Injuries, and Causes of Death
2136	245	Minimum Standards of Water Potability in Emergency Situations
2885		Emergency Supply of Water in War
2908		Preventive Measures for an Occupational Health Programme
2981		Prevention of Cold Injury
	889	Essential Field Sanitary Requirements

The staffing and organization structure presented in this publication reflects those established in base table(s) of organization and equipment (TOE). However, such staffing is subject to change to comply with manpower requirements criteria outlined in Army Regulation (AR) 71-32 and can be subsequently changed by your modification table(s) of organization and equipment (MTOE).

As the Army Medical Department (AMEDD) transitions to the 91W military occupational specialty (MOS), positions for 91B and 91C will be replaced by 91W when new unit MTOE take effect.

Users of this publication are encouraged to submit comments and recommendations to improve the publication. Comments should include the page, paragraph, and line(s) of the text where the change is recommended. The proponent for this publication is the United States (US) AMEDD Center and School (AMEDDC&S). Comments and recommendations should be forwarded directly to: **Commander, AMEDDC&S, ATTN: MCCS-FCD-L, 1400 East Grayson Street, Fort Sam Houston, Texas 78234-6175,** or by using the E-mail addresses on the Doctrine Literature website at *http://dcdd.amedd.army.mil/index1.htm* (click on Doctrine Literature).

Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.

Use of trade or brand names in this publication is for illustrative purposes only and does not imply endorsement by the Department of Defense (DOD).

CHAPTER 1

MEDICAL THREAT

1-1. General

a. The term *medical threat* is defined as a collective term used to designate all potential or continuing enemy actions and environmental situations that could adversely affect the combat effectiveness of friendly forces, to include wounds, injuries, or sickness incurred while engaged in a joint operation. (Joint Publication 4-02). In Army and multiservice publications, the term is defined as a composite of all ongoing potential enemy actions and environmental conditions (disease and nonbattle injuries [DNBIs]) that may render a soldier combat ineffective. Commanders and unit leaders are responsible for protecting and preserving Army personnel and equipment against injury, damage, or loss that may result from food-, water-, and arthropodborne diseases, as well as environmental injuries (for example, heat and cold injuries) and occupational hazards.

b. The term *health threat* refers to an individual soldier s health. The term can include hereditary conditions which manifest themselves in adulthood, individual exposure to an industrial chemical or toxin where others are not exposed, or other injuries and traumas which affect an individual s health rather than the health of the unit. For example, an individual who has a food allergy inadvertently eats the offending food; he may become incapacitated with diarrhea but the remainder of the unit is not affected by this condition. On the other hand, in a unit where 40 to 50 percent of its personnel contract *Salmonella* (an infectious disease), the unit can no longer complete its mission. A *health threat* may be more individualized in nature and may not be of any military significance. The significant difference in these terms lies with the effects on the ability of a military unit to successfully execute its mission.

c. The elements of the medical threat include infectious diseases that occur naturally, but are not limited to

Diseases endemic to the AO.

Environmental factors (heat, cold, humidity, and significant elevations above sea level).

Diseases caused by zoonotic/animal bites.

The presence of poisonous animals, plants, and insects. (These are important considerations as causative agents of DNBI casualties.)

Diseases stemming from weapons of mass destruction (WMD) (such as nuclear, biological, and chemical [NBC], and directed-energy [DE] weapons/devices such as radiation composed of three types radio frequency, laser, and charged particle beam). Blast effect weapons, such as fuel and air explosives, represent an emerging medical threat. This includes terrorist (individuals or groups) actions directed against defenseless targets.

Prolonged periods of intense, continuous operations under all types of conditions that tax soldiers to the limits of their physiological and emotional endurance.

1-2. Historical Perspective

Throughout history, DNBI resulting from medical threats (including, but not limited to, heat, cold, and disease) have accounted for more losses to fighting forces than combat-related injuries. Even prominent military personalities, such as Alexander, Hannibal, Frederick, and Napoleon, suffered setbacks due to loss of forces as a result of DNBI. Despite considerable advances in the technology of war, the medical threat still presents a significant danger to our forces. For example:

a. Lebanon Intervention of 1958. Half of the deployed US force in Beirut suffered the misery of diarrhea. Five percent of those were sick enough to require hospitalization.

b. Vietnam War in the Republic of Vietnam. Nearly half the US troops deployed to Vietnam had one or more significant bouts with diarrhea during their first 4 months in country.

c. Sinai Campaign in Egypt, 1967. Twenty percent of the entire Egyptian force deployed across the peninsula died from heat, even though the war only lasted a few days.

d. Jerusalem Campaign in Israel, 1967. Forty percent of Israeli infantry units operating within the ancient city contracted cutaneous leishmaniasis.

e. Canal Clearance Operation in Egypt, 1975. Eighty percent of the US Navy personnel deployed to Egypt in support of clearance operations suffered diarrhea and dysentery from eating in poorly maintained food service facilities.

f. Operation Bright Star in Egypt, 1980. The exercise ended miserably for many US troops because of diarrhea and dysentery. They had eaten in civilian restaurants just before returning home.

g. Peacekeeping Operations in the Sinai, 1982. Thirty percent of one US airborne company was incapacitated by the Sinai heat and required intravenous (IV) fluids to recover from dehydration.

h. Operation Just Cause, Republic of Panama, 1989. Many US personnel suffered heat prostration/injuries due to a lack of acclimatization and a shortage of drinking water. Airborne personnel jumped into the mangrove swamps around Panama City without adequate amounts of water to drink. Each individual only had one canteen of water. The water in these swamps is brackish (salt) water; therefore, the personnel could not refill their canteens and treat the water with iodine tablets. Unit combat lifesavers cut off the tops of 500 cubic centimeter (cc) IV solution bags and had the individuals drink the solution to relieve the heat effects.

i. Operation Desert Shield/Operation Desert Storm in Saudi Arabia, 1990-1991. At ports and other large troop concentration areas, sanitation safeguards were nonexistent or poorly controlled. In order to get to showers, soldiers had to pass through areas where human waste was leaking from outdoor latrines (some were positioned too closely). These conditions along with other sanitation problems, contributed to many cases of *Shigella* (a diarrheal disease).

j. Operation Restore Hope in Somalia, 1993-1994. In the process of upgrading and moving a unit to a new location, a US unit selected an area that had been occupied by a coalition force. The

assumption was made that because these forces had found the area suitable that it would probably accommodate the unit s soldiers. After expending considerable time and resources on construction of facilities in the area, the unit contacted the surgeon to assist in dealing with a fly problem. When the PVNTMED team arrived, they quickly discovered that the source of the flies was a dump adjacent to the site into which Somalis were discharging raw sewage. The solution was to relocate the unit to another area.

k. Haiti. US personnel did not employ personal protective measures against arthropodborne diseases. They failed to correctly use the insect repellent, permethrin, and bed nets. Failure to use these protective measures contributed to a dengue fever rate of over 30 percent among febrile hospitalized soldiers.

l. Bosnia. One US dining facility was implicated in an outbreak of *Salmonella*. The cooks were preparing eggs that had been in an unrefrigerated container express (CONEX) for days. The food service manager ordered the remaining eggs destroyed.

1-3. Disease and Nonbattle Injury

a. General. Disease and nonbattle injuries are the major medical threat during military operations. Preventive medicine DNBI surveillance must include their effects on US, allied, coalition, and host-nation (HN) forces, and the local populace. As in war, DNBIs are the leading cause of manpower losses in stability operations and support operations. Individual, unit, and field sanitation team (FST) PMM must be stressed and applied. Preventive medicine personnel can identify the diseases and recommend control and preventive measures (see Appendix A).

b. Person-to-Person. Soldiers can prevent or reduce the incidence of diseases transmitted person-to-person by observing basic PMM (including use of masks, gloves, and eye protection)

When working around or with local national or refugee populations.

When handling or exposed to human fluids or waste.

By avoiding sneezing or coughing toward/from others.

By sleeping head-to-toe.

By ensuring working and living areas are well-ventilated.

By practicing good personal hygiene (such as washing hands before eating and after using the latrine) and avoiding unprotected sex.

c. Arthropodborne Disease.

(1) These diseases are transmitted through the biting process of arthropods or by the physical transfer of disease-causing organisms. In endemic disease areas, the native population may appear healthy; however, they may be carriers of, or immune to, diseases that they have been exposed to repeatedly since

birth. The pathogen is kept at a low level by the host immune system. This smoldering infection can be transmitted to a new host (US forces) by arthropods. Forces introduced into the AO may lack immunity from arthropodborne diseases, and if bitten, their body s immune system may not be prepared to prevent the disease from progressing. The result from soldiers becoming ill from arthropodborne disease includes loss of manpower which reduces the commander s ability to execute the mission and reduces combat health support (CHS) resources to support the mission.

(2) Prevention of these diseases is much more cost-effective than treatment. Personnel applying basic PMM can reduce their susceptibility to the diseases. The PMM include the use of arthropod (insect) repellents; insect netting; aerosol sprays; prophylaxis; and periodic self and buddy checks for the presence of arthropods on the body (such as ticks, lice, and fleas). Also, eliminating arthropod breeding areas (such as standing water) and access to food sources for arthropods (such as covering trash and rubbish collection areas) aids in preventing these diseases.

d. Foodborne and Waterborne Diseases.

(1) In areas of poor sanitation, locally procured foods present a high risk of disease for US forces. Therefore, PVNTMED personnel must work closely with the veterinary personnel that are responsible for approving locally procured foods. Food- and waterborne diseases are usually transmitted by or result from

Food handlers during food preparation and serving.

Food preparation facilities that lack adequate refrigeration for food storage.

Inadequate or absent arthropod and rodent control.

Animals that are permitted free access to food storage, preparation, and serving areas.

Improperly treated or stored water.

Contaminated or improperly treated ice.

(2) Potable water for drinking and food preparation is often scarce. Deployed forces cannot be assured of the quality of local water supplies. Quartermaster water production personnel may not be available to treat water for the forces; especially in the early days of the mission. Locally purchased ice poses the same health risks as food and water.

(3) The risk of food- and waterborne diseases to US forces can be minimized by command enforcement of basic PMM.

Personnel should only eat food prepared by US military food service personnel; when not available, maximize the use of meals, ready to eat (MREs), T-Rations, or other similarly prepackaged foods. Commanders and unit leaders must be sensitive to HN customs as local hosts may consider refusal to eat their foods an insult. The risk of experiencing a foodborne illness must be weighed against the impact on relationships with HN personnel.

Personnel should only consume water that has been treated to US military standards and inspected by PVNTMED personnel. Commanders and unit leaders must ensure that personnel carry their own supply of water purification material (iodine tablets, calcium hypochlorite ampoules, or Chlor-Floc). Bottled water does not guarantee purity; personnel should only drink US-approved and properly bottled water. Commanders and unit leaders must ensure personnel are familiar with other water purification techniques (boiling and use of bleach). Since ice from approved facilities may have been packed in contaminated materials to prevent melting, they must ensure it is inspected by PVNTMED personnel prior to consumption or use in beverages.

(4) Commanders and leaders should be on the alert for possible terrorist contamination of US military water supplies. Possible targets include water treatment plants and equipment, reservoirs, storage tanks, and water distribution systems. Water supplies must be closely monitored to ensure any contamination is identified before soldiers begin presenting at medical treatment facilities with symptoms.

(5) Use of local water treatment facilities may provide needed water sources for our forces. Such facilities may require supplemental treatment to meet US drinking water standards. In all cases, PVNTMED personnel must closely monitor water treatment.

e. Environmental Injury/Illness. Injury and illness from heat, cold, or sudden exposure to high elevations is serious, sometimes deadly, and usually preventable. Units that are not alert to this medical threat can quickly reduce their effectiveness and ability to accomplish their mission. Commanders and unit leaders must ensure that personnel are informed of risks associated with environmental medical threats and plan for the necessary equipment and clothing.

(1) Commanders and leaders can reduce the threat of heat injury by emphasizing that all personnel apply PMM. They must ensure that adequate water supplies are available and enforce a liberal water consumption policy. Further, they must ensure that all soldiers consume all meals to minimize the impact of deployment to hot areas. The standard military menu provides adequate amounts of salt to replace what is lost through sweat. Until soldiers are fully acclimatized, and when the mission permits, operations should be conducted in the cooler parts of the day to minimize the risk of heat injury. Work/rest cycles should also be used, mission permitting (see FM 21-10).

(2) Commanders and leaders can minimize the threat of cold injury by ensuring personnel use PMM (dress in layers, keep dry, change socks often). Soldiers performing at low levels of activity should be reminded to increase exercise or movement (even moving toes and fingers results in increased blood circulation to the extremities). As in hot weather, soldiers must drink adequate amounts of water and consume all meals. Commanders and leaders should provide warm, well-ventilated areas for personnel to get out of the cold, mission permitting. To avoid carbon monoxide poisoning, they must ensure that personnel do not sleep in unventilated areas or in vehicles with the windows closed and the engines running.

(3) Mountain and high altitude illness and injuries adds a new dimension in military operations. Commanders and leaders must be aware of the effect this environment will have on their personnel. Personnel must not be allowed to ascend to high altitudes at a rapid pace; to do so can cause acute mountain sickness and/or other more serious illnesses and injuries that will prevent the accomplishment of their mission. Acclimatization to high altitudes is based on altering the ascent rate to allow soldiers to

partially acclimatize. Graded ascent limits the daily altitude gain to allow partial acclimatization. The altitude at which soldiers sleep is critical. Have soldiers spend two nights at 9,000 feet and limit sleeping altitude to no more than 1,000 feet above the previous night s sleeping altitude. When personnel begin to show the effects of high elevation, they may have to be evacuated to below 8,000 feet to recover. At very high elevations (above 14,000 feet), personnel may only be able to work for a few minutes at a time. Rest periods may have to be extended until the personnel can acclimatize to the environment.

1-4. Individual and Unit Preventive Medicine Measures

The impact of the medical threat and measures taken to minimize those threats significantly affects an Army s ability to fight and win. Forces who take the medical threat seriously gain an advantage over other forces who do not. Application of individual and unit PMM gives forces who observe and counter medical threats a strategic advantage, by minimizing losses from DNBI. For example, US forces can reduce or minimize losses from

Malaria or other arthropodborne diseases by using repellents on skin and clothing and taking prescribed prophylaxis.

Waterborne diseases by only drinking approved water or purifying water with purification materials, or boiling.

Diarrhea and other foodborne diseases by only eating approved foods.

Dehydration in hot or cold climates by increasing fluid (preferably water) consumption and avoiding self-dehydration (reducing fluids to minimize trips to the latrine).

Heat injuries by ensuring personnel follow work/rest cycles, keep skin covered, and consume sufficient quantities of food and fluids.

Cold injuries by dressing in layers and keeping dry, working and resting in warm, well-ventilated areas, and consuming sufficient quantities of food and fluids.

High altitude illness and injuries by ascending to high elevations in a slow steady pace and observing each other for signs of mountain sickness.

1-5. Preventive Medicine Employment in Defeating the Threat

The employment of PVNTMED personnel in defeating the threat is one of the least expensive means of maintaining a fighting force. When PVNTMED is employed early in the mission, fewer personnel are lost to DNBI. Once DNBIs appear, the effectiveness of the force has been compromised. However, PVNTMED personnel and FSTs can do much to reduce the impact of DNBI and other medical threats on the mission. Early PVNTMED emphasis is essential in deploying and sustaining a fit, healthy force.

CHAPTER 2

ROLE OF THE SOLDIER AND UNIT LEADER

2-1. General

The mobility and dispersion of modern fighting forces increases the need for soldiers and their leaders to apply PMM to protect themselves against the medical threat. The application of basic PMM can reduce and, in some instances, eliminate the incidence of DNBI resulting from the medical threat. Commanders and leaders planning for and using basic PMM can rapidly achieve mission objectives by quickly and efficiently executing the mission with healthy and fit soldiers.

2-2. Role of the Individual Soldier

Individual soldiers can reduce the threat of disease by applying basic PMM. These PMM include the soldier protecting himself against—

a. Heat injuries (heat cramps, heat exhaustion, or heatstroke) by—

- Following acclimatization guidance, mission permitting.
- Avoiding alcoholic and caffeinated drinks.
- Keeping physically fit.
- Avoiding medications (antidiarrheal or cold medicines), except when prescribed.
- Drinking plenty of water to replace lost body fluids through sweating; remembering that thirst is not an indicator of the body's need for fluids.
- Following the correct work/rest cycle (see FM 21-10).
- Eating all meals to replace lost salt.
- Keeping the skin covered and clean; rolling down the shirtsleeves; wearing full-length trousers and headgear; and wearing cotton undergarments to increase ventilation.
- Using sunblock (at least a sun protection factor [SPF] of 15) and lip balm. Apply the sunblock on all exposed skin, (face, neck, ears, and under the chin).
- Avoiding exposure to direct sunlight for long periods, mission permitting.
- Using the buddy system and seeking medical assistance if experiencing symptoms of heat injury.

b. Cold injuries (chilblain, trench foot, frostbite, hypothermia) by—

- Wearing clothing in layers (creating air spaces) to hold maximum body heat; ensuring clothing is fitted properly; reducing the layers of clothing when exercising or working to prevent sweating (sweating reduces the protective effects of layered clothing).

- Keeping dry and changing socks several times a day to keep the feet dry.

- Frequently exercising the entire body, when the tactical situation permits. At a minimum, exercise the feet, hands, and face to increase circulation.

- Drinking sufficient water to prevent dehydration (thirst is not an indicator of the body's need for water).

- Eating regularly. Required calories increase during cold weather operations; therefore, eat all meals to ensure adequate body heat can be generated.

- Using sunblock (at least an SPF of 15) and lip balm. Apply the sunblock on all exposed skin (face, neck, ears, and under the chin).

- Wearing ultraviolet (UV) eye protection to prevent snow blindness.

- Being aware that a high altitude (above 8,000 feet) affects mental abilities. The higher the altitude, the lower the oxygen content in the air; thus causing mental confusion in personnel due to the lack of adequate oxygen.

c. Arthropodborne diseases (such as malaria, tick-borne encephalitis, leishmaniasis, and Lyme disease) by—

- Taking all prescribed prophylaxis as directed before, during, and after deployment.

- Using the DOD repellent system:

Applying insect/arthropod repellent on all exposed skin and on tight-fitting areas of their uniforms.

Applying permethrin to uniforms (that have not been treated and marked prior to deployment), using the individual dynamic absorption kit (preferred method, good for life of uniform) or spray-can method (reapply after sixth laundering).

Wearing the uniform with the pants tucked into the boots, sleeves rolled down, and the undershirt tucked into the pants.

Applying permethrin on bed nets, and tucking bed net under bedding; using bed net poles or other devices to keep bed net off of the individual.

- Using the buddy system to inspect the scalp, skin, and clothing at least twice daily for ticks or other arthropods.

- Practicing good personal hygiene, showering often and changing to a clean uniform at least weekly.

- Avoiding the establishment of bivouac areas near arthropod breeding areas.

- Discouraging pests by disposing of trash, garbage and rubbish in designated disposal areas. Eating and storing food only in designated areas, not in sleeping areas. Minimizing contact with animals (alive or dead).

- Remembering to also use PMM when not in uniform (continue prophylaxis and apply insect repellent to exposed skin, remembering feet and ankles).

- Using bed nets to protect from biting arthropods when sleeping.

d. Diarrheal diseases by—

- Avoiding food, drink, or ice from unapproved sources.

- Drinking approved water provided by the quartermaster water production support unit. When approved water supplies are not available, treat water with iodine water purification tablets, chlorine ampoules, Chlor-Floc™, or boil it before drinking. REMEMBER: Boiling water does not provide any lasting disinfecting features; it is the least preferred method.

- Washing hands before eating, after using the latrine, after handling or exposure to dirt, dust, animals, rodents, local nationals, refugees, food waste, used serving and eating utensils, pesticides, fuel and lubricant products, or other sources of contamination.

- Washing field eating utensils immediately after use. Resanitizing field eating utensils by dipping them in boiling water just before eating.

e. Nonbattle injuries by—

- Wearing hearing protection in all areas with constant or high-level noise. Avoid high-level noise areas if hearing protection is not worn.

- Wearing ballistic- and laser-protective eyewear.

- Wearing safety goggles or other protective eyewear when riding in vehicles with the windshield down, in the back of open vehicles, in the driver and track commander position of tracked vehicles, or in areas with blowing dust or sand.

- Wearing gloves and other safety devices when handling metal objects in extreme cold weather and when working with dirt and dusts.

- Wearing respiratory protective equipment when in occupational hazard areas. Self-contained breathing equipment is required when in confined areas with hazardous gases, vapors, or aerosols present.

- Using safe, approved solvents (not gasoline or diesel fuel) to clean equipment.

- Resting, sleeping, and working in designated areas that are well-ventilated. Sleeping on the ground or other nonapproved area could result in being run over or hit by a vehicle. Sleeping or working in poorly ventilated areas being warmed with field heaters or in vehicles with engines running can be fatal.

- Practicing the buddy system when operating in high altitude areas to prevent high altitude illness from advancing too rapidly.

- Using safety gear during contact sports.

- Applying defensive driving techniques, especially in foreign countries.

- Staying alert and being cautious. Keep the leadership informed of hazards or unsafe areas.

2-3. Role of Unit Leaders

Unit leaders can reduce the threat of DNBI by staying informed of the medical threat. They must also motivate, train, and equip subordinates prior to and during deployment to defeat the medical threat. To defeat the medical threat, commanders/unit leaders must work closely with PVNTMED personnel and emphasize the use of PMM within their unit.

a. Unit Headquarters Staff Responsibilities.

(1) Prepare the unit for deployment by—

- Requesting medical threat information on the AO from the Center for Health Promotion and Preventive Medicine (CHPPM) and the Armed Forces Medical Intelligence Center (AFMIC).

- Confirming all personnel have up-to-date prescribed immunizations for the AO and are physically fit for deployment.

- Ensuring each soldier receives DOD-prescribed immunizations, medications, prophylaxis, and NBC pretreatments.

- Ensuring unit personnel treat uniforms with approved insect repellent. They should mark the uniforms to indicate treatment has been accomplished.

- Incorporating PMM into the unit standing operating procedures (SOPs).

- Ensuring that FST members are trained and equipped (see FM 21-10-1).

- Ensuring required field sanitation devices are on hand and operational (see FM 21-10).

- Designating safety personnel to ensure safety procedures are being practiced.

- Ensuring personnel have adequate personal hygiene supplies, to include sunscreen and insect repellent, if required.

- Ensuring personnel have adequate clothing and equipment for the mobilization AO (hot or cold); also, the chemical protective overgarment, gloves, overboots, and protective mask. Clothing requirements may include special items for high altitude (above 8,000 feet) operations. Personnel should have sunscreen, sunglasses, and wind barriers when operating in high altitudes.

- Educating soldiers and their families prior to deployment to dispel rumors. Ensure personnel and families receive current information from the command, not from rumor sources; see FM 8-51 for detailed information within the bounds of operational security.

- Distributing PVNTMED deployment guidelines.

(2) Prepare unit during deployment by—

- Medical surveillance/documentation.

- Coordinating with PVNTMED personnel prior to and during site selection.

- Ensuring personnel use work/rest cycle during early stages of deployment to become acclimatized to the AO, mission permitting. When the mission permits, personnel should perform heavy work in the early morning or late evening until they are acclimatized to the heat.

- Coordinating with the supply and logistics channel for food, water and ice from US military-approved sources.

- Ensuring water is procured from approved sources and kept cool. When water from approved sources is not available, ensuring that the water is correctly treated before releasing for troop use.

- Ensuring personnel take prophylaxis and pretreatments as prescribed.

- Ensuring that all personnel keep their immunizations up-to-date for the AO.

- Ensuring that all personnel practice good personal hygiene and making provisions for showers and laundry when possible.

(3) Prepare unit for postdeployment by—

- Ensuring soldiers continue taking prescribed prophylaxis for the specified period of time.

- Planning a unit and family gathering upon return to reduce the stress associated with the reunion.

- Monitoring soldiers for signs of illness, ensuring affected soldiers receive prompt medical attention.

- Continuing postdeployment medical surveillance reporting.

b. Commander/Executive Officer/First Sergeant Responsibilities.

(1) Prior to deployment—

- Meet with FST members early and regularly to ensure requirements and guidance are clearly established and understood. Ensure FST kits are well-stocked and in good condition.

- Ensure required field sanitation devices are on hand and operational (see FM 21-10).

- Ensure soldiers receive personal and organizational supplies and equipment packing guidelines for the AO and mission. Emphasize the need for adequate clothing for cold weather operations (to layer) or correct clothing for hot weather conditions (including headgear and sunglasses).

- Reinforce command emphasis regarding prescribed immunizations, prophylaxis, and pretreatments.

- Eliminate rumors by ensuring information is passed down quickly and accurately.

(2) During deployment—

- Ensure, in coordination with the FST, the setup or construction and maintenance of showers, latrines, and handwashing devices; see FM 21-10 and FM 21-10-1 for details on requirements.

- Ensure drinking water supplies are from approved sources and the chlorine residual is maintained at the level established by the command medical authority. When treated water is not available, instruct individuals to treat their water by using iodine tablets, chlorine ampoules, Chlor-Floc™, or by boiling it. REMEMBER: Boiling water does not provide protection from recontamination. See Technical Bulletin, Medical (TB Med) 577, FM 21-10, and FM 21-10-1 for details.

- Ensure all personnel drink adequate amounts of water to prevent dehydration and heat injuries.

- Ensure personnel drink adequate amounts of water in cold weather to prevent dehydration; individuals can become dehydrated, even in cold weather.

- Provide warm water for handwashing and personal hygiene. Male personnel should shave daily to ensure proper fit of the protective mask; female personnel should avoid shaving to minimize infections or skin irritation.

- Provide safe, well-ventilated sleeping, working, and recreational areas.

- Enforce the use of individual PMM among their troops.

- Monitor the heat index/windchill information regularly. Direct personnel to observe work/rest cycles to prevent heat injuries, mission permitting. Direct personnel to use the buddy system during cold weather operations to prevent cold injuries.

- Ensure personnel wear clothing in layers during cold weather operations and remove outer layers during work or exercise. Ensure personnel wear headgear to prevent body heat loss during cold weather.

- Ensure personnel change their socks at frequent intervals to keep their feet dry and prevent heat or cold injuries.

- Ensure personnel keep their sleeves rolled down and their headgear on during hot weather to prevent heat injuries.

- Rotate personnel with outside exposure to extreme heat or cold (guard duty, maintenance, and observation post) to reduce the extreme temperature effects.

- Ensure personnel are trained to use the equipment that they will be using during the mission.

- Ensure personnel use approved solvents to clean unit equipment; not gasoline or other fuels.

- Ensure personnel wear their ballistic and laser protective eyewear.

- Ensure personnel wear safety goggles when operating vehicles or riding in the commander position with the windshield down and when riding in the back of open vehicles.

- Ensure personnel turn off vehicle engines or vent exhaust fumes to the outside when repairing vehicles in enclosed areas.

- Ensure personnel wear hearing protection when working in noise hazard areas.

- Minimize contact with animals, especially rodents. Discourage pests by ensuring proper disposal of trash and elimination of food consumption or storage in living areas.

- Ensure the FST performs its roles and responsibilities. Ensure that they have all required supplies and equipment. Ensure that they are trained in their duties.

- Request PVNTMED support for conditions that are beyond unit capabilities.

(3) Postdeployment—

- Reinforce command emphasis regarding continued use of prophylaxis and medical screening.

- Provide encouragement and support to soldiers during reunions.

- Monitor soldiers for signs of illness, ensuring affected soldiers receive prompt medical attention.

- Ensure FST materials are checked and restocked immediately upon return to the home station.

c. Field Sanitation Team Responsibilities

(1) Prior to deployment—

- Ensure FST materials are complete and operational. Report FST material deficiencies through the chain of command.

- Ensure the unit has the required personal hygiene supplies and equipment.

- Ensure required field sanitation devices are on hand and operational (see FM 21-10).

(2) During deployment—

- Coordinate with unit leaders for personnel to set up or construct showers, latrines, and handwashing devices. The FST is responsible for supervising the setup or construction of devices; they are not responsible for setting up or constructing the devices.

- Ensure handwashing devices are placed close to food service areas and that food handlers wash their hands—

After handling equipment, trash, garbage, and after smoking or using the latrine.

Before handling, preparing, or serving food. Also, after handling one raw food, but before handling clean utensils or another food item.

- Ensure personnel wash their hands and pre-dip field eating utensils before eating.

- Check the unit water supply for adequacy of chlorine residual and add chlorine, if needed. Chlorine residual should be kept at or above the level established by the command medical authority. Ensure individuals have water purification material when departing unit area for extended periods of time.

- Ensure that food is stored properly. Hot food is maintained above 140° Fahrenheit (F) and cold food is maintained below 45° F. Food should be covered except during serving.

- Use the 2-gallon sprayer to control arthropods.

- Ensure latrines are being maintained and cleaned.

- Ensure handwashing devices are being maintained (have soap and water).

- Ensure all trash and waste is controlled from point of origin to time of disposal.

- Train unit personnel in the application of individual PMM.

- Tell the commander when problems appear which leaders, individuals, and the FST cannot correct or control.

- Request PVNTMED support to assist in correcting or controlling problems that are beyond the capabilities of unit personnel.

(3) Postdeployment—

- Immediately restock FST material upon return to home station. Replace equipment or items that were damaged or lost during deployment.

- Prepare after-action report for submission through the chain of command.

- Provide support to unit leaders, as needed, to complete medical surveillance reports.

CHAPTER 3

PREVENTIVE MEDICINE STAFF IN A THEATER OF OPERATIONS

3-1. Staffing

Command emphasis has a critical impact on how well soldiers and their leaders follow the PMM summarized in Chapter 2. To assist the command in ensuring PMM are applied, PVNTMED personnel are assigned to various Army command staffs. The PVNTMED staff advises the command surgeon, represents the commander on PVNTMED matters, and directs his attention to problems worthy of command emphasis. To ensure PVNTMED support is provided when and where it is required, the PVNTMED staff prepares a PVNTMED estimate of the situation and the PVNTMED portion of the operation plan (OPLAN). The estimate and the plan are constantly updated to ensure all actions are taken to best support the mission. See Appendix A for sample formats. The PVNTMED staff conducts and monitors disease surveillance activities and provides recommendations on preventive measures. The staffing indicated at the following command levels is provided as a starting point for establishment of a PVNTMED staff structure to meet mission requirements.

3-2. Army Service Component Command

Army Service Component Command (ASCC) is the major Army headquarters in the theater of operations (TO). This staff publishes PVNTMED policy on behalf of the ASCC commander. It exercises technical control over PVNTMED resources in the TO. It recommends the employment of PVNTMED detachments (sanitation) and PVNTMED detachments (entomology) within the TO in accordance with the medical threat.

3-3. Medical Command

The medical command (MEDCOM) is the major coordinating headquarters for CHS at EAC. This staff publishes PVNTMED policy on behalf of the MEDCOM commander and exercises technical control over PVNTMED resources at EAC. The staff prepares the PVNTMED estimate and the PVNTMED portion of the MEDCOM CHS plan. They monitor and analyze DNBI reporting to ensure timely information is presented to the leadership to counter the DNBI effects on the mission.

3-4. Corps

The corps surgeon s staff is small and may not include PVNTMED personnel. When included, the PVNTMED staff publishes PVNTMED policy on behalf of the corps commander. They incorporate the employment of PVNTMED detachments into the corps operation order (OPORD), as appropriate, and exercise technical control over their operations. They monitor and analyze DNBI reporting to ensure timely information is presented to the leadership to counter the DNBI effects on the mission. They prepare the PVNTMED estimate and the PVNTMED portion of the corps OPLAN. When not included, the corps surgeon relies upon the medical brigade staff for PVNTMED advice (see paragraph 3-5).

3-5. Medical Brigade

The medical brigade is the major coordinating headquarters for CHS in the CZ. The PVNTMED staff publishes PVNTMED policy on behalf of the medical brigade commander. They prepare the PVNTMED portion of the medical brigade CHS plan. They incorporate the employment of PVNTMED detachments into the corps OPORD, as appropriate, and exercise technical control over their operations. They monitor and analyze DNBI reporting to ensure timely information is presented to the leadership to counter the DNBI effects on the mission.

3-6. Medical Group

The medical group is the coordinating headquarters for CHS in a designated part of the CZ. This staff publishes PVNTMED policy on behalf of the medical group commander. The staff prepares the PVNTMED portion of the medical group CHS plan. It coordinates the administrative and logistical support for attached PVNTMED teams or detachments. It also assigns missions to the teams or detachments and exercises technical control over their operations.

NOTE

Under the Medical Reengineering Initiative (MRI) the medical group will not exist.

3-7. Division

The division surgeon is responsible for coordinating CHS in the division area. The division PVNTMED section is assigned to the medical company, main support battalion (see FM 8-10-1). The division PVNTMED staff

Prepares an estimate of the situation to identify the medical threat in the division s AO. Advises the commander on the impact of the medical threat on his forces and provides recommended techniques and procedures to defeat/minimize the medical threat.

Prepares essential PVNTMED information for inclusion in the OPLAN, OPORD, and briefings to ensure awareness of both the medical threat and the corresponding PMM.

Performs sanitary inspections of supported units food service, field site, latrine, bathing, and other facilities for accomplishment of basic sanitation practices.

Provides early warning of any breakdown in basic sanitation within the division s AO to permit time for corrective actions before diseases are transmitted.

Provides early detection and warning of potential disease epidemics or biological warfare (BW) agent employment within the division AO. Early warnings permits implementation of control measures before the disease or BW agent fully manifests itself among our forces. For some BW agents, early warning is required to prevent death from occurring due to exposure to the agent.

Provides limited pest management support to supported units.

Assigns missions to attached PVNTMED teams/detachments. Exercises technical control and coordinates the administrative and logistical support for the teams/detachments.

Monitors field water supplies, to include possible NBC contamination.

Collects water and environmental samples from suspect NBC-contaminated sources. Prepares the samples for submission to the AO supporting medical laboratory for analysis. Prepares a chain of custody document and ensures that the samples are not contaminated from sources outside the sampled site.

3-8. Separate Brigade

The separate brigade surgeon is responsible for coordinating CHS in the separate brigade s AO. The PVNTMED staff performs the same functions as the division PVNTMED staff; see Section II of the unit s TOE for specific PVNTMED staff authorizations. See paragraph 3-7 for duties and responsibilities.

3-9. Armored Cavalry Regiment

The armored cavalry regiment (ACR) surgeon is responsible for coordinating CHS in the ACR AO. The PVNTMED staff performs the same functions as the division PVNTMED staff; see Section II of the unit s TOE for specific PVNTMED staff authorizations. See paragraph 3-7 for duties and responsibilities.

3-10. Special Operations Forces

Preventive medicine personnel are assigned to the medical section of various special operations forces (SOF) units, some SOF support units, and to civil affairs (CA) units. Other Army SOF units, such as Rangers and psychological operations, have no dedicated PVNTMED assets. In SOF units, PVNTMED personnel teach SOF medics to perform PVNTMED services for their team and attached personnel. In SOF support units, PVNTMED personnel perform most of the duties of the division PVNTMED staff on a limited scale and without benefit of assigned PVNTMED teams or detachments. In CA units, assigned PVNTMED personnel assess the PVNTMED capabilities of another country or area but are not responsible for directly providing PVNTMED services to them. Army SOF PVNTMED personnel recommend PMM to the commander or assigned unit surgeon to combat the medical threat. Some Army SOF operations may require PVNTMED resources from conventional assets.

3-11. Area Support Medical Battalion

The PVNTMED section of the area support medical battalion (ASMB) provides PVNTMED support on an area basis (see FM 8-10-24). The PVNTMED staff

Prepares an estimate of the situation to identify the medical threat in the support area.

Incorporates essential information in the OPLAN, OPORD, and briefings to ensure awareness of both the medical threat and the corresponding PMM.

Provides early warning of any breakdown in basic sanitation within the support area to permit time for corrective actions before diseases are transmitted.

Provides limited pest management support to supported units.

Prepares the command health report to document the impact of heat, cold, disease, and other health hazards to units in the support area.

Assigns missions to attached PVNTMED teams/detachments.

Monitors field water supplies, to include possible NBC contamination.

3-12. Engineer Units

A PVNTMED staff is assigned to the facility engineer section in an engineer command. They serve as technical advisors to the command on pest management, environmental health, and sanitation issues. Furthermore, they serve as the liaison between the medical and engineer community.

3-13. Military Police Units

a. Preventive medicine personnel play a vital role in the oversight of health and sanitation standards in displaced persons assembly areas, enemy prisoner(s) of war (EPW) camps, and confinement facilities. To perform this mission, PVNTMED personnel are assigned to military police (MP) EPW detachments, MP EPW battalions, MP EPW brigades, MP EPW commands, and MP confinement battalions.

b. The type and number of PVNTMED personnel assigned is dependent upon the assigned unit s mission. The PVNTMED element can range from a single PVNTMED noncommissioned officer (NCO) to a staff consisting of an environmental science officer, a sanitary engineer, and PVNTMED specialists.

c. They serve as technical advisors to the command on PVNTMED issues associated with the supported population. Since the staff s role is advisory, it has no organic equipment and must coordinate for monitoring/testing support from PVNTMED detachments, ASMB or the Theater Army Medical Laboratory (TAML).

- Monitoring unit waste disposal facilities and techniques for compliance with sanitation standards (US, HN, or overseas environmental baseline guidance document).

- Monitoring unit occupational health programs and advising commanders on the application of occupational health practices and procedures.

- Providing retrograde cargo inspections, as required.

c. Priority to Combat Elements. Tactical dispersion places combat elements largely on their own for PVNTMED self-protection; however, there are opportunities for PVNTMED detachments to provide support in these situations. The detachments must seek out such opportunities and give priority to the combat elements. The detachments can do much for dispersed combat units by ensuring that water supplies and food service operations are safe; this helps to ensure that the force is ready to perform their mission.

d. Decentralized Command and Control. Initially PVNTMED detachments are assigned to an ASMB, medical group, medical brigade, or medical command. As missions for detachments require their employment in specific roles, they may be attached to other medical units. Preventive medicine detachments provide the most responsive support when they work directly with units at the greatest risk. The preferred support relationship is attachment; direct support is the next best; and general support is employed when the situation is too unclear to establish realistic priorities within the AO. The exact command relationship is dependent on mission, enemy, terrain, troops, and time available.

4-3. Operational Concept for the Preventive Medicine Detachment (Sanitation)

This detachment provides PVNTMED support and consultation to minimize the effects of occupational hazards; enteric diseases; arthropod-, food-, and waterborne diseases; and other medical threats on deployed forces including—

- Field sanitation and personal hygiene.

- Sanitary engineering.

- Disease surveillance.

- Occupational health.

- Health promotion.

- Limited entomology.

- Limited pest management.

- Limited ground pesticide spraying.

4-4. Location of the Preventive Medicine Detachment (Sanitation)

Normally, the detachment is deployed to specific areas in the corps or EAC. However, the detachment may be deployed to any area within the AO.

a. When attached to (or in direct support of) units in the corps or EAC, the detachment generally collocates on a temporary basis with the supported unit until the task is done or the mission priorities shift.

b. When attached to a division, the detachment generally collocates with the medical company, forward support battalion or main support battalion, to ensure coordination of support efforts.

c. When deployed in general support, the detachment generally collocates with a medical unit or medical headquarters on a temporary basis with the supported unit until the task is accomplished or the mission priority shifts.

d. The detachment is dependent upon the unit to which it is attached or in support of for the following:

- Food service.
- Religious support.
- Legal services.
- Combat health support.
- Finance services.
- Personnel and administrative support.
- Bath and laundry service.
- Clothing exchange.
- Unit maintenance.
- Communications maintenance.
- Resupply of all classes of supply.

4-5. Function of the Preventive Medicine Detachment (Sanitation)

The detachment provides PVNTMED support at the home station, during field training exercises, during organizational rotations through the combat training centers, and during mobilization. The detachment

conducts surveillance of troop assembly areas to ensure individuals and units are applying PMM to protect themselves. When such measures are inadequate, the detachment offers on-site advice to unit leaders. When requested, the detachment conducts training on PMM for unit members and assists units in training their FSTs. The detachment may function as a single operational activity or may split into a headquarters section and two teams to provide support to a greater number of units. When operating in the split-team configuration, the teams must maintain contact with the detachment headquarters section. In preparation for deployment, during deployment, and postdeployment, the detachment performs the following support functions (many of these functions are also performed during training exercises):

a. Predeployment.

- Obtain medical threat information, including medical intelligence reports, medical threat products, and briefings.

- Brief mobilizing unit commanders, leaders, and soldiers on the medical threat.

- Provide mobilizing unit commanders and leaders predeployment information related to medical screening, immunizations, and prophylaxis and recommended packing lists to counter the medical threat.

- Assist supported unit commanders and leaders to ensure their personnel have the required immunizations, prophylaxis, pretreatment, dental care, and other medical needs completed.

b. During Deployment.

- Coordinate with and support commanders and unit leaders to establish base camps, food service areas, latrines, and showers and to perform inspections of living and work areas.

- Provide guidance to commanders and unit leaders concerning PMM to reduce the incidence of DNBI.

- Assist engineer personnel in water site selection and preparation.

- Assist quartermaster water production personnel in setting up water production site.

- Inspect water sources, supply points, and supplies (including monitoring for NBC contamination), ice plants, food service facilities, and waste disposal facilities for compliance with established sanitation standards. Provide guidance on corrective actions for identified deficiencies.

- Maintain surveillance on endemic and epidemic diseases in the AO. Collect medical data to assist in evaluating conditions affecting the health of the supported military and civilian population. Conduct epidemiological surveillance for endemic diseases to reduce the disease effects on personnel in the area. Conduct investigations on disease outbreaks to determine the source(s) and to recommend control measures.

- Analyze DNBI data to evaluate trends and patterns and disseminate information on such data to the higher headquarters for use in reevaluating CHS priorities and/or effectiveness of PMM.

- Monitor industrial operations (motor pools, maintenance depots, aircraft repair facilities, and other locations with industrial waste/hazards) for compliance with established health standards.

- Monitor supported units noise protection programs.

- Monitor troop housing/sleeping areas for compliance with sanitation standards.

- Monitor supported units eye protection programs (particularly issue and wear of ballistic-laser protective spectacles).

- Provide retrograde cargo inspection support, as required. Issue vessel clearance for entry into destination ports, as authorized.

- Provide entomological consultation and limited pest management.

- Provide continuous training for supported units on field hygiene and sanitation, prevention of DNBI resulting from hot and cold weather, high altitudes, industrial/occupational hazards, and other related conditions.

c. Postdeployment.

- Provide guidance on site/area restoration operations, including removal and disposal of general and hazardous waste. Perform sampling to ensure site/area is restored.

- Continue medical surveillance monitoring and reporting on units redeployed from an AO.

- Provide assistance to supported commanders and leaders to ensure timely follow-up visits for health screening.

- Provide after-action reports and lessons learned.

- Ensure all detachment equipment is serviceable or replacements are ordered for items missing or damaged. The detachment must begin preparing for future deployment.

- Ensure supported unit and detachment personnel continue on prophylaxis or pretreatments for the required time.

4-6. Operational Concept for the Preventive Medicine Detachment (Entomology)

This detachment provides PVNTMED support and consultation to minimize the effects of arthropod-, food-, and waterborne diseases; environmental injuries; enteric diseases; and other health threats on deployed

forces. The detachment provides pest management direct support to units and general support on an area support basis. Pest management support is provided using both aerial spray (see Appendix C) and ground spray equipment. The PVNTMED support and consultation includes—

- Entomology.
- Aerial and ground pesticide spraying.
- Pest management.
- Disease surveillance.
- Field sanitation and personal hygiene.
- Health promotion.
- Occupational health.

4-7. Location of the Preventive Medicine Detachment (Entomology)

The detachment normally deploys near potential pest infestations to identify and apply control measures before the pest can affect the health of US forces. They may be located anywhere within the corps or EAC.

a. When providing direct support to a specific unit in the corps or EAC, the detachment collocates with the supported unit.

b. When attached to a division to provide aerial spray missions, the detachment generally locates near a divisional airfield. The airfield serves as an excellent source of real-time information on weather conditions, the availability of rotary-wing aircraft, and the tactical situation. All three elements are essential when conducting aerial spray operations. Proximity to the airfield also minimizes nonproductive shuttle time for the aircraft concerned. Since these airfields are located in the division support areas, the detachment can also meet its surveillance and ground spray mission responsibilities with minimal travel. All detachment activities conducted in the division area are coordinated with the PVNTMED section of the main support medical company. This coordination ensures continuity of support to the divisional units.

c. Attachment and direct support missions are usually for limited periods of time. Therefore, the detachment relocates frequently as problems are resolved and the medical threat changes.

d. When providing general support to units in the corps or EAC, the detachment generally collocates with another medical unit on a temporary basis with the supported unit until the task is done or the mission priorities shift. The precise location is dependent upon time required for travel, type of terrain, and the medical threat.

e. The detachment is dependent upon the unit to which it is attached or in support of for the following:

- Food service.
- Religious support.
- Legal services.
- Combat health support.
- Finance services.
- Personnel and administrative support.
- Bath and laundry service.
- Clothing exchange.
- Unit maintenance.
- Communications maintenance.
- Resupply of all classes of supply.

4-8. Function of the Preventive Medicine Detachment (Entomology)

The detachment employs a combination of aerial and ground spray equipment to suppress arthropods. It applies measures to control rodents. The detachment may function as a single operational activity or may split into a headquarters section and two teams to provide support to a greater number of units. When the two teams are operating in the split team configuration, they must maintain contact with the detachment headquarters section. In preparation for deployment, during deployment, and postdeployment, the detachment performs the following support functions (many of these functions are also performed during training exercises):

a. Predeployment.

- Obtain medical threat information, including medical intelligence reports, medical surveillance products, and briefings. Provide commanders and leaders predeployment information related to medical screening, immunizations, and prophylaxis and recommend packing lists to counter the medical threat.
- Brief supported unit commanders, leaders, and soldiers on the medical threat.

- Assist supported unit commanders and leaders to ensure that their personnel have required immunizations, prophylaxis, pretreatment, dental care, and other medical needs completed.

b. During Deployment.

- Conduct entomological surveillance to ensure early warning of disease-vectoring and nuisance pest populations.

- Provide technical consultation on entomological matters.

- Conduct pest management operations, to include aerial pesticide spraying.

- Perform pesticide-resistance tests on arthropods in the AO to ensure the efficacy of the pest control procedures.

- Provide retrograde cargo inspection support, as required. Issue vessel clearance for entry into destination ports, as authorized.

- Provide limited consultation on sanitary engineering.

- Conduct food sanitation, water supply, and field sanitation inspections.

- Provide DNBI and occupational health/industrial hygiene consultation.

c. Postdeployment.

- Provide guidance on site/area restoration operations, including removal and disposal of general and hazardous waste. Perform sampling to ensure site/area is restored.

- Continue medical surveillance monitoring and reporting on units redeployed from an AO.

- Provide assistance to supported commanders and leaders to ensure timely follow-up visits for health screening.

- Provide after-action reports and lessons learned.

- Ensure all detachment equipment is serviceable or that replacements are ordered for items missing or damaged. The detachment must begin preparing for future deployment.

- Ensure supported unit and detachment personnel continue their prophylaxis or pretreatments for the required time.

4-9. Basis of Allocation

a. The basis of allocation for the PVNTMED detachment (sanitation) is one per 28,000 personnel and one per 50,000 prisoners of war. Rule of thumb: Two per division supported.

b. The basis of allocation for the PVNTMED detachment (entomology) is one per 66,000 personnel and one per 100,000 prisoners of war. Rule of thumb: One per division supported.

4-10. Mobility

The strategic deployability for each PVNTMED detachment is 100 percent mobile. See Appendix H for deployment data.

4-11. Standing Operating Procedures, Checklists, and Movement Plans

Every unit must have SOPs, checklists, and movement plans prepared. An SOP must be prepared for many activities in a unit; for example, an SOP for classified document security is prepared to ensure that everyone handling classified documents understands the commander's intent and requirements. The SOP specifies who has the authority to receive, review, safeguard, and destroy these documents. Many activities related to unit movement must be conducted far in advance of the actual movement date; these activities are controlled through SOPs and checklists. As a specific action is accomplished, it can be recorded on a checklist, thus ensuring that others are aware that the action is completed. The use of SOPs and checklists also ensure that the unit is prepared for its designated support mission. The SOPs and checklists let members of the unit know what needs to be done and when, where, and how it must be done. All TOE equipment must be on hand and in a serviceable condition. Special equipment, organizational clothing, and required repair parts must be on hand. Essential common table of allowances (CTA) items must be on hand and in a serviceable condition. Personnel records, immunizations, and family support plans must be up to date. Appendix A provides sample formats for the PVNTMED estimate and plan. Appendix D provides a sample commander's checklist for mobilization. Appendix E provides information on conducting an entomological survey. Appendix F provides a sample checklist for conducting a PVNTMED site survey. Appendix G provides a training procedures guide.

Section II. TABLES OF DISTRIBUTION AND ALLOWANCES ACTIVITIES

4-12. General

The mission of PVNTMED TDA activities is to prepare and update the medical threat database, publicize the medical threat, and stimulate the employment of PMM. The TDA activities provide reinforcing PVNTMED services to eliminate or reduce the medical threat, whenever possible. The PVNTMED TDA activities are located within the sustaining base and in locations outside the continental United States (CONUS). The TDA activities provide day-to-day PVNTMED support to military installations. They may also provide PVNTMED support to US Army Reserve and National Guard units on an area support basis.

During the unit's preparation for mobilization and during mobilization, the TDA activities provide support to the alerted units in the form of training; assistance in obtaining a list of PVNTMED supplies and equipment required in the unit's assigned AO; identification of the medical threat in the unit's assigned AO; and assurance that the unit's personnel receive their required immunizations, prophylaxis, and pretreatments for their mobilization AO. Some TDA activities continue to support the units during their deployment by having teams in the AO for specific PVNTMED surveillance activities. The CHPPM provides day-to-day PVNTMED support on a worldwide basis. The CHPPM has regional offices that provide PVNTMED support on an area basis. Other TDA organizations also provide PVNTMED support on a daily basis; they are discussed later in the chapter.

4-13. Center for Health Promotion and Preventive Medicine

The CHPPM provides technical support teams for various PVNTMED missions, including—

- Detailed laboratory analysis of environmental (air, soil, water) samples collected by PVNTMED detachments or other teams. In some cases, CHPPM deploys its own specialized teams (both military and civilian) to perform highly technical field sampling missions.

- Expertise for the analysis of threats posed by low-level toxic industrial chemicals and radiation, arthropodborne disease threats, and occupational hazards.

4-14. United States Army Medical Research Institute for Chemical Defense

The US Army Medical Research Institute for Chemical Defense provides technical teams to assist medical commanders and leaders in preparing units to provide CHS in a chemical environment. The technical teams provide on-site consultation on medical management of chemical agent casualties and training for health care providers. They perform research on the medical effects of chemical warfare agents on personnel. They provide technical data for use in protecting US forces from the effects of chemical warfare agents.

4-15. United States Army Research Institute for Environmental Medicine

The US Army Research Institute for Environmental Medicine (a TDA organization) provides research on the medical effects of the environment (heat, cold, and high altitude) on personnel. They provide technical guidance to commanders and leaders on the effects of heat, cold, altitude, and adequate nutrition and recommend measures to protect personnel. They also perform research on the effects of physical training and physical performance and interventions to eliminate musculoskeletal injury, especially with respect to carrying load-bearing equipment.

4-16. United States Army Medical Research Institute of Infectious Diseases

The US Army Medical Research Institute of Infectious Diseases (USAMRIID) (a TDA organization) conducts research to develop strategies, products, information, procedures, and training programs for

medical defense against BW threats and infectious diseases. The USAMRIID plays a key role in national defense and in infectious disease research as the only biological containment laboratory in the DOD for the study of hazardous diseases. Medical products developed to protect military personnel against biological attack or against endemic infectious diseases include vaccines, drugs, diagnostic tests, and medical management procedures. Medical and scientific subject matter experts at USAMRIID provide technical guidance to commanders and senior leaders on prevention and treatment of hazardous diseases and management of BW casualties. In addition, the institute serves as the DOD reference center for identification of biological agents from clinical specimens and other sources.

4-17. Walter Reed Army Institute of Research

a. The Walter Reed Army Institute of Research (WRAIR) is the center for infectious disease surveillance. The WRAIR conducts research in naturally occurring infectious diseases, to include malaria and other vectorborne diseases; diarrheal diseases; bacterial diseases, including meningitis; and viral diseases, including hepatitis and human immunodeficiency virus (HIV).

b. The WRAIR also conducts research in combat casualty care; neuropsychiatry, including performance enhancement and operational stress; laser injury and treatment; drug development; medical; chemical and biological defense; and PVNTMED.

c. The WRAIR satellite laboratories in Kenya, Brazil, and Thailand emphasize infectious disease research, while the satellite laboratory in Germany emphasizes the basic and biomedical aspects of human adaptation to stress.

4-18. Preventive Medicine Sections at Medical Department Activities or Regional Medical Commands

The PVNTMED sections of medical department activities and regional medical commands provide day-to-day PVNTMED support for the installation and supported units. They perform sanitary inspections of food service facilities, waste disposal facilities, sewage treatment plants, industrial complexes, water plants, troop housing, family housing (at the request of the installation commander or the family housing manager), field training areas, ice plants, and other activities, as directed. They provide consultation support for local Reserve and National Guard units, as directed. During mobilization, they provide assistance to mobilizing units in preparing their PVNTMED plan, determining immunization/prophylaxis requirements, training unit FSTs, and obtaining essential field sanitation supplies and equipment. They also provide assistance to local health authorities and provide local disaster relief assistance as directed by the command.

4-19. Armed Forces Medical Intelligence Center

The AFMIC is the sole producer of medical scientific and technical intelligence and general medical intelligence for the DOD (see FM 8-10-8 for a comprehensive discussion on AFMIC). It responds to requests from the armed forces for medical intelligence. The mission and functions of AFMIC are to—

a. Produce required foreign scientific and technical intelligence (S&TI) and general medical intelligence.

b. Produce foreign BW intelligence studies and reports on the capabilities of foreign countries to acquire, develop, produce, or employ any agent of biological origin as a weapon.

c. Produce intelligence studies on the medical aspects of foreign chemical warfare capabilities.

d. Organize and execute the medical aspects of the DOD Foreign Medical Materiel Exploitation Program (FMMEP).

e. Coordinate the acquisition, exploitation, and disposition of foreign medical materiel obtained in support of DOD FMMEP.

f. Plan, coordinate, and provide intelligence studies in accordance with DOD S&TI production policies and procedures.

g. Prepare medical intelligence funding and manpower requirements for submission to the DOD general defense intelligence program.

h. Manage and maintain the medical intelligence database and the medical portion of the DOD S&TI database.

i. Provide quick responses on foreign medical intelligence to DOD elements and other government agencies as required.

j. Assist in debriefing personnel on matters related to medical intelligence.

k. Sponsor medical intelligence briefings and training for selected Reserve and active military units and individual mobilization designees, as required.

l. Maintain coordination and liaison with members of the technical intelligence community on matters involving medical intelligence.

m. Provide a medical intelligence advisor to the military services.

n. Transmit a weekly wire of current medical intelligence developments.

CHAPTER 5

PREVENTIVE MEDICINE DETACHMENT MOBILIZATION

5-1. General

The PVNTMED commander is responsible for the readiness of his detachment for deployment. He must be prepared to deploy the unit from CONUS to an overseas area, from an overseas area to the CONUS, or between major commands. This chapter contains guidance for the preparation and execution of unit movement plans. When preparing a detailed movement plan, refer to AR 55-113, AR 220-10, FM 55-65, FM 100-17, and all pertinent local directives.

5-2. Planning

Planning for unit movement is continuous. It begins with the unit's first day of activation, continues during preparation for the move, and goes on until the move is completed. The commander reviews existing movement plans, SOPs, and loading plans for completeness and correctness. If the unit is newly activated or has no developed plans, the commander MUST prepare movement plans, including SOPs and loading plans. Specific actions are detailed in the planning checklist at Appendix D.

5-3. Warning Order

The first indication that a unit will move may be the receipt of a warning order establishing the personnel shipment readiness data (PSRD). Receipt of this order prompts several actions. The unit begins preliminary preparation for the move. The major Army commander gaining the unit furnishes preparation for overseas movement information to the losing major Army commander. The losing commander distributes required planning and equipment information to the affected units. Preparation for overseas movement information normally includes—

- The unit's new mailing address.
- A listing of authorized (TOE and CTA) items that need not be shipped with the unit.
- Additional items that the overseas commander desires to have shipped with the unit.
- Special clothing for the deployment area.
- Authorized stockage lists.
- Authorized prescribed load list.
- Expendable supply requirements.

Additional actions to be taken by a unit commander on receipt of a warning order are shown in Appendix D.

5-4. Movement Directive and Movement Order

The movement directive is the authority for unit movement and is the basis for actions by all agencies concerned with the move. It is usually issued 90 days before the deploying unit's PSRD. Based on this directive, the installation or activity issues a movement order for the deploying unit. This order implements the movement directive and provides additional instructions needed to prepare the unit for movement. Any TOE modification is included in the movement order, along with a listing of equipment to be issued at the port of embarkation or in country, if applicable. Actions required on receipt of the movement order are outlined in Appendix D.

5-5. Unit Movement Plans

These plans contain up-to-date logistical data summarizing transportation requirements, priorities, and limitations that affect the unit's movement. Movement may be by highway, water, rail, or air. Contents of a movement plan may vary with the unit's contingency status, guidance from higher headquarters, and the effort the unit commander puts into preparing the plan. As a minimum, the unit movement plan should contain the following elements:

a. Detailed listing of personal baggage, organizational equipment, expendable supplies, and nonexpendable supplies.

b. The organization for movement, including the procedure for movement of the staff and advance party, if applicable.

c. Procedures to be followed at home station, en route, and at destination.

d. Unit load plans (see paragraph 5-7).

5-6. Standing Operating Procedures for Unit Move

Details relating to a unit move are included in unit SOPs. These SOPs may include such things as duties of an advance party; convoy security; and deployment procedures at destination. Although minor changes in SOPs may be required, basic procedures should vary little from movement to movement. Preparation of an SOP covering the details of unit movements relieves the commander of having to repeatedly plan and issue directives for operations that follow established patterns.

5-7. Unit Load Plans

Unit load plans are documents that present detailed instructions for hauling all unit personnel and equipment. To ensure effective and expeditious movement of unit personnel and equipment, load plans should be kept current. Load plans are based on TOE-authorized personnel (with their personal baggage), equipment,

vehicle onboard equipment (including camouflage netting), and CTA items. Load plans are prepared and maintained in each unit in anticipation of movement by the various transportation modes.

a. Unit Load Inventory and Checklist. This is prepared for each category of equipment, such as vehicles, CTA items, and PVNTMED medical equipment sets. It is a numerical list of all containers and vehicles to be shipped.

b. Unit Vehicle Load Plan. The vehicle load plan is used to move unit equipment, personnel, and supplies with organic transportation. It lists the personnel, equipment, and supplies to be transported in organic vehicles. Common table of allowances equipment is limited to that which is essential for mission completion. Applicable CTAs that may be used are 8-100; 50-900; 50-909; and 50-970.

c. Unit Train Load Plan. This plan is used when the unit moves by rail. It shows the proposed distribution of personnel and equipment based on the rail cars tentatively available for the unit. It may require adjustments when an actual move is made and specific rail cars are assigned.

d. Unit Air Load Plan. This plan is used when the unit moves by air. A separate plan for each type of aircraft must be made. It covers the type of cargo to be loaded in each aircraft, loading start time, estimated time required to load, special equipment requirements, and other data pertaining to the specific aircraft.

e. Unit Estimate of Aircraft Required. This is used to determine the number and type of aircraft required to airlift a unit's personnel and equipment.

f. Unit Vessel Loading Plan. This plan is used when the unit moves by watercraft or ship. (See Appendix H.)

CHAPTER 6

PREVENTIVE MEDICINE SERVICES IN STABILITY OPERATIONS AND SUPPORT OPERATIONS

6-1. General

The role of PVNTMED in stability operations and support operations encompasses a wide range of support activities. Preventive medicine personnel will have much closer contact with the local populace. In most stability operations and support operations, the primary mission of PVNTMED is to support US, allied, and coalition forces; they may provide limited support to HN civilians. However, in domestic support, the PVNTMED mission is to provide assistance to civilians affected by disaster. Preventive medicine is not the lead agency; any PVNTMED support provided to civilians must be preapproved by DA, the ASCC commander, or the task force commander. The PVNTMED staff may be from TDA or TOE organizations. Personnel assigned to TDA activities will find their role greatly increased in support of many stability operations and support operations. Personnel assigned to TDA organizations will be called upon to assist units during their preparation for stability operations and support operations, and in some situations, to continue this support during the mission. During preparation for stability operations and support operations, supported units will require PVNTMED support as if they were preparing for a war; however, they may have to provide for themselves or rely on the HN for housing, water supplies, and waste disposal support. Therefore, PVNTMED personnel must be actively involved in all phases of their preparation for the mission and during the mission. See FM 8-42 for detailed information on CHS in stability operations and support operations.

6-2. Domestic Support

Domestic support operations are normally conducted under the authority of the Federal Emergency Management Agency (FEMA). At the request of FEMA, the DOD may direct Army units and personnel (including PVNTMED) to assist in the operation. When deployed in support of such missions, PVNTMED personnel will **NOT** assume the primary role of providing public health support. Instead, they will assist FEMA and local or state health authorities as directed by the Army command and control (C2) organization.

a. Initial Actions. Upon arrival in the disaster area, PVNTMED personnel establish contact with the Army C2 organization for instructions on their mission. After receiving their initial instructions, PVNTMED personnel should determine—

- Where they are to be headquartered.
- What FEMA and the health authorities have identified as the medical threat in relationship to the disaster. Based upon the identified medical threat, PVNTMED personnel establish priorities for PVNTMED support.

b. Information Flow. Preventive medicine personnel establish procedures for acquiring early access to local information of PVNTMED concern. The information flow at a minimum should be—

- From the PVNTMED support element and staff through the chain of command to FEMA and the health authorities.

- From FEMA and the health authorities down through the chain of command to the PVNTMED staff.

- Between other supporting agencies and the PVNTMED staff.

- Information pertaining to engineering support, for example, should also be provided to the PVNTMED staff. This information is important in the PVNTMED decision-making process, especially in determining the best recommendations for provision of sanitation facilities, safe water supplies, and food service sources. EXAMPLE: The supporting engineers may know that the local water supply system is functioning in one area of the disaster area, but not in other areas. This information will assist PVNTMED personnel in making recommendations on how to provide safe water in all areas. If water is safe in one area, then transport of this water to unsafe areas can be employed, rather than having to rely on trying to disinfect water at the user level.

c. Life Support. Life support services are not a direct responsibility of PVNTMED personnel. However, such services are of considerable interest because of their impact on the health of the disrupted community. Preventive medicine personnel can assist local authorities in these services by providing technical advice on—

- The adequacy of expedient shelters such as schools, churches, warehouses, and other structures which survived the devastation. If tent villages are necessary, they provide advice on the configuration of the communities and the adequacy of available tentage.

- The adequacy of food service facilities, water supplies, waste disposal, personal hygiene, and laundry facilities.

d. Emergency Supplies. Preventive medicine personnel assist with the identification of emergency supplies needed by the disrupted community. The supplies may include—

- Clothing and blankets.

- Cooking utensils.

- Supplies to treat drinking water. If bulk chlorine is provided, measuring devices and instructions on its use must also be included.

- Chemicals for use in improvised portable toilets. Chemical toilets may be constructed by using scrap lumber, canvas or tarpaulins, and buckets. The chemicals are added to the buckets for odor control and to begin waste decomposition.

e. Water. Technical advice on the adequacy of the water supply to the disrupted community, including advice on cleaning or rejecting contaminated wells and water distribution systems, is provided by PVNTMED personnel. Attention is focused on—

- Restoration of wells and water distribution systems. Even if only limited portions of a distribution system are restored, the restored system can make providing a safe water supply much easier.

- Acquisition of other sources until restoration efforts can be completed.
- Transportation of water from those sources.
- Management of distribution points.
- Quality of the water as it impacts on the individual consumer.

f. Food. Preventive medicine personnel provide technical advice concerning the adequacy of food supplies for the disrupted community. Attention is focused on sanitation, to include storage, preparation, and distribution of available food. They help local authorities evaluate food stocks (when veterinary personnel are not available) in the disrupted area with emphasis on salvage, when possible.

6-3. Protection Against Epidemic Diseases

Disaster situations often overwhelm the capabilities of local public health agencies. Local public health agencies may not be fully aware of diseases being introduced into their area by refugees or multinational forces. The PVNTMED mission may include assisting public health officials in identifying diseases and recommending or providing measures to reduce the incidence of disease. Ways in which PVNTMED personnel can assist may include—

a. Suppression of Arthropod Vectors. They provide technical advice concerning the suppression of mosquitoes, flies, lice, other arthropods, animals, and rodents. With the concurrence of local authorities, they may conduct limited pest management operations to reinforce local efforts.

b. Investigation of Disease Outbreaks. Preventive medicine personnel assist local authorities by investigating reported disease outbreaks. Their findings are used to dispel rumors or to provide early warning for local action if the threat is confirmed.

c. Immunizations and Prophylaxis. Although mass immunization operations are seldom warranted, PVNTMED personnel must be prepared to assist local health authorities if called upon to do so. Provisions for prophylaxis, such as malaria pills, may be required to counter some diseases.

d. Control of Human Waste. Lack of human waste control can lead to a number of disease outbreaks. Simple control procedures can prevent their occurrence. Improvised waste disposal devices can be prepared for use until standard sanitary facilities can be restored. Preventive medicine personnel can provide advice on the construction and maintenance of these devices. The use of chemical toilets or burnout latrines can greatly reduce the health hazard from inadequate control of human waste.

e. Recovery from Disruption. Return to normal or near-normal living conditions is the central motivation of all individuals who are displaced by a disaster. Before individuals are allowed to return home, several important tasks must be considered. Preventive medicine personnel provide technical advice on the—

- Clearance of debris from drainage structures. Badly damaged homes represent a major debris removal problem, but the basis for condemnation is structural (not health) and such decisions are left to local authorities.

- Collection and disposal of animal carcasses.
- Collection and disposal of food that has been condemned by local authority.

f. Preparation of Homes for Reoccupancy. Preventive medicine personnel provide technical advice on cleaning, disinfecting, and spraying homes that were affected by the disaster. Contact surfaces (such as tabletops, countertops, and cooking and eating utensils) are of primary concern because of their potential for vectoring enteric diseases carried by water. Also, provisions are made for refrigeration units or ice chests with ice to protect perishable food from extended exposure to temperatures at which organisms can grow. Perishable food should be stored at temperatures below 45°F.

6-4. Humanitarian Assistance

During humanitarian assistance operations, PVNTMED personnel may provide assistance in restoring public health services. The assistance may include, but not be limited to, the areas of food sanitation, entomology, epidemiology, occupational health, housing, water treatment, and waste disposal. Preventive medicine personnel will provide this assistance as directed by the lead agency for the operation. They will not volunteer to provide any services outside of those areas to which they are assigned a mission. Any assistance provided must be coordinated with local public health officials. This coordination will help the local public health officials maintain the services upon the departure of PVNTMED personnel. The PVNTMED personnel should not perform the actual activities of restoring public health services; their role should be to provide guidance to the public health officials and the local populace. This does not mean that in the absence of individuals to perform the restoration activities that PVNTMED personnel cannot start the restoration process.

6-5. Peacekeeping/Peace Enforcement

As in war, PVNTMED support during peacekeeping and peace enforcement operations will comprise all activities with an increased surveillance for occupational exposure to numerous industrial chemical, biological, and radiological hazards. EXAMPLE: Troops may be housed near steel foundries; these facilities may have high levels of components such as lead, chromium, zinc, cyanides, and radiation. The exposure levels may be so low that limited immediate effects do not manifest in the troops; however, the long-term effects could be serious. Preventive medicine personnel must closely monitor areas habitually occupied by US forces for such exposures. Local water supplies may have to be used by US forces; these supplies may not meet US standards and will require supplemental chlorination before use.

6-6. Environmental Health and Environment Surveillance

Preventive medicine personnel conducting environmental health surveillance in stability operations and support operations may use several techniques to verify the presence or absence of industrial chemicals in the environment. In Bosnia, the M93 Series NBC Reconnaissance Vehicle System (FOX) was used to collect air samples for industrial waste vapor surveillance. When used for this mission, the FOX employed the industrial surveillance equipment; in its chemical agent surveillance mode, it does not have the correct sample collecting supplies.

CHAPTER 7

PREVENTIVE MEDICINE IN SUPPORT OF CIVIL-MILITARY OPERATIONS

7-1. Mission

Winning indigenous population support is an important facet of military operations. Civil-military operations are an important part of that effort. As part of CMO, PVNTMED can make a significant contribution to this support. Preventive medicine support may be provided by personnel organic to the CMO organization or may be provided by TDA and TOE personnel and units.

7-2. Command Approval

Any PVNTMED participation in CMO is first coordinated with the C2 authority, then with the agencies designated by that headquarters to conduct the project. Command approval is required when substantial resources are involved. Command approval is also important from the standpoint of HN agreements, which could be violated by well-intentioned efforts.

7-3. Purpose

The dominant theme in the design of a CMO project is local sufficiency. The community must have the aptitude and resources to sustain the project after US forces leave, or the whole effort is for naught. Other constraints include local customs and taboos; some are so grounded in culture that to challenge them will result in a loss of credibility rather than winning support.

7-4. Preventive Medicine Projects

There are a variety of projects that PVNTMED elements can undertake to win the support of the local populace. However, all projects undertaken should be designed to make lasting improvements in the community s overall health. Emphasis is placed on training the community in self-sufficiency to conduct such services. If equipment or materiel is involved, the training must include procedures for procuring the equipment or materiel and repair parts; repair parts must be readily available in the region. Equipment from a distant country will be of little value to a community unless the repair parts are also provided; in many instances, the high cost for repair parts will create problems that the community cannot handle. Many communities are so poor that they cannot afford even the basic items. Projects that may be undertaken include actions or activities such as

Health screening to identify endemic diseases with recommendations on how the people can counter the effects of the disease.

Health education on how the people can reduce disease and illness risk.

Immunization programs to reduce the spread of diseases.

Projects to upgrade or improve the local water supply and waste disposal facilities. If the improvement to the water supply system includes installation of power-driven pumps, training must include maintenance and repair parts procurement procedures (if repair parts are not provided with the pump). Installing a pump system without training the people on maintaining the pump, including repair parts procurement, will not be an improvement; it will be an additional problem.

7-5. Health Screenings

When conducting health screenings, PVNTMED personnel must ensure that the local population understands actions taken are to aid in improving their health and well-being. Preventive medicine personnel

Collect only those human specimens necessary to evaluate suspect diseases in the area such as malaria, hepatitis, dysentery, and intestinal parasites.

Evaluate the prevalence of skin diseases and body lice among the population.

Evaluate the nutritional status of the population, to include daily dietary intake of vitamins, minerals, fats, proteins, fibers, and carbohydrates.

Provide guidance to the local population on how they may improve their health by applying basic procedures to prevent disease and how to improve their nutritional intake with the available food sources.

7-6. Health Education

Health education must be taught at the educational level of the population. All classes should be short in duration; interactive, hands-on, if possible; and directed toward achievable goals. Simple procedures, such as washing their hands after using the bathroom or before eating, are much more effective than trying to explain the process by which diseases are spread. Explain that burying human waste can prevent flies from spreading diseases to food, rather than how flies pick up disease organisms and deposit them on the food.

CHAPTER 8

PREVENTIVE MEDICINE REPORTS

8-1. General

Reports are documents provided to leaders and commanders that record PVNTMED support. The reports give immediate feedback to leadership on medical threat findings; the medical threat may adversely affect a unit s ability to perform its assigned mission. Included in the reports are recommendations for the commander to use in countering the medical threat. Reports also serve as a historical account of medical threat effects on a force during the conduct of operations.

8-2. Medical Statistical Report

The occurrence of certain diseases of man and animals must be reported to higher headquarters. Army Regulation 40-5 lists diseases of interest and the reporting requirements, including frequency of reporting. The frequency for statistical reports may be on a daily, weekly, monthly, quarterly, or annual basis.

8-3. Sanitary Inspection Report

The findings of PVNTMED inspections, such as inspections of food service facilities, troop billeting/bivouac areas, and field water supplies are documented on inspection reports. These reports are provided to the immediate supervisor or commander for their use in ensuring corrective actions are taken.

8-4. Epidemiological Investigation/Surveillance Report

A report must be prepared for each epidemiological investigation or surveillance activity. At a minimum, the report should include the following:

Suspect disease.

Number of cases (individuals).

Age of persons affected.

Nationality of involved individuals.

Locality (area/region) of the occurrence.

Findings.

Recommendations to control/prevent the spread of the disease.

8-5. Occupational Health Report

Occupational health surveys are conducted on motor pools and other industrial-type operations. Findings of these surveys are documented in an occupational health report. This report is provided to the immediate supervisor or commander. When conditions merit reporting to higher command authorities, then the results of the survey are also reported to the employee and a copy of the report is filed in the employee s medical record.

8-6. Annual Historical Report

a. Annual reports of administrative, professional, and operational activities of the AMEDD are the basic files of the Historical Unit, AMEDD. They are used as reference and source material for historical programs, AMEDD missions, and teaching material. Particular attention should be given to personnel rosters, TOE, unit participation in support of battle, and movement orders.

b. All PVNTMED detachments prepare the report in accordance with AR 40-226. The report is submitted for each calendar year. Reports from small medical units, such as detachments and teams that are functionally integrated with larger medical units, may be included with the larger unit s report. The title page of the consolidated report must list each unit included in the report. The information reported from each small medical unit must be attached to an identified tab or appendix of the basic report. Upon deactivation, agencies prepare and forward final reports covering the calendar year of deactivation.

CHAPTER 9

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9-1. Introduction

Medical surveillance (MEDSURV) is the ongoing, systematic collection, analysis, and interpretation of data essential to the planning, implementation, and evaluation of military force health. The determination of unit-specific rates of illness and injuries of public health significance is the foundation of the MEDSURV program. Medical surveillance is closely integrated with the timely dissemination of these data to those responsible for prevention and control of DNBI. Implementing guidance for DOD is found in DOD Instruction 6490.3. The establishment of uniform and standardized health surveillance and readiness procedures for all deployments are listed in Chairman of the Joint Chiefs of Staff (CJCS) Memorandum MCM-251-98. Deployment mental health screening will be addressed in separate policy memorandums.

9-2. Applicability and Scope

The DOD Instruction mentioned above applies to the Office of the Secretary of Defense, the military departments, the CJCS, the combatant commands, the Defense agencies and the DOD field activities. The term *military service* refers to the Army, the Navy, the Air Force, and the Marine Corps. When the Coast Guard is operating as a military service in the Navy, it will be included in the military MEDSURV system.

a. Preventive medicine assets, both TOE and garrison, monitor DNBI in the force in order to identify and reduce incidents and to identify and counter medical threats.

b. Medical surveillance teams provide timely reports to commanders, medical clinicians, planners, and others who require this information in a timely manner. This information and analysis provides decision support to commanders, so that the commanders have an understanding of the potential combat effectiveness of their units before, during and after operational deployments.

c. Medical surveillance forms a basis for medical resource allocations, refines knowledge of the medical threat, and permits continual assessment of the effectiveness of measures used to prevent and control DNBI.

d. The term *medical surveillance* as used here is different than its meaning in occupational medicine; *occupational medical surveillance* is the monitoring applied to individual workers based on actual or presumed workplace exposures.

9-3. Mission Objective of Medical Surveillance

The mission objective of the AMEDD, *to conserve the fighting strength,* mirrors PVNTMED s mission objective for MEDSURV: *to protect the health of the force*. Together they improve soldier performance and unit effectiveness, minimizing the demand for a more logistically intensive health restoration capability. The PVNTMED functions include assessing the medical threat, identifying and recommending PMM, and conducting surveillance. The traditional yardstick of deployed force health is the DNBI rate. The primary

mission objective is to deploy a healthy force having a DNBI rate equal to, or less than, the average DNBI rate for the nondeployed force.

a. Predeployment PVNTMED assets determine the baseline readiness of the force by conducting predeployment health screening assessments. These assessments are documented on standardized forms for inclusion in individual medical records.

b. Once in theater, the PVNTMED s mission objective is to sustain the health of the force in the field. Soldier performance equals soldier health and fitness being sustained for the duration of the deployment. The medical threat is not limited to infectious disease, nor is the medical threat any less dynamic than the enemy threat. Preventive medicine assets provide troop commanders with appropriate information on troop health status, illness and disease threat analyses, and redeployment health concerns.

c. Finally, during the postdeployment phase of operations, PVNTMED s MEDSURV will continuously monitor the health status of the force just as judiciously as organizational equipment and training status are monitored. As was done during predeployment activities, a postdeployment health assessment will be conducted. Together, these health assessments

(1) Define the rates and trends of DNBI in the force.

(2) Provide commanders an accurate description of the health status of their force.

(3) Validate new or continuing preventive and curative medicine needs for the force.

(4) Contribute to the ongoing determination of the medical threat.

9-4. Principles of Medical Surveillance

Several controlling principles govern MEDSURV. These state that MEDSURV is

Useful. The information collected and reported is directly applicable to the commander s critical information requirements, prevention of DNBI, and to ongoing appreciation of the medical threat in the AO. The MEDSURV information is always immediately applied to PVNTMED activities. It prompts immediate corrective action for identified DNBI, but more importantly, it is applied to adjust PMM. For example, a dramatic increase in the rate of acute diarrhea among the troops in one or several units may be a sign of contaminated food or water in the affected units, warranting additional investigation. An increase in the rate of nonbattle injuries in a unit will prompt an investigation that results in reinforcement of control measures and proper use of protective equipment. Thus, MEDSURV contributes to prevention and serves as a force multiplier.

Systematic. Medical surveillance is executed throughout the force by the same methods. Transmission of the information collected is uniform in method and schedule. Reporting of the interpreted information is clear, predictable, and coordinated with OPLANs and concerns.

Timely. Information collected loses value rapidly. It must be transmitted up the chain of command and medical chains efficiently. Integrating reports must be similarly disseminated back down the chain of command.

Tailorable. Medical surveillance can be focused to reflect the intensity of specific elements of the medical threat to the force. For example, dermatological conditions may be highlighted in data collected within the force deployed to a location with a high prevalence of skin disease or continuous exposure to high humidity or water that threatens combat effectiveness.

Interconnected. Medical surveillance exploits the communications and network capabilities of the theater and the sustaining base to rapidly disseminate its data and reporting results throughout the CHS system. Using analog and digital media, and employing legacy and emerging systems, MEDSURV results are communicated and applied to PMM selection and employment at all levels of the deployed force.

Simple. The flow of information is direct and clear. The elements of information collected are sparse and concise.

Acceptable. The burden on the soldier, leader, and unit is light. The tasks of MEDSURV are embedded in the tasks of the CHS system. The reports generated support the mission and planning needs of the receivers.

Sensitive, Predictive, and Representative. The means of collection must be sensitive to ensure elements of the DNBI are not overlooked. The information gathering structure/process must allow for rapid interpretations of data to provide the commander with timely and factual information on DNBI prevention.

9-5. Responsibilities for Medical Surveillance

The responsibilities for MEDSURV are shared by the individual soldier, unit leaders, senior commanders, and the CHS system.

a. Unit leaders and commanders

Inform troops of illness, injury, and disease threats, the risks associated with those threats, and the countermeasures in place, or to be used, to minimize those risks while deployed.

Ensure compliance with PVNTMED guidance.

Promote combat stress control programs and policies.

Ensure completion of pre- and postdeployment health assessments.

b. Senior commanders

Support MEDSURV within their units and by their CHS personnel with appropriate planning, resources, policy, enforcement, education, and training.

Use MEDSURV information as the basis for unit health reporting and in all phases of planning.

Report unit DNBI rates and health readiness in accordance with joint guidance (see CJCS Memorandum, MCM-251-98), service policy, OPORD, and OPLAN.

Provide unit personnel strength figures to supporting medical units for calculation of unit-specific MEDSURV rates and trends.

Consolidate MEDSURV report information from subordinate units in determining health status and medical threat. For example, the brigade will incorporate reports from subordinate battalions and separate companies; the division will use brigade reports, and so forth.

Ensure that soldiers complete pre- and postdeployment survey forms and other requirements in accordance with joint guidance. (See DOD Directive 6490.2.)

c. Medical commanders and officers in charge

(1) Ensure that each case of DNBI that is defined as a reportable event is reported through command channels to the appropriate MEDSURV activity (such as CHPPM, AFMIC, Defense Medical Surveillance System).

(*a*) In garrison and on fixed installations, reporting is routed through the PVNTMED service of the MTF.

(*b*) In theater, reports are routed through senior medical channels to the appropriate MEDSURV activity.

(2) Assist in preparation of weekly DNBI reports for supported units by recording returned to duty and admission to Echelons III-V facilities in accordance with joint guidance.

d. Preventive medicine officers

(1) Assist surgeons in tabulating, interpreting, and reporting MEDSURV data.

(2) Provide technical assistance to supported units and staffs in deriving and applying MEDSURV data.

(3) Maintain oversight of MEDSURV reporting in supported units.

APPENDIX A

PLANNING/PREPARATIONS FOR PREVENTIVE MEDICINE IN MILITARY OPERATIONS

Section I. GENERAL PLANNING INFORMATION

A-1. General

The precursor in all military operations must be planning. Plans must be clear. They must explain *how* and *why* forces are employed, *what* forces are to be deployed, and *when*. Ultimately, the plan that is developed must stand up to the strongest scrutiny execution. All plans must be prudent and relevant to current and projected threats. The PVNTMED plans must keep deployed forces in the most vigorous health possible wherever and whenever they are employed. This appendix will assist task force commanders and their staffs in understanding the complexity and the necessity of PVNTMED to their overall plan.

a. Joint Military Missions. In today s world, the Services will not fight or deploy alone. Each of the Services will have a part in all military missions of the US no matter how small or large. Joint medical planning must be done with the knowledge and awareness of each Service s capabilities in any given situation. The mission of PVNTMED is to counter the health threat.

b. Common Problems in Planning for Preventive Medicine During Military Operations. The CHS planner must use professional judgment and common sense to omit nonapplicable portions of the PVNTMED estimates and plans. Planning is ongoing and the planner will need to adjust certain elements of the PVNTMED plan to stay current with the development of a military operation. The planner may expand certain areas of the plan that require more detailed information in subsequent phases of the operation or may have to redirect PVNTMED emphasis in other areas. The planner s job is never over.

(1) One of the common problems in planning for PVNTMED during ongoing operations is that the perspective of the MEDCOM PVNTMED officer, the ASMB PVNTMED officer and the divisional PVNTMED officer are different. These perspectives can be vastly different from one another and each planner has different aspects to consider when preparing estimates and plans and submitting them to the CHS planner. The best way to alleviate this potential problem is to maintain communication with all associated planners during the ongoing planning process.

(2) Another problem that the PVNTMED planner may have is many of the tasks for the PVNTMED detachments are implied and *not* clearly stated in any of the plans. The PVNTMED planner must guard against assuming that the PVNTMED detachments will know what was intended by the commander/PVNTMED planner in vague and poorly worded plans.

(3) Always a constant concern for the PVNTMED planner is the frequently changing mission statement. The planner must guard against misinterpreting the changes to the CHS mission statement when revamping/updating the PVNTMED plan.

(4) The PVNTMED planner must stay abreast of all medical intelligence information that is applicable to PVNTMED. Medical intelligence is obtained from sources listed in the medical intelligence

annex to the CHS plan. The most common problem comes as the theater or operation develops and current medical intelligence is not brought up to date to reflect the current situation. Digitization will help alleviate that problem to a certain degree, but it will not totally do away with the PVNTMED planner being caught in a data/information vacuum during critical times of an operation or during planning sessions. There is little a planner can do about the situation but he must be aware that the problem exists and be prepared to deal with the fact when it occurs.

c. Preventive Medicine Versus Patient Care and Management. Often, the problem occurs because each piece is so important to the success of the mission. The one principle that must be remembered is that the medical footprint must always be constrained. Many of the problems that occur can be averted if the following items are dealt with at the outset:

Define the health threat.

Identify the threat assessment factors.

Communicate the health threat.

Include PVNTMED in the OPLAN.

Understand that planners are staff members, not commanders.

Read the OPLAN/OPORD.

Stovepipe to Service surgeon generals.

Understand the difference between executing and planning.

Address the necessary PVNTMED skills among the force.

A-2. Facts and Assumptions

During this phase of the planning process, the force surgeon usually attends the facts and assumption meetings. If possible, the PVNTMED planner should try to attend these meetings also.

a. The PVNTMED planner should develop personal working relationships with the operations staff officer, G3/J3/S3; the personnel staff officer, G1/J1/S1 and the intelligence officer, G2/J2/S2. To a lesser degree, the PVNTMED planner needs to be able to work with the logistics staff officer, G4/J4/S4 and the overall planning cell, the G5/J5/S5; and the communications staff officer, the G6/J6/S6.

b. In joint operations, the J3 operations staff officer has the information that will allow the PVNTMED planner to formulate many of the PVNTMED facts and assumptions. The PVNTMED planner must be proactive; from the J3, the following information is attainable:

Mission and commander s intent (one or two levels up).

Current task organization (two levels down).

Current unit status.

- Unit locations.
- Unit combat capabilities.
- Unit activities.

Other Services CHS.

Other unit information.

Area NBC exposure status.

Time of exposure.

c. From the J2, the intelligence staff officer, the PVNTMED planning officer can obtain the following:

Battlefield analysis (not usually considered, but should be, is whether blood and blood products will be necessary in the theater).

Terrain analysis (surface water; need to purify water or use bottled water).

Current weather status.

Known enemy status.

d. The PVNTMED planner needs to develop relationships with the J1/G1 in order to obtain information regarding the following:

Personnel readiness.

Unit strength, maintenance, and replacements.

Service support/noncombat matters.

Organizational climate.

Commitment/cohesion.

e. From the logistics staff officer, the J4, the following facts and assumptions can be found:

Maintenance.

Supply/services.

Transportation.

Labor.

Facilities and construction.

Airspace for medical supplies and personnel.

Contracting support.

f. The planning staff officer, J5, has access to the following information:

Civil Affairs unit locations and capabilities.

Local government support availability.

Constraints or restrictions.

Area intelligence information.

A-3. Mission Analysis

Once the facts and assumptions have been collected, the PVNTMED planner moves to the third phase of the appendix development process. The nature of the second phase makes it important to continually update the facts and assumptions as the operation develops. Facts that may have been important initially may move to the background, and assumptions may prove to be false or less important. The reverse of those instances can also occur and the planner must stay on top of all situations.

a. The PVNTMED planner develops a mission analysis from the data collected during the fact-finding portion of the planning process. The planner then develops the PVNTMED estimate of the mission. The planner lists any critical assumptions or commander s requirements applicable to the operation.

b. The planner describes, in general terms, how the medical support system addresses the infectious disease, vectorborne disease, sanitation, and environmental threats prevalent throughout the AO. He outlines what types of PVNTMED resources will be introduced early in the development process to institute basic measures and describes how the overall PVNTMED capabilities will be phased into and positioned throughout the theater. The planner identifies tasks to be performed, specified, and implied.

c. The planner describes the medical intelligence used to develop this appendix and outlines how medical intelligence is gathered, processed, and disseminated to the deployed and deploying units. The planning staff lists the assets available, the essential tasks that must be accomplished, the acceptable levels of risk, constraints, restrictions, and the initial time analysis.

d. During development of the PVNTMED planning stages for an operation, a mission analysis is necessary. The commander s intent has been clarified, the tasks to be performed (specified and implied) have been identified. The planner knows what assets are now and will be available; he knows the constraints and restrictions established for the mission. He has identified the acceptable levels of risk. A list of essential tasks has been identified and the planning cell has restated the mission, to include who, what, when, where, and why. The mission analysis is forwarded to the commander for approval. The commander will review and approve the analysis; or he may clarify and/or restate the mission.

A-4. Developing Courses of Action

The first stage in developing courses of action (COA) is the situation and the considerations that need to be identified and answers found. The amount of time available significantly influences the planning process. Military solutions may be constrained; a COA may be limited by available resources, or political and diplomatic considerations may need to be taken into account. A regional, rather than global, focus for deliberate planning allows increased flexibility in apportionment of available combat forces.

Section II. SAMPLE FORMAT FOR THE PREVENTIVE MEDICINE ESTIMATE

A-5. General

a. The purpose of the PVNTMED estimate is to recommend COA to the commander on issues such as site selection and risk management. The planning process for CHS operations in stability operations and support operations is the same process as used for traditional CHS operations. The CHS estimate of the situation is the basic tool used by the CHS planner. A detailed discussion of each subparagraph of the CHS estimate is provided in FM 8-55. The information contained in this appendix supplements the discussion in FM 8-55. The considerations are similar; however, the range of options and COA are expanded. These expanded options include missions and functions not accomplished during the more traditional CHS operations (such as the assessment of the HN medical infrastructure).

b. All of the categories of the CHS estimate are presented in FM 8-55. Some of the categories may seem contrived when applying them to stability operations and support operations situations. The CHS planner must, therefore, interpret the categories and apply the pertinent information or modify the categories to fit the operational scenario. In some stability operations and support operations scenarios, there may not be a recognizable enemy; the *enemy* and *friendly* situation paragraphs of the estimate can be thought of as *negative* and *positive* factors impacting on the successful accomplishment of the mission. For example, in a discussion of opposition groups, it is conceivable that an organized opposition may not be apparent in a country where a humanitarian assistance program or disaster relief effort is being conducted. The CHS planner should, therefore, consider those situations and factors which could foster an insurgency or the formation of opposition groups and focus the CHS operations to correct anticipated deficiencies, thereby eliminating the possible threat.

c. Field Manual 8-55 contains a format for preparing the veterinary, PVNTMED, dental, CSC, and combat health logistics estimates.

d. The examples provided in this appendix do not include all possible scenarios or information needed to complete an estimate. They are intended to be thought-provoking and are included for illustrative purposes only.

(Classification)

Headquarters
Location
Date, time, and zone

PREVENTIVE MEDICINE ESTIMATE OF THE SITUATION

References: *List all maps, overlays, charts, or other documents required to understand the plan. References to a map will include the map series number and country or geographic area, if required; sheet number and name, if required; edition; and scale.*

1. MISSION (*Statement of the specific PVNTMED mission in support of various activities [such as support for insurgency and counterinsurgency, combating terrorism, peace support, or domestic support operations].*)

2. SITUATION AND CONSIDERATIONS

a. Enemy (Opposition) Situation/Negative Factors. (*Information contained in this section of the estimate is similar to that contained in paragraph A-2; however, it is tailored to PVNTMED concerns.*)

(1) Communicable diseases. (*This should include endemic and epidemic diseases and their impact on mission effectiveness.*)

(2) Sanitation levels. (*This can include the opposition s ability/resources to raise/provide for standards of sanitation for the populace.*)

(3) Public health capabilities. (*This can include the opposition s ability to provide primary care and health development programs, such as well-baby clinics; to conduct epidemiological investigations; to provide guidance on water treatment/purification; to provide guidance on waste disposal; and to provide inspection of food service operations.*)

(4) Immunization status. (*This can include both the opposition and general public, especially children. Does the opposition have the resources available to provide immunizations to their forces and*

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the populace? Do they possess special immunizations/prophylaxis to protect their forces from potential BW agents?)

(5) Level of field sanitation training.

(6) Nuclear, biological, and chemical and DE capabilities. (*This can include the opposition s ability to employ weapons of mass destruction, disperse biological agents, disseminate radioactive material, and employ DE devices/weapons.*)

b. Friendly Situation/Positive Factors.

(1) Status of individual and unit PVNTMED supplies.

(2) Operational situation. (*Factors such as the state of sanitation, type of billeting, and reliance on local economy for food and water will dictate the PVNTMED support requirements. Are the available sources sufficient to support US forces, allies, coalition partners, HN forces, and domestic and humanitarian assistance operations? If not, what will be the source of potable water?*)

(3) Types of rations used. (*In stability operations and support operations, units may have to rely on local vendors for food items; caution should be exercised when relying on these food supplies. Veterinary inspection support is essential to ensure wholesomeness and quality.*)

(4) Unit PVNTMED readiness.

(a) Field sanitation team training and equipment.

(b) Individual and unit PMM training and enforcement.

(5) Potable water and ice.

(a) Sufficient production and distribution units.

(b) Sufficient availability and quantity.

(c) Access to and availability of clean water in HN communities.

(d) Inspection/certification of water and ice sources and supplies.

(6) Availability of aircraft for aerial spray operations.

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(7) Status of HN and domestic public health system (*to include health education programs*).

(8) Status of sanitation facilities.

(9) Status of immunizations (*especially for children*).

(10) Off-limit establishments.

c. Characteristics of the AO.

(1) Terrain. (*Discuss the following questions.*)

(a) Does the AO favor arthropod/rodent populations? (*In military operations in urbanized terrain [MOUT], are there fields of rubble where rodents can flourish? Are there open sewers or drainage canals? Are there stagnant pools of water or open water storage containers [such as drums]?*)

(b) Is the AO at a high altitude, in a jungle, in the desert, or on mountainous terrain?

(c) Is water available? (*What are the requirements for treatment and purification? Is it plentiful? Is it easily accessible?*)

(d) How will the terrain affect pest management operations? (*Are there low-lying areas where water can accumulate? Are there caves where bats can roost?*)

(2) Climate and weather. (*Discuss the following questions.*)

(a) Will the season affect disease transmission? (*Upper respiratory infections in the winter months; increased cases of malaria during rainy season.*)

(b) Will the season affect heat or cold injuries? (*How long will it take to acclimatize the troops to the AO? Is heat complicated with high/low humidity? Will exposure to cold be complicated by high winds? Will cold injuries be complicated by high altitudes? Will sunburn/windburn or snow blindness be factors?*)

(c) Will the season affect disease vectors? (*Are arthropod vectors or pests more prevalent during the operational period in the AO?*)

(d) Will the season affect the water supply? (*Amount of rainfall such as flood or drought.*)

(e) Will the season affect pest management operations?

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(3) Civilian population. (*Discuss the following subjects. There may be different subpopulations within the civilian community with different characteristics than other groups such as refugees from another country or displaced persons from the surrounding countryside.*)

(a) Endemic diseases (*especially those of military significance*).

(b) Epidemic diseases (*especially those of military significance*).

(c) Sources of disease/illness on the main supply route (*such as restaurants, lodging, or swampy areas*).

(d) Immunization status (*among the adult population; among the pediatric population*).

(e) Water treatment standards. (*Do standards exist? Is water treatment a common practice?*)

(f) Waste disposal practices. (*Do community sanitary facilities exist? Is the water source protected from contamination? Is garbage collected and disposed of in a sanitary landfill?*)

(g) Nutritional standards. (*In the short term [are food supplies and availability affected by outbreaks of violence]? In the long term [is famine occurring/recurring]? Can the average family afford an adequate diet?*)

(h) Civilian medical support and public health system. (*This should include capabilities/ deficiencies, facilities, and resources.*)

(i) Chemical hazards from industrial operations.

(j) Radiation hazards from nuclear power plants or other sources.

(k) Biological hazards from medical research and treatment operations.

(4) Flora and fauna. (*Discuss the following subjects.*)

(a) Arthropod vectors in the AO.

(b) Arthropod vectors resistant to pesticides.

(c) Venomous animals and insects.

(d) Poisonous plants.

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(e) Rodents.

(5) Enemy prisoners of war and/or detainees, if applicable. (*May also include internment and resettlement operations. Discuss the following subjects.*)

(a) Presence of disease.

(b) Number of detained public health officers.

(c) Disease immunization status.

(d) Nutritional standards.

(6) Other. (*This could include cultural, religious, or ethnic practices that impact on the PVNTMED arena.*)

d. Strengths to be Supported.

(1) Army.

(2) Navy.

(3) Air Force.

(4) Marines.

(5) Coast Guard.

(6) Allied forces.

(7) Coalition forces.

(8) Host-nation forces.

(9) Enemy prisoners of war, if applicable. (*May also include internment and resettlement operations.*)

(10) Indigenous civilians. (*This category is important if planning humanitarian assistance programs.*)

(11) Detainees.

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(12) Retainees.

(13) Others. (*This can include DOD civilian employees, DOD civilian contractors, third country civilians, nongovernmental organizations* (*NGO*), *private volunteer organizations* (*PVO*), *and refugees.*)

e. Health Status of the Command. (*Discuss the following subjects.*)

(1) Origin of the troops. (*This is of particular importance in multinational operations as the forces from different nations will have different endemic diseases. Are the forces acclimated to the environment [heat, cold, altitude]?*)

(2) Presence of disease. (*Is the unit experiencing an outbreak of disease? Is it an endemic disease or the effects from a BW agent?*)

(3) Immunization status. (*Are the troops from all participating nations immunized for the same diseases? If not, what are the differences? Are all immunizations current?*)

(4) Status of nutrition. (*What is the diet of the troops and how long have they been consuming it [such as MRE for 2 weeks]?*)

(5) Clothing and equipment. (*This can include the availability of protective equipment such as insect netting and insect repellent or special clothing for extreme environmental conditions.*)

(6) Fatigue and resistance to disease. (*Are sleep plans developed and implemented? Are there other factors contributing to fatigue [such as jet lag]?*)

(7) Other. (*Availability of prophylaxis.*)

f. Assumptions.

(1) (*Is the assumption really necessary for the solution?*)

(2) (*Will the results change if the assumptions are not made?*)

g. Special Factors. (*Coordination requirements with HN- or US-backed group, NGO, PVO, and other US agencies. Additionally, the impact of culture, customs, or religious beliefs/practices on providing PVNTMED services should be discussed.*)

3. ANALYSIS

a. Estimates.

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(1) Tasks involving arthropods and rodents.

(a) Disease and nonbattle injury threat assessment.

(b) Survey and identification of requirements.

(c) Control requirements.

(2) Tasks involving environmental health.

(a) Heat.

(b) Cold.

(c) Water and ice.

(d) Sanitation.

(e) Waste disposal.

(f) Altitude.

(3) Tasks involving disease.

(a) Epidemiology. (*Are laboratory resources available to support epidemiological investigations?*)

(b) Immunizations. (*Are they current? In nation assistance and humanitarian assistance operations, are they available to provide to the civilian population?*)

(c) Prophylaxis. (*Are supplies sufficient for the operation? Has a program been instituted to ensure prophylaxes are taken on a scheduled basis [such as antimalarial tablets taken every Friday morning with breakfast]?*)

b. Requirements.

(1) Supplies. (*Are on-hand supplies sufficient to meet the requirements? What is the availability/ accessibility of resupply? Have unforeseen requirements been established that were not previously planned for? If so, what are their impact?*)

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(2) Equipment. (*Is equipment on hand and serviceable? Are repair parts and maintenance support available?*)

(3) Civil and military support.

c. Resources Available.

(1) Organic PVNTMED personnel.

(2) Attached PVNTMED personnel.

(3) Supporting PVNTMED personnel.

(4) Status of unit field sanitation teams.

(5) Other Services.

(6) Allied forces.

(7) Coalition forces.

(8) Host nation.

(9) Civilian public health personnel.

(10) Detained enemy (opposition) health personnel, if applicable.

(11) Preventive medicine troop ceiling. (*Discuss the impact [either negative or positive] that the troop ceiling has on mission accomplishment.*)

(12) Preventive medicine supply status.

d. Preventive Medicine Courses of Action. (*Determine, as a result of the above analysis, all logical COA which support the commander s OPLAN and accomplish the CHS mission. Courses of action are expressed in terms of* ***WHAT, WHEN, WHERE, HOW,*** *and* ***WHY****.*)

4. EVALUATION AND COMPARISON OF PREVENTIVE MEDICINE COURSES OF ACTION

a. Determine and state the probable outcome of each COA listed in paragraph 3d when opposed by each identified significant difficulty. This may come in two steps:

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(1) Determine and state those anticipated difficulties that will have an equal effect on the COA listed.

(2) Evaluate each COA against each significant difficulty to determine strengths and weaknesses inherent in each.

b. Compare all COA listed in terms of significant advantages and disadvantages or in terms of the major considerations that emerged during the above evaluations.

5. CONCLUSIONS

a. Indicate whether the mission set forth in paragraph 1 can or cannot be supported.

b. Indicate which COA can best be supported from the veterinary service standpoint.

c. Indicate the disadvantages of nonselected COA.

d. List the deficiencies in the preferred COA that must be brought to the attention of the commander.

*/s/*_____
Preventive Medicine Staff Officer

Annexes (*as required*)
DISTRIBUTION: (*Is determined locally and includes the command surgeon.*)

Section III. FORMAT FOR THE PREVENTIVE MEDICINE PORTION OF THE COMBAT HEALTH SUPPORT PLAN (MEDICAL SECTION OF A UNIT)

The purpose of the PVNTMED plan is to outline the strategy necessary to implement the decided upon COA. This PVNTMED plan format will assist those who are tasked with plan development. Remember the PVNTMED plan is only a portion of the CHS plan.

PREVENTIVE MEDICINE

1. MEDICAL THREAT (*From the PVNTMED estimate, give a brief picture of the size of the threat.*)

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a. Heat/cold. (*Example: Units conducting combat operations, especially in mission-oriented protective posture* (*MOPP*) *Level 4 and/or in enclosed vehicles, can expect heat casualties in excess of 10 percent of strength within hours if PMM are not enforced.*)

b. Diarrhea. (*Example: The threat from diarrheal casualties should be low for units consuming MRE and treating all water. Units preparing Class A or B rations or not treating water could experience 20 percent diarrheal casualties within hours if PMM are not enforced.*)

c. Biting Arthropods. (*Example: Units should experience few casualties from diseases caused by biting arthropods if proper personal hygiene is practiced and required laundry support is provided. Poor personal hygiene/laundry support could result in significant casualties from louse-carried diseases within weeks.*)

d. Other. (*Consider the threat from diseases such as those of the skin, upper respiratory infections, and schistosomiasis. Also, consider performance detractors such as eye injury due to laser devices, hearing threshold shifts due to noise exposure, or disrupted physical motor skills from carbon monoxide exposure due to firing weapons in an enclosed vehicle.*)

2. CONCEPT OF SUPPORT (*Give a brief overview of the integration of PVNTMED at different levels.*)

a. Individuals. (*Example: Perform individual PMM.*)

b. Units. (*Example: Enforce individual PMM; perform unit PMM.*)

c. Major Units. (*Example: Monitor PVNTMED status of command; request support.*)

d. Division PVNTMED Personnel. (*Example: Provide support on an area basis.*)

e. PVNTMED Detachment. (*Example: Provide support with priority to combat units.*)

3. RESPONSIBILITIES

a. General Policies. (*State policies applying to all soldiers within the command.*)

(1) Individual PMM.

(2) Specific policies. (*Example: Policies concerning off-limits areas and immunizations.*)

b. Unit Commanders. (*Indicate specific requirements, which all unit commanders must enforce within their units. Start with unit PMM as a basis and add requirements specific for this operation.*)

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(1) Heat/cold. (*Example: Ensure that each soldier is issued an additional canteen, sunscreen, and specified zone clothing.*)

(2) Diarrhea. (*Example: Obtain food from Class I points only; obtain water from water supply points only.*)

(3) Biting arthropods. (*Example: Ensure each soldier is issued arthropod repellent before deploying.*)

(4) Other.

c. Specific Unit Commander s Responsibilities. Examples:

(1) Medical units: (**Reporting responsibilities for diseases/injuries received or admitted. Infectious waste disposal policy.*)

(2) Quartermaster units: (**Reporting responsibilities of location of water supply points and laundry exchange.*)

(3) Subordinate units: (*Attachments of PVNTMED teams.*)

*These reporting requirements may already be defined in the unit tactical SOP.

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APPENDIX B

ARMY FORCE XXI PREVENTIVE MEDICINE SUPPORT UNDER THE MEDICAL REENGINEERING INITIATIVE

B-1. General

This appendix provides information on the PVNTMED staff positions of the various command and control headquarters and the PVNTMED detachment designed under the MRI. It also discusses the mission and functions of this unit. Further, a discussion of the area medical laboratory PVNTMED staff is also included.

B-2. Medical Command, Echelons Above Corps

The PVNTMED staff (TOE 08611A000) publishes PVNTMED policy on behalf of the MEDCOM commander and exercises technical control over PVNTMED resources at EAC. The staff prepares the PVNTMED portion of the MEDCOM CHS plan. They monitor and analyze DNBI reporting to ensure timely information is presented to the leadership to counter the DNBI effects on the mission. This staff is located in the Professional Services section in the Headquarters and Headquarters Company. The PVNTMED staff at this level is comprised of a PVNTMED officer, an environmental science officer, and one PVNTMED NCO.

B-3. Theater Medical Command, Corps

Within the corps MEDCOM, the PVNTMED staff (TOE 8411A000) is attached to the clinical services section. This staff publishes PVNTMED policy on behalf of the MEDCOM commander; provides consultation services and technical advice on PVNTMED subjects; and exercises technical control over PVNTMED resources in the corps. The staff prepares the PVNTMED portion of the MEDCOM CHS plan. The PVNTMED staff monitors and analyzes DNBI reporting and ensures timely information is presented to the leadership to counter the DNBI effects on the mission. The PVNTMED staff is comprised of a PVNTMED officer, a nuclear medical science officer, an entomologist, an environmental science officer, and a PVNTMED NCO.

B-4. Medical Brigade

The PVNTMED section (TOE 8422A100) within the medical brigade has four staff positions. This section is comprised of a PVNTMED officer, environmental science officer, a veterinary NCO, and a PVNTMED NCO. This section carries out policy on behalf of the medical brigade commander; provides consultation services and technical advice on PVNTMED subjects; and exercises technical control over PVNTMED resources in the corps. This staff prepares the PVNTMED portion of the medical brigade CHS plan and monitors and analyzes DNBI reporting to ensure timely information is presented to the leadership to counter the DNBI effects on the mission.

B-5. Combat Support Hospital

A community health nurse and one PVNTMED specialist are assigned to the CSH to maintain DNBI surveillance. The community health nurse is the primary officer within the hospital responsible for ensuring

that basic principles of PVNTMED are met while assessing the medical threat from indigenous populations and environments. This nurse—

- Plans appropriate interventions for individuals or groups.

- Mobilizes and integrates all available resources for interventions to minimize DNBI and identified medical threats to the deployed force.

- Assesses health risk needs in all phases of the deployment cycle and humanitarian/disaster relief operations.

- Recommends appropriate interventions.

- Interfaces with Civil Affairs, and/or NGO affecting civilian public health when the situation warrants.

B-6. Division Medical Companies

a. The PVNTMED staff at the forward support medical company consists of an environmental science officer and a PVNTMED specialist. This staff provides support to units located in the brigade support area. This support includes technical advice to the commander; sanitary inspections of food service facilities, field sites, latrine, bathing and other facilities; and monitoring field water supplies, including sample collection for potential NBC contamination. Further, this staff coordinates and provides oversight of medical surveillance activities, to include early recognition of potential epidemic disease outbreaks and suspect BW agent employment.

b. The PVNTMED staff at the direct support medical company consists of a three-man team. The team is comprised of a PVNTMED physician located with the division surgeon, an environmental science officer, and a PVNTMED specialist. This staff provides subject matter expertise to the division surgeon on PVNTMED issues.

c. The PVNTMED staff of the division medical companies provide—

- Preventive medicine support to units located in the brigade support areas/division support area. In addition, they provide technical advice to the company and the battalion commanders. This support includes—

  - Training, monitoring, and technical assistance to supported unit FSTs.

  - Conducting sanitary inspections of supported units' food service, field site, latrine, bathing, and other facilities for basic sanitation practices. This is accomplished in order to provide early warning of any breakdown in basic sanitation within the division's AO. This permits the unit to take corrective actions before diseases are transmitted.

- Coordination/oversight and execution of MEDSURV information gathering and reporting, which enables the early detection and identification of potential disease epidemics or BW agent employment within the division AO.

- Limited pest management support to supported units.

- Mission assignments to attached PVNTMED teams/detachments. They exercise technical control and coordinate the administrative and logistical support for the teams/detachments.

- Field water supplies monitoring, to include possible NBC contamination.

- Collection of water and environmental samples from suspect NBC contaminated sources. They prepare the samples for submission to the supporting medical laboratory for analysis and safeguard collected samples and ensure chain of custody procedures are followed.

B-7. Operational Concept for the Preventive Medicine Detachment

a. This detachment provides technical consultation support on PVNTMED issues throughout the TO. The unit provides specialized PVNTMED support in the areas of DNBI surveillance, health physics, disease-vector identification, environmental engineering, medical threat profile, and health hazard assessment. The detachment conducts surveillance of troop assembly areas to ensure the adequacy of PMM; particularly those performed by individuals and small units to protect themselves.

b. When such measures are inadequate, the detachment offers on-site advice to unit leaders. When requested, the detachment conducts training on PMM for unit members. The detachment may function as a single operational activity or may split into a headquarters section and three teams to provide support to a greater number of units. When the teams are operating in the split-team mode, they must maintain contact with the detachment headquarters for instructions and guidance. The team is comprised of an environmental science officer, an entomologist, a senior PVNTMED NCO, one PVNTMED NCO, and six PVNTMED specialists. The detachment commander may be an environmental science officer or entomologist. The executive officer will be an officer of the other area of concentration (AOC).

c. The detachment is:

- Commanded by an environmental science officer or entomologist. The executive officer will be an officer of the other AOC.

- Dependent upon elements of the corps or EAC for religious, legal, CHS, finance, personnel and administrative services, graves registration, bath and laundry services, clothing exchange, unit maintenance, communications maintenance, food service, and resupply of all classes of supply.

- Dependent upon the units to which they are attached for rations, quarters, CHS, religious, personnel and administrative services, resupply of all classes of supply, and maintenance for vehicles, communication equipment, and generators.

B-8. Operational Capabilities for the Preventive Medicine Detachment

The operational capabilities remain the same, however, early arrival of the detachment is essential to providing preemptive action in identifying, controlling, and protecting troops from the effects of DNBI. Operational capabilities of the detachment include, but are not limited to—

a. Disease and Nonbattle Injury Surveillance and Epidemiology.

- Gather information systematically to input into an automated medical surveillance system which produces real-time tactically significant medical threat profiles.

- Provide guidance to the command concerning PMM by performing a medical assessment of the command and the potential impact of DNBI on military operations.

- Conduct epidemiological investigations to include case-contact interviewing, contact tracing, and outbreak investigations.

b. Environmental Health.

- Perform on-site water quality analysis.

- Monitor water and field ice production and distribution.

- Collect water, soil, and air samples from sources that may pose environmental, occupational, or industrial hazards to US troops for definitive laboratory analysis.

- Conduct food service sanitation inspections.

- Monitor and provide guidance on proper field sanitation and waste disposal techniques.

- Provide guidance on the prevention of climatic injuries (heat, cold, and altitude).

c. Medical Entomology Services.

- Provide direct pest management support, including aerial spray missions. When directed to conduct aerial spray missions, the detachment must request issue of the aerial spray equipment from the ASMB.

- Provide entomology consultation on arthropodborne diseases; on poisonous plants or animals; measures for control or avoidance of disease vectors of military significance; and use of pesticides.

d. Nuclear, Biological, and Chemical Threat.

- Collect water and ice samples for NBC surveillance. Establish and maintain chain of custody for samples, and forward samples to supporting medical laboratory for identification.

- Coordinate with Chemical Corps NBC reconnaissance and biological detection units for the collection of environmental samples (air and soil) for laboratory analysis.

e. Health Promotion and Education.

- Provide information on specific PMM to counter medical threats.
- Conduct FST and food service sanitation training and certification.
- Conduct health promotion education.

f. Retrograde Cargo Inspections.

- Conduct inspections of cargo destined out of theater for plants, arthropods, rodents, soil, and other items as specified to prevent their introduction into the US, its territories and possessions, or other nations.
- Issue vessel clearances for entry into the destination ports, as authorized.

B-9. Location, Assignment, and Basis of Allocation of the Preventive Medicine Detachment

Normally, the detachment is deployed to specific areas in the corps or EAC. However, the detachment may be deployed to any area within the TO. The detachment may be assigned to the MEDCOM, a medical brigade, ASMB, or a task force medical C2 headquarters. The detachment may be further attached to a unit in the division, corps, or EAC.

a. When attached to units in the corps or EAC, the detachment generally collocates on a temporary basis with the supported unit until the mission is completed or the mission priority changes. EXAMPLE: The detachment may be assisting in establishment of a refugee camp when a major outbreak of diarrhea occurs at a debarkation assembly area. In this example, the detachment would end its support role at the refugee camp and proceed to the debarkation area. At the debarkation area, it would begin the mission of identifying the source of the diarrhea and establishing control measures.

b. When attached to a division, the detachment generally collocates with the PVNTMED section of a medical company to ensure coordination of support efforts.

c. When deployed in general support, the detachment collocates with a medical unit or headquarters, as discussed above.

d. The basis of allocation for this detachment is one detachment per 17,000 personnel supported.

B-10. Preventive Medicine Detachment Mobility

The PVNTMED detachment is 100 percent mobile. All personnel with personal gear, TOE equipment and supplies, and required CTA items may be transported on organic vehicles in a single lift. See Appendix H for strategic deployment information.

B-11. Preventive Medicine Section, Area Support Medical Battalion

a. The PVNTMED Section of the Area Support Medical Battalion. Within the ASMB the PVNTMED section has the responsibility for providing PVNTMED support on an area support basis. This section is responsible for maintaining the aerial spray equipment and supplies. This is a new mission for this section. Although, the ASMB has the mission of maintaining the spray equipment, it is not staffed to perform the spray mission. The PVNTMED detachment is staffed to perform this mission. When a PVNTMED detachment is tasked to perform aerial spray missions, it requests the aerial spray equipment from the ASMB and also requests the use of a medical evacuation helicopter from the medical evacuation battalion. The PVNTMED detachment sets up the spray equipment and installs it on the supporting helicopter. Detachment personnel fly with the helicopter crew to ensure that the sprayer disperses the insecticide correctly and that the desired area is covered. Upon completion of the aerial spray mission, detachment personnel clean, pack, and return the spray equipment to the ASMB. The detachment personnel also prepare a report on the amount of supplies used for the mission so that replacement supplies can be ordered. The PVNTMED staff provides:

- An estimate of the situation to identify the medical threat in the supported area.
- Essential PVNTMED information for inclusion in the OPLAN, OPORD, and briefings to ensure awareness of both the medical threat and the corresponding PMM.
- Early warning of any breakdown in basic sanitation within the support area to permit time for corrective actions before diseases may be transmitted.
- Early detection and warning of potential epidemics within the supported area. Early warning of disease outbreaks permits implementation of control measures before the disease fully manifests itself among the forces.
- Limited pest management support to supported units.
- The command health report to document the impact of heat, cold, disease, and other health hazards to units in the supported area.
- Missions to attached PVNTMED teams/detachments.
- Technical control and coordinates the necessary administrative and logistical support for the teams/detachments.
- Monitoring of field water supplies, to include possible NBC contamination.

b. The Preventive Medicine Detachment's Split Teams. The staffing of this section allows for personnel to be split into teams to conduct evaluations within their assigned AO and/or to be task-organized to provide direct support to designated corps/EAC units, as required. Specific functions of the PVNTMED section include, but are not limited to, the following:

health hazards of weapons, equipment, clothing and materiel systems, and chemicals and by-products associated with these systems.

- Plans, implements, supervises, directs, and conducts various microbiological diagnostic procedures to diagnose zoonotic and animal diseases of military importance.

- Determines the status of the conditions influencing the health of military personnel in an AO.

- Provides risk assessment guidance and advises on health hazards and occupational disease trends.

- Formulates and recommends measures for health improvement as it relates to the performance of military duties in an operational environment.

- Performs analysis and investigations related to health physics, laser, microwave, directed energy, and ionizing and nonionizing radiation biology associated with military operations.

- Supervises and performs biochemical analysis on occupational/environmental health hazard specimens in the AO.

- Conducts PVNTMED inspections, surveys, and laboratory procedures relative to occupational/environmental health hazards.

- Performs analysis of radiologically contaminated samples.

- Prepares, evaluates, and analyzes food samples to determine wholesomeness and safety.

APPENDIX C

CONDUCT AERIAL SPRAY OPERATIONS

C-I. General

a. Preventive medicine units have a need to aerially disperse both liquid and solid pesticides to control arthropod disease vectors and pest insects. The US Army's pesticide dispersal unit (PDU), multicapability, helicopter slung, fulfills this need. The unit is slung from a helicopter's cargo hook, using a 6-foot nylon strap. As an external load, the problems of contamination, jettison capability, and refilling time are solved. The PDU can be configured in the high-volume mode with a 33.75-foot boom using a maximum of 34 nozzles; in the ultra low-volume mode with a 6-foot boom using 2 dispersal nozzles; or in the solid mode using a rotating disc slinger. The unit is self-powered by an 11-horsepower gasoline engine. A remote control enables starting and stopping the engine, activating pesticide dispersal valves, and monitoring pesticide quantity in the hopper from inside the helicopter. Since the unit is electrically independent of the helicopter, it is compatible with any rotary-wing aircraft that has a cargo hook.

b. Aerial spray missions are conducted to meet arthropod control requirements that—

- Require large area control measures.

- Exceed the detachment's capabilities of controlling arthropod infestations by use of ground-based equipment.

- Require arthropod control in areas that are inaccessible to ground crews.

c. Preventive medicine personnel who desire to plan, conduct, and/or supervise an aerial pesticide spray operation must be certified DOD aerial pesticide applicators (in accordance with DOD Instruction 4150.7). They must complete a training program and pass a written examination that covers the following areas: general principles, meteorological aspects, legal aspects, environmental aspects, DOD spray systems and aircraft, aerial spray math, aerial spray maps, contingency operations, spray system calibration, swath characterization, pesticides and pesticide safety, and aerial spray in the military.

C-2. Prepare for Mission

When preparing for an aerial spray mission, the unit should perform several actions including—

- Requesting helicopter support. The PDU is compatible with any rotary-wing aircraft that has a cargo hook.

- Conducting a survey of the target area to verify the need for a spray mission; identifying arthropods to be controlled; establishing boundaries of the treatment area; and preparing a map. Ideally this survey should include an aerial surveillance of the target area with the actual aircrew and aircraft to be used for the aerial spray mission. A detailed mission map should result from the survey.

- Briefing participating personnel on the mission.

- Performing preventive maintenance checks and services (PMCS) on the sprayer.
- Calibrating the sprayer with the pesticide to be used (essential premission operation).
- Assembling supplies.
- Assigning personnel to set up and operate the sprayer (four personnel minimum).
- Assigning personnel for establishing aircraft guide markers, if used.
- Notifying higher headquarters and units within the target area of the mission. In foreign countries, participation/coordination with CMO personnel is essential.
- Notifying all persons in the target area of the date, mission procedures, time of mission, and the type of pesticide to be dispersed.

C-3. Set Up Equipment

The personnel assigned to set up the sprayer should—

- Coordinate with the aircrew on the setup and hookup procedures.
- Receive a briefing from aircraft commander/crew on aircraft safety requirements.
- Set up the sprayer for operation.
- Fill the sprayer with pesticide.
- Under the direction of the aircrew, hook up the sprayer to the aircraft by connecting the sprayer to the sling-load hook of the aircraft.
- Be prepared to refill the sprayer during the mission, as required.

C-4. Conduct Spray Mission

Personnel assigned to fly with the aircraft and operate the sprayer should—

- Receive an aircraft safety briefing from the aircraft commander/crew.
- Obtain a copy of the strip map and detailed mission instructions from the spray mission officer in charge (OIC) (DOD-certified aerial spray applicator).
- Board the aircraft and man the sprayer controls.

- Begin applying the pesticide when notified by the aircraft crew that they are on target. The aircraft must fly in straight-line patterns across the target area. Each pass should extend across the length of the target area. The spacing of each pass over the target (or swath width) is established by the spray mission OIC based on the altitude and air speed of the aircraft, the wind speed, and pesticide formulation.

- Ensure the entire target area is covered.

C-5. Conduct After-Spray Mission Maintenance on Sprayer

Personnel assigned to set up the sprayer and the personnel assigned to fly the spray mission should—

- Remove the sprayer equipment from the aircraft.

- Empty any remaining pesticide from the sprayer. Place the unused pesticide in the original container for use on later missions, or dispose of as directed by the mission OIC.

- Perform after-mission PMCS on the sprayer.

- Pack sprayer and supplies for storage and load on vehicle for return to detachment staging/ encampment area.

C-6. Conduct Post-Mission Activities

Supervisory personnel should—

- Perform post-spray PMCS on sprayer.

- Collect mission data and prepare after-action report to provide a record of events. Essential information to be included in the mission worksheet or after-action report is shown in Figure C-1.

- Provide a copy of the report to higher headquarters.

- Plan a follow-up entomological/pest survey of the treated area to evaluate effectiveness of spraying.

- Schedule a follow-up survey.

C-7. Conduct Follow-up Survey of Treated Area

Unit personnel should—

- Conduct a survey of the entire area to evaluate the effectiveness of the spraying.

- Prepare a report of findings.
- Schedule another spray mission, if required.
- Repeat the above steps if another spray mission is required.

AERIAL SPRAY MISSION DATA

MISSION DATE/LOCATION: _____
MISSION OIC (DOD-CERTIFIED AERIAL SPRAY APPLICATOR): _____
PVNTMED PERSONNEL PARTICIPATING: _____
UNIT PROVIDING AVIATION SUPPORT: _____
TYPE AIRCRAFT: _____
PILOT/COPILOT: _____
PESTICIDE USED: _____
APPLICATION RATE: _____
NOZZLE CALIBRATION, LEFT:/RIGHT:/TOTAL: _____
NOMINAL SWATH WIDTH: _____
ALTITUDE: _____
GROUND SPEED: _____
WIND SPEED/DIRECTION: _____
GROUND TEMPERATURE: _____
MISSION START TIME:/END TIME:/TOTAL: _____
PREMISSION PESTICIDE LOAD: _____
TOTAL PESTICIDE USED: _____
TOTAL MOGAS USED: _____
TOTAL AREA COVERED: _____
COMMENTS: _____

Figure C-1. Essential information for an aerial spray mission after-action report.

APPENDIX D

COMMANDER'S CHECKLIST FOR UNIT MOVEMENT

Section I. ACTIONS CONDUCTED ON A CONTINUING BASIS

D-1. General

Detachment commanders may use this list to identify actions required for movement planning on receipt of either a warning order or a movement order. Adjust the checklist to meet the instructions as specified in the movement order.

D-2. Standing Operating Procedures, Checklists, and Plans

All units must prepare SOPs, checklists, and plans for unit operations and keep them up to date. They include, but are not limited to

A pyramidal alert plan for personnel, including personnel on leave, pass, and temporary or special duty.

Classified documents security SOP.

Unit movement plans.

Unit vehicles load plans. Load plans should include TOE, CTA, passengers, and personal baggage and equipment for each vehicle.

Vehicle preparation for movement checklist.

Convoy operations SOP.

Detached parties (advance party and stay-behind party) SOP.

Disposition of nondeployment personal items SOP.

Unit personnel SOP.

Unit mail SOP.

Unit movement officer SOP.

Weapons and ammunition issue/control SOP.

A readiness folder for each major TOE end item, such as vehicles, generators, and computers.

Table of organization and equipment medical equipment set/container packing checklist.

Common table of allowances item checklist.

Individual equipment/personal items checklist.

D-3. Personnel and Administrative Actions

The following actions are required:

Appoint a unit officer or NCO to ensure that all individual records (personnel, finance, medical, dental, and immunization) are current and complete.

Ensure that unit personnel have two sets of personal identification tags.

Ensure that required eyewear is on hand, to include laser protective eyewear and corrective lenses for the protective mask.

Issue a Code of Conduct card to each person.

Prepare and maintain readiness folders on all personnel, to include

- Emergency personnel data card.
- Preparation for overseas movement personnel checklist.

Prepare authorizations to start, stop, or change allotments.

Prepare DA Form 348 (Equipment Operator s Qualification Record [except aircraft]), if required.

Obtain driver s license required by host nation, if necessary.

Issue Geneva Convention Identification Card (if applicable).

Checklist for preparation of replacements for overseas movement.

Prepare change of address and directory record.

Prepare other locally required documents.

Required supply of administrative and PVNTMED-specific blank forms and supplies.

Appoint a unit safety officer.

Encourage all personnel to prepare a will and keep it updated. Do not wait until a warning order is issued to accomplish this task.

D-4. Security Actions

The following actions are required:

Appoint a unit security officer/NCO.

Initiate requests to obtain required security clearances for unit personnel.

Provide for the secure disposition of nondeployment personal items.

D-5. Operations and Training Actions

The following actions are required:

Maintain a pyramidal alert recall plan.

Determine requirements from other units or the installation to support movement and loading plans such as labor, materiel, and food service.

Check status of unit training.

Provide individual training.

- Keep individual training records up to date.
- Ensure that weapons familiarization/qualification is complete.
- Maintain training documents in the readiness folders.

D-6. Logistics Actions

The following actions are required:

Appoint a unit transportation liaison officer.

Prepare and submit unit movement and loading plans to the installation transportation office.

Request CONEX, military vans, or other hard-walled containers from the installation transportation support agency, if needed.

Request the required packing, loading, blocking, bracing, and tie-down materials from the installation transportation support agency. Also, designate teams to carry out movement functions.

Ensure that each individual has a complete issue of clothing and individual equipment (CTA 50-900) for destination AO. If clothing and equipment are to be issued upon arrival in the AO, forward requirements to the AO supporting logistics unit.

Ensure that the following are issued as required:

- Weapons and ammunition.
- Protective masks.
- Eyewear to include two pairs of prescription glasses, protective mask inserts, and ballistic-laser protective spectacles (B-LPS).
- Mission-oriented protective posture equipment.
- Individual skin decontamination kits.
- Individual biological/chemical warfare agent prophylactics and antidote kits/items.
- Flashlights.
- Pocket knives.
- Watches.
- Night vision goggles.
- Safety goggles.
- Special clothing for deployment area.
- Individual CTA items, as available.

D-7. Equipment, Accountability, Serviceability, and Testing Actions

Accounting for, determining the serviceability of, and/or testing the following equipment is required:

Medical equipment sets, kits, and outfits. Request replacement items for expired items such as reagents and pesticides. Request replacements for shortages.

Organizational tool kits.

Tentage, lighting, and heating equipment.

Office equipment (such as typewriters/computers, field desks), to include equipment service manuals. Required software for computers.

Vehicles.

Repair parts for vehicles, generators, and other organizational equipment.

Section II. ACTIONS TAKEN ON RECEIPT OF WARNING ORDER

D-8. Warning Order Receipt

Actions indicated in Section I have been accomplished. Upon receipt of a warning order, the unit commander initiates the implementing procedures.

D-9. Personnel and Administrative Actions

The following actions are required:

Place the pyramidal personnel recall plan into effect.

Conduct a meeting with key unit personnel.

Open unit journals and maintain daily logs.

Begin preparation of all items listed in each readiness folder.

Prepare and submit request for required personnel identification cards and tags.

Request that the supporting medical activity provide required immunizations for unit personnel.

Check with unit personnel on need for assistance in completing or updating wills, powers of attorney, and other documentation for families.

D-10. Operations and Training Actions

The following actions are required:

Submit request for use of training areas, as required.

Conduct new AO-specific training.

Post individual training records.

D-11. Logistics Actions

The following actions are required:

Send appointed liaison officer to the installation transportation office to arrange for needed transportation support.

Verify as being on hand or requested:

- Container expresses, military-owned demountable containers (MILVANs), or other hard-walled containers.
- Container express inserts, if required with CONEX.
- Packing, banding, blocking, and bracing materials.
- Prophylactics required for endemic diseases, chemical, or biological warfare agents.

Follow-up on outstanding requisitions.

Inspect individual clothing and equipment to include MOPP gear, protective masks, and B-LPS.

Section III. ACTIONS TAKEN ON RECEIPT OF MOVEMENT ORDER

D-12. General

Upon receipt of the movement order and after completing all required actions of the warning order, the unit completely and accurately performs the actions detailed in the following paragraphs.

D-13. Personnel and Administrative Actions

The following actions are required:

Initiate required or desired pay actions.

Complete installation clearances.

Request assistance in

- Preparing wills and powers of attorney, if necessary.
- Clearing quarters.
- Moving families.
- Disposing of personal property.

Orient personnel for new mission duties.

Complete unit fund and unit fund property actions.

Verify completion of required immunizations for all personnel.

D-14. Security Actions

The following actions are required:

Have written instructions available for handling classified documents. Some documents may accompany the unit, while others may be forwarded to the unit s destination or left behind.

Have written instructions available for the disposition of classified documents to be left behind (AR 25-400-2).

D-15. Logistics Actions

The following actions are required:

Fill equipment shortages and replace unserviceable items.

Draw and pack CONEXs and inserts or MILVANs.

Pack organizational equipment for movement.

Apply unit identification markings to all packages and containers.

Label CONEXs, MILVANs, or other hard-walled containers, as necessary, with to accompany troops (TAT) markings. Red disk TAT is used for items that must arrive overseas with the unit. Yellow disk TAT is for items, such as individual weapons and personnel records, which must be accessible to unit while it is en route to the overseas area.

Issue containers for packing and shipping personal property.

Prepare vehicles for movement; check with the transportation commander.

APPENDIX E

CONDUCT AN ENTOMOLOGICAL SURVEY

E-1. Prepare to Conduct an Entomological Survey

When preparing to conduct an entomological survey, several actions should be completed before departing the base camp/home base. These actions include, but are not limited to, the following:

a. Determine purpose of survey.

b. Establish size of area to be surveyed.

c. Determine number of personnel required to accomplish the survey.

d. Determine security support requirements, if applicable.

e. Ensure correct equipment and supplies are available for the type of survey to be conducted.

f. Obtain transportation for the mission.

g. Ensure personnel have food and drinking water for the mission.

h. Ensure personnel have individual life-support supplies and equipment, weapons, NBC protective ensemble, special clothing, and/or other essential personal items for the mission area. Items listed may or may not all be required.

E-2. Required Actions to Ensure Survey Covers Area

Upon arrival at the survey area, several actions are required to ensure that the survey covers the entire area. Actions required include, but are not limited to, the following:

a. Assign individuals to a specific grid of the area.

b. Issue survey equipment, if not already in individuals' possession.

c. Brief personnel on survey techniques, specific specimen (arthropod/rodent/animal) to be collected, and how to package or preserve the specimen. Some specimens must be collected and kept alive for some types of investigations.

d. Brief personnel on security measures that must be taken.

e. Brief personnel on safety measures that must be observed.

f. Establish time for all personnel to return to the assembly area (point at which survey controller is stationed).

g. Brief personnel on actions to take if they become disoriented and unable to find their way back to the assembly area.

h. Debrief personnel upon their return to the assembly area.

i. Establish a control log book/file for each survey mission that includes at least—

- Location of survey site.
- Date and time group for survey.
- Suspect vector/pest.
- Type of terrain in survey site.
- Other information as deemed necessary by survey team members.

j. Send personnel to survey areas missed in the initial grid sweeps, time permitting.

E-3. After-Action Requirements

When the survey team returns to the base camp/home base, several actions should be taken. These actions include, but are not limited to, the following:

a. Placing all specimen containers in the central processing area.

b. Assigning individuals to log the specimen containers into a control log book/file.

c. Assigning individuals to begin sorting specimens by species, if multiple species are included in a container.

d. Assigning individual(s) to begin specimen identification or packaging specimens for shipment to a supporting laboratory for identification.

APPENDIX F

PREVENTIVE MEDICINE SITE SURVEY CHECKLIST

F-1. Purpose

This checklist is to provide for an effective PVNTMED site survey within a field environment. It provides a guide that ensures all aspects of PVNTMED are included in the site survey.

F-2. Responsibilities

The checklist is for use by all PVNTMED personnel, the unit FST, or other persons conducting an evaluation of a unit s PVNTMED status.

F-3. Preventive Medicine Site Survey Checklist

1. INDIVIDUAL PREVENTIVE MEDICINE MEASURES				
A. SHOWERING DEVICES.	☐ NA	☐ SAT	☐ UNSAT	
B. HANDWASHING DEVICES.				
(1) OUTSIDE ALL LATRINES.	☐ NA	☐ SAT	☐ UNSAT	
(2) IN FOOD SERVICE AREA.	☐ NA	☐ SAT	☐ UNSAT	
C. SOAKAGE PITS LOCATED UNDER HANDWASHING AND SHOWERING DEVICES.	☐ NA	☐ SAT	☐ UNSAT	
D. LAUNDRY FACILITIES.	☐ NA	☐ SAT	☐ UNSAT	
2. WATER SUPPLY				
A. QUANTITY OF WATER REQUIRED FOR SOLDIERS IS AVAILABLE.				
(1) DRINKING (POTABLE) WATER:				
(A) COLD CLIMATE: ½ GALLON PER SOLDIER PER DAY.	☐ NA	☐ SAT	☐ UNSAT	
(B) HOT CLIMATE: 3 TO 4 GALLONS PER SOLDIER PER DAY.	☐ NA	☐ SAT	☐ UNSAT	
(2) FOOD PREPARATION:				
(A) MEAL, READY-TO-EAT: 2 QUARTS PER SOLDIER PER DAY.	☐ NA	☐ SAT	☐ UNSAT	
(B) A-, B- OR T-RATION.	☐ NA	☐ SAT	☐ UNSAT	
(3) NONPOTABLE: GENERAL PLANNING TO MEET WATER REQUIREMENTS IN AN ARID ZONE IS 3 TO 6 GALLONS PER SOLDIER PER DAY UNLESS IMPROVISED SHOWERING DEVICES ARE MADE AVAILABLE. IN THIS CASE, THE REQUIREMENT SHOULD BE INCREASED TO 15 GALLONS OR MORE PER SOLDIER PER DAY.	☐ NA	☐ SAT	☐ UNSAT	

B.	QUARTERMASTER WATER DISTRIBUTION POINTS.	☐	NA	☐	SAT	☐	UNSAT
C.	WATER SOURCES.						
(1)	SURFACE WATER.	☐	NA	☐	SAT	☐	UNSAT
(2)	GROUND WATER.	☐	NA	☐	SAT	☐	UNSAT
(3)	RAIN WATER.	☐	NA	☐	SAT	☐	UNSAT
(4)	MELTED ICE WATER.	☐	NA	☐	SAT	☐	UNSAT
(5)	MELTED SNOW WATER.	☐	NA	☐	SAT	☐	UNSAT
(6)	SEA WATER.	☐	NA	☐	SAT	☐	UNSAT
D.	WATER CONTAINERS.						
(1)	5-GALLON WATER CANS.	☐	NA	☐	SAT	☐	UNSAT
(2)	COLLAPSIBLE FABRIC DRUMS.	☐	NA	☐	SAT	☐	UNSAT
(3)	WATER TRAILER (400-GALLON).	☐	NA	☐	SAT	☐	UNSAT
(4)	OTHER WATER CONTAINERS.	☐	NA	☐	SAT	☐	UNSAT
3.	FOOD SERVICE SANITATION						
A.	TRANSPORTATION OF FOOD.						
(1)	VEHICLE USED IS CLEAN AND COMPLETELY COVERED.	☐	NA	☐	SAT	☐	UNSAT
(2)	VEHICLE USED TO TRANSPORT GARBAGE, TRASH, PETROLEUM PRODUCTS, OR SIMILAR MATERIAL IS THOROUGHLY CLEANED AND SANITIZED BEFORE IT IS USED TO TRANSPORT FOOD.	☐	NA	☐	SAT	☐	UNSAT
B.	FOOD STORAGE.						
(1)	REFRIGERATOR AVAILABLE TO STORE FOOD AT 45°F OR BELOW.	☐	NA	☐	SAT	☐	UNSAT
(2)	ICE CHEST AVAILABLE.	☐	NA	☐	SAT	☐	UNSAT
(3)	ICE OBTAINED FROM AN APPROVED SOURCE.	☐	NA	☐	SAT	☐	UNSAT
(4)	INSULATED FOOD CONTAINERS AVAILABLE AND USED.	☐	NA	☐	SAT	☐	UNSAT
(5)	DUNNAGE AVAILABLE FOR DRY STORAGE.	☐	NA	☐	SAT	☐	UNSAT
C.	MESS KIT LAUNDRY.						
(1)	CORRECT NUMBER OF CONTAINERS AVAILABLE PER LINE.	☐	NA	☐	SAT	☐	UNSAT
(2)	CONTAINERS CORRECTLY PREPARED AND AT RIGHT TEMPERATURES.	☐	NA	☐	SAT	☐	UNSAT
D.	SANITATION CENTER.						
(1)	CORRECTLY SET UP.	☐	NA	☐	SAT	☐	UNSAT

(2) CONTAINERS CORRECTLY PREPARED AND AT RIGHT TEMPERATURES. ☐ NA ☐ SAT ☐ UNSAT

4. FOOD PREPARATION AND SERVING

A. FOOD PROTECTED FROM CONTAMINATION DURING PREPARATION AND SERVING. ☐ NA ☐ SAT ☐ UNSAT

B. FOOD MAINTAINED AT CORRECT TEMPERATURE DURING SERVING (COLD 45°F OR BELOW AND HOT 140°F OR ABOVE). ☐ NA ☐ SAT ☐ UNSAT

C. CORRECT DISPOSAL OF LEFTOVERS. ☐ NA ☐ SAT ☐ UNSAT

5. WASTE DISPOSAL

A. HUMAN WASTE.

(1) LATRINES.

(A) FIXED LATRINE SITES. ☐ NA ☐ SAT ☐ UNSAT

(B) CHEMICAL LATRINES. ☐ NA ☐ SAT ☐ UNSAT

(C) AUTHORIZED USE OF BURN-OUT LATRINES. ☐ NA ☐ SAT ☐ UNSAT

(D) AUTHORIZED DIGGING OF LATRINES. ☐ NA ☐ SAT ☐ UNSAT

(E) NUMBER OF LATRINES 4 PERCENT OF MALE POPULATION/6 PERCENT OF FEMALE POPULATION. ☐ NA ☐ SAT ☐ UNSAT

(F) LATRINE CONSTRUCTION SUPPLIES (LUMBER, TOILET SEATS, #10 CANS, AND SCREENING). ☐ NA ☐ SAT ☐ UNSAT

(G) PAIL LATRINES. ☐ NA ☐ SAT ☐ UNSAT

(H) LATRINE LOCATION. 100 YARDS DOWNWIND (PREVAILING WIND) FROM THE UNIT FOOD SERVICE FACILITY AND AT LEAST 100 FEET FROM ANY UNIT GROUND WATER SOURCE. ☐ NA ☐ SAT ☐ UNSAT

(2) URINE DISPOSAL FACILITIES. ☐ NA ☐ SAT ☐ UNSAT

B. SOLID WASTE DISPOSAL/TEMPORARY STORAGE.

(1) LOCATION: 100 FEET FROM ANY NATURAL WATER SOURCE USED FOR COOKING OR DRINKING. ☐ NA ☐ SAT ☐ UNSAT

(2) SOLID WASTE WILL BE—

(A) BURIED. ☐ NA ☐ SAT ☐ UNSAT

(B) INCINERATED. ☐ NA ☐ SAT ☐ UNSAT

(C) HAULED AWAY. ☐ NA ☐ SAT ☐ UNSAT

6. ARTHROPOD CONTROL

A. IDEAL BIVOUAC SITE.

(1) HIGH, WELL-DRAINED GROUND AT LEAST 1 MILE FROM BREEDING SITES OF FLIES AND MOSQUITOES. ☐ NA ☐ SAT ☐ UNSAT

(2) 1 MILE FROM NATIVE HABITATS, EXCEPT IN STABILITY OPERATIONS AND SUPPORT OPERATIONS. ☐ NA ☐ SAT ☐ UNSAT

B. SCREENED BILLETS. ☐ NA ☐ SAT ☐ UNSAT

C. AVAILABILITY OF PESTICIDES. ☐ NA ☐ SAT ☐ UNSAT

D. ARTHROPOD RESISTANCE TO PESTICIDES. ☐ NA ☐ SAT ☐ UNSAT

E. INSECT REPELLENT AVAILABLE. ☐ NA ☐ SAT ☐ UNSAT

7. RODENT CONTROL

A. SIGHTINGS OF LIVE OR DEAD RODENTS. ☐ NA ☐ SAT ☐ UNSAT

B. DROPPINGS. ☐ NA ☐ SAT ☐ UNSAT

C. SMUDGE MARKS. ☐ NA ☐ SAT ☐ UNSAT

D. TRACKS. ☐ NA ☐ SAT ☐ UNSAT

E. GNAWINGS. ☐ NA ☐ SAT ☐ UNSAT

F. BURROWS/HOLES. ☐ NA ☐ SAT ☐ UNSAT

G. NESTS. ☐ NA ☐ SAT ☐ UNSAT

H. SOUNDS. ☐ NA ☐ SAT ☐ UNSAT

I. ODORS. ☐ NA ☐ SAT ☐ UNSAT

J. CONTROL MATERIAL AVAILABLE. ☐ NA ☐ SAT ☐ UNSAT

8. HEAT/COLD INJURIES

A. SEASONAL TEMPERATURES (DATA AVAILABLE). ☐ NA ☐ SAT ☐ UNSAT

B. SEASONAL WINDS (DATA AVAILABLE). ☐ NA ☐ SAT ☐ UNSAT

C. HUMIDITY (DATA AVAILABLE). ☐ NA ☐ SAT ☐ UNSAT

D. SEASONAL PRECIPITATION (DATA AVAILABLE). ☐ NA ☐ SAT ☐ UNSAT

E. ETHYL ALCOHOL AVAILABILITY. ☐ NA ☐ SAT ☐ UNSAT

F. ACCLIMATIZATION PROGRAM. ☐ NA ☐ SAT ☐ UNSAT

G. WET BULB GLOBE TEMPERATURE INDEX:

(1) DEVICE EMPLOYED BY UNIT. ☐ NA ☐ SAT ☐ UNSAT

(2) AVAILABLE FROM PREVENTIVE MEDICINE SERVICE.	☐ NA	☐ SAT	☐ UNSAT
(3) AVAILABLE FROM MILITARY METEOROLOGICAL SERVICE.	☐ NA	☐ SAT	☐ UNSAT

9. INDUSTRIAL CHEMICAL HAZARDS

A. GAS, LIQUID, OR SOLID CHEMICALS CORRECTLY STORED IN AREA.	☐ NA	☐ SAT	☐ UNSAT
B. ENCLOSED AREAS VENTILATED.	☐ NA	☐ SAT	☐ UNSAT
C. CORRECT SOLVENT BEING USED.	☐ NA	☐ SAT	☐ UNSAT
D. PROTECTIVE CLOTHING AVAILABLE.	☐ NA	☐ SAT	☐ UNSAT

10. NOISE HAZARDS

A. NOISE HAZARD AREAS CLEARLY MARKED.	☐ NA	☐ SAT	☐ UNSAT
B. NOISE SOURCES HAVE BAFFLING DEVICES IN USE.	☐ NA	☐ SAT	☐ UNSAT
C. HEARING PROTECTION DEVICES BEING USED.	☐ NA	☐ SAT	☐ UNSAT

11. FIELD SANITATION TEAM

A. FIELD SANITATION TEAM APPOINTED, IF REQUIRED.	☐ NA	☐ SAT	☐ UNSAT
B. FIELD SANITATION TEAM TRAINED.	☐ NA	☐ SAT	☐ UNSAT
C. FIELD SANITATION TEAM SUPPLIES AVAILABLE.	☐ NA	☐ SAT	☐ UNSAT
D. FIELD SANITATION TEAM PERFORMING DUTIES.	☐ NA	☐ SAT	☐ UNSAT
E. UNIT FIELD SANITATION SUPPLIES AVAILABLE IF FIELD SANITATION TEAM NOT REQUIRED	☐ NA	☐ SAT	☐ UNSAT

APPENDIX G

TRAINING PROCEDURES GUIDE

G-1. Purpose

The following guide is provided to help you design effective training, using the Five-P Model (planning, preparing, presenting, practicing, and performing).

G-2. Planning

- Review command guidance, unit missions, Army Training and Evaluation Plan, FM 25-100, and FM 25-101.
    - Review the training objective (task, conditions, and standards).
    - Determine if selected soldiers or if the entire unit is to be trained.
    - Determine the place and time of training.
    - Determine the resources and facilities available.
    - Consult training references.
    - Review coordinating instructions and special considerations.
- Use backward planning.
    - Determine what, where, when, and how the training will take place.
    - List all necessary actions to prepare for training.
    - Estimate the time needed for each action.
    - Arrange the necessary actions in reverse order, beginning with the last action and working back to the first.
    - Schedule the necessary actions.
- Develop the training outline.
- Write a training statement based on the training objective.
- Develop caution statements (personnel or equipment hazards or security classification).
- Select the presentation method (demonstration, demonstration with practice, conference, lecture, or combination of two or more).

- Address pretest, if applicable.

G-3. Preparing

- Prepare yourself.
  - Know how to perform the task being trained.
  - Know how to train others to perform the task.
- Prepare the soldiers.
  - Identify training target audience (individual soldier or units) to be trained.
  - Motivate the soldiers.
  - Announce the training.
  - Train any prerequisite tasks first.
- Prepare the equipment, facilities, and materials.
  - Reserve and requisition.
  - Receive equipment and materials before rehearsals.
  - Operate the equipment to become familiar with it and to check it for completeness and spare parts.
- Prepare the training support personnel.
  - Ensure they understand their support roles, to include their role as evaluators.
  - Ensure they are equipped and prepared to perform.

G-4. Presenting

- Provide enough information to permit practice.
- Give information that motivates.
- Present information that allows transfer of training, if applicable.

- Tell soldiers the exact tasks, conditions, and standards that they are expected to achieve.

G-5. Practicing

- Train each individual to perform the tasks step-by-step.
    - Give the soldiers a basic knowledge of, and familiarity with, each task.
    - Build confidence.
- Train the tasks to standard.
    - Improve soldier performance to meet the training objective standards.
    - Use sustainment training.
- Train the tasks in realistic settings.
    - Add realism to increase the challenge.
    - Train to achieve time requirements.
    - Use sustainment training to reinforce the training presented and performed during earlier sessions.

G-6. Performing

- Have individuals, teams, or units perform each trained task to reinforce training presented in earlier sessions.
- Evaluate performance with a post-training check, by sampling, by on-the-job observation, by test or evaluation by higher headquarters, or by internal evaluation.
- Record and report the results.

APPENDIX H

STRATEGIC DEPLOYABILITY DATA FOR THE MEDICAL DETACHMENT, PREVENTIVE MEDICINE

H-1. General

This appendix provides strategic deployability data for the medical detachment, PVNTMED for MRI and MF2K units. It is only a general reference and must be tailored to the specific unit and equipment.

H-2. Strategic Deployability Data

Table H-1 provides strategic deployability data for PVNTMED MRI units. Table H-2 provides strategic deployability data for PVNTMED MF2K units.

Table H-1. Deployability Data for PVNTMED MRI Units

UNIT	SRC	WEIGHT (LBS)	CUBIC FT	SQ FT	TRANSPORT MODES							PASSENGER (AIR)	
					AIR				SURFACE				
					PURE FLEET TOTAL				SHIP BY % SQ FT		RAIL		
					C130	C141	C17	C5	RORO	LMSR	(STD 89' CAR)	PAX	B747 (400 SEAT)
MED DET, PVNTMED*	08429A000	25,942	2,453	320	2	1	1	1	0.2%	0.1%	1	13	3%
MED DET, PVNTMED**	08429A000	82,504	9,946	1,357	2	4	1	1	0.8%	0.5%	3	13	3%

NOTE: The percentage figures in the RORO, LMSR, and B747 columns are the SRC space requirements of the ship capacity.

LEGEND:

LMSR	Large Medium-Speed Roll-On/Roll-Off	*	(MRI-OBJ) without vehicles and equipment
PAX	Passenger	**	(MRI-OBJ) with vehicles and equipment
RORO	Roll-On/Roll-Off		
SRC	Standard Requirement Code		
STD	Standard		

Table H-2. Deployability Data for PVNTMED MF2K Units

UNIT	SRC	WEIGHT (LBS)	CUBIC FT	SQ FT	TRANSPORT MODES							PASSENGER (AIR)	
					AIR				SURFACE				
					PURE FLEET TOTAL				SHIP BY % SQ FT		RAIL		
					C130	C141	C17	C5	RORO	LMSR	(STD 89' CAR)	PAX	B747 (400 SEAT)
MED DET, PVNTMED (SANITATION)*	08498A000	23,702	2,217	320	1	1	1	1	0.2%	0.1%	1	10	3%
MED DET, PVNTMED (SANITATION)**	08498A000	49,742	6,141	986	3	2	1	1	0.6%	0.4%	2	10	3%
MED DET, PVNTMED (ENTO)*	08499L000	24,384	2,317	320	1	1	1	1	0.2%	0.1%	1	10	3%
MED DET, PVNTMED (ENTO)**	08499L000	72,266	8,502	1,135	3	2	1	1	0.6%	0.4%	2	10	3%

NOTE: The percentage figures in the RORO, LMSR, and B747 columns are the SRC space requirements of the ship capacity.

LEGEND:

LMSR	Large Medium-Speed Roll-On/Roll-Off	*	(MF2K-OBJ) without vehicles and equipment
PAX	Passenger	**	(MF2K-OBJ) with vehicles and equipment
RORO	Roll-On/Roll-Off		
SRC	Standard Requirement Code		
STD	Standard		

GLOSSARY

ABBREVIATIONS, ACRONYMS, AND DEFINITIONS

ABCA American, British, Canadian, and Australian

ACR armored cavalry regiment

AFMIC Armed Forces Medical Intelligence Center

AMEDD Army Medical Department

AMEDDC&S Army Medical Department Center and School

AML area medical laboratory

AO area of operations

AOC area of concentration

AR Army regulation

ASCC Army Service Component Command

ASMB area support medical battalion

attn attention

B-LPS ballistic-laser protective spectacles

BW biological warfare

C2 command and control

CA Civil Affairs

cc centimeter(s)

Chlor-Floc™ A new individual water treatment process. Water is placed in a 1-quart plastic bag with a coagulant; after 30 minutes the water is strained into the individual canteen for consumption.

CHPPM Center for Health Promotion and Preventive Medicine

CHS combat health support

CJCS Chairman of the Joint Chiefs of Staff

CMO civil-military operations

COA course of action

CONEX container express

CONUS continental United States

CTA common table of allowances

CZ combat zone

DA Department of the Army

DE directed energy

DNBI disease and nonbattle injury(ies)

DOD Department of Defense

EAC echelons above corps

EPW enemy prisoner of war

F Fahrenheit

FEMA Federal Emergency Management Agency

FM field manual

FMMEP Foreign Medical Materiel Exploitation Program

FOX M93 Series NBC Reconnaissance Vehicle System

FST field sanitation team

HIV human immunodeficiency virus

HN host nation

IV intravenous

MEDCOM medical command

MEDSURV medical surveillance

MF2K Medical Force 2000

MILVAN military-owned demountable container

MOGAS motor gasoline

MOPP mission-oriented protective posture

MOS military occupational specialty

MOUT military operations in urbanized terrain

MP military police

MRE meals, ready to eat

MRI medical reengineering initiative

MTOE modification tables of organization and equipment

NA not applicable

NATO North Atlantic Treaty Organization

NBC nuclear, biological, and chemical

NCO noncommissioned officer

NGO nongovernmental organizations

OIC officer in charge

OPLAN operation plan

OPORD operation order

PDU pesticide dispersal unit

PMCS preventive maintenance checks and services

PMM preventive medicine measures

PSRD personnel shipment readiness data

PVNTMED preventive medicine

PVO private volunteer organizations

QSTAG Quadripartite Standardization Agreement

S&TI scientific and technical intelligence

sat satisfactory

SOF special operations forces

SOP standing operating procedure

SPF sun protection factor

STANAG standardization agreement

TAML Theater Army Medical Laboratory

TAT to accompany troops

TB technical bulletin

TDA tables of distribution and allowances

TM technical manual

TO theater of operations

TOE table(s) of organization and equipment

unsat unsatisfactory

US United States

USAMRIID US Army Medical Research Institute of Infectious Diseases

UV ultraviolet

WMD weapons of mass destruction

WRAIR Walter Reed Army Institute of Research

REFERENCES

DOCUMENTS NEEDED

These documents must be available to the intended users of this publication.

NATO STANAGs

2037. *Vaccination of NATO Forces. Edition 6.* (Latest Amendment, 3 September 1997.)
2048. *Chemical Methods of Insect and Rodent Control AMedP-3. Edition 2.* (Latest Amendment, 10 September 1986.)
2050. *Statistical Classification of Diseases, Injuries, and Causes of Death. Edition 5.* (Latest Amendment, 21 October 1991.)
2136. *Minimum Standards of Water Potability in Emergency Situations. Edition 3.* (Latest Amendment, 7 September 1995.)
2885. *Emergency Supply of Water in War. Edition 3.* (Latest Amendment, 1 October 1997.)
2908. *Preventive Measures for an Occupational Health Programme. Edition 2.* (Latest Amendment, 23 May 1995.)
2981. *Prevention of Cold Injury. Edition 1.* (Latest Amendment, 24 September 1991.)

ABCA QSTAGs

245. *Minimum Requirements for Water Potability (Short and Long Term Use). Edition 2.* (Latest Amendment, 10 September 1985.)
889. *Essential Field Sanitary Requirements.* 27 February 1990.

Joint and Multiservice Publications

AR 40-562. *Immunizations and Chemoprophylaxis*. (AFJI 48-110; BUMEDINST 6230.15; CG COMDTINST M6230.4E.) 1 November 1995.
Joint Publication 4-02. *Doctrine for Health Service Support in Joint Operations*. 26 April 1995.
Chairman of the Joint Chiefs of Staff Memorandum MCM-251-98. *Deployment Health Surveillance and Readiness*. 4 December 1998.
DOD Directive 6490.2. *Joint Medical Surveillance.* 30 August 1997.
DOD Instruction 4150.7. *DOD Pest Management Program.* 22 April 1996.
DOD Directive 6490.3. *Implementation and Application of Joint Medical Surveillance for Deployments.* 7 August 1997.
FM 8-285. *Treatment of Chemical Agent Casualties and Conventional Military Chemical Injuries*. (NAVMED P-5041; AFJMAN 44-149; FMFM 11-11.) 22 December 1995.

Army Publications

AR 25-400-2. *The Modern Army Recordkeeping System (MARKS)*. 26 February 1993.

AR 40-5. *Preventive Medicine*. 15 October 1990.
AR 40-226. *Annual Historical Report AMEDD Activities (Reports Control Symbol MED-41[R4])*. 18 September 1973.
AR 55-113. *Movement of Units Within Continental United States*. 19 July 1973.
AR 71-32. *Force Development and Documentation Consolidated Policies*. 3 March 1997.
AR 220-10. *Preparation for Oversea Movement of Units (POM)*. 15 June 1973.
FM 8-10-1. *The Medical Company Tactics, Techniques, and Procedures*. 29 December 1994.
FM 8-10-8. *Medical Intelligence in a Theater of Operations.* 7 July 1989.
FM 8-10-24. *Area Support Medical Battalion Tactics, Techniques, and Procedures*. 13 October 1993. (Change 1, 3 October 1995.)
FM 8-42. *Combat Health Support in Stability Operations and Support Operations*. 27 October 1997.
FM 8-50. *Prevention and Medical Management of Laser Injuries*. 8 August 1990.
FM 8-51. *Combat Stress Control in a Theater of Operations Tactics, Techniques, and Procedures*. 29 September 1994. (Change 1, 30 January 1998.)
FM 21-10. *Field Hygiene and Sanitation.* (MCRP 4-11.1D.) 21 June 2000.
FM 21-10-1. *Unit Field Sanitation Team*. 11 October 1989.
FM 25-100. *Training the Force*. 15 November 1988.
FM 25-101. *Battle Focused Training*. 30 September 1990.
FM 55-65. *Strategic Deployment*. 3 October 1995.
FM 100-17. *Mobilization, Deployment, Redeployment, Demobilization*. 28 October 1992.
TB Med 577. *Occupational and Environmental Health: Sanitary Control and Surveillance of Field Water Supplies*. 7 March 1986.
DA Form 348. *Equipment Operator's Qualification Record (Except Aircraft)*. 1 October 1964.

Common Tables of Allowances

CTA 8-100. *Army Medical Department Expendable/Durable Items.* 31 August 1994.
CTA 50-900. *Clothing and Individual Equipment*. 1 September 1994.
CTA 50-909. *Field and Garrison Furnishings and Equipment*. 1 August 1993.
CTA 50-970. *Expendable/Durable Items (Except: Medical, Class V, Repair Parts, and Heraldic Items)*. 21 September 1990.

Tables of Organization and Equipment

08498L000. *Medical Detachment, Preventive Medicine (Sanitation).*
08499L000. *Medical Detachment, Preventive Medicine (Entomology).*

READINGS RECOMMENDED

These readings contain relevant supplemental information.

Joint and Multiservice Publications

AR 40-12. *Quarantine Regulations of the Armed Forces.* (SECNAVINST 6210.2A; AFR 161-4.) 24 January 1992.

AR 40-31. *Armed Forces Institute of Pathology and Armed Forces Histopathology Centers.* (BUMEDINST 6510.2F; AFR 160-55.) 4 June 1993.
AR 740-7. *Safeguarding of DLA Sensitive Inventory Item, Controlled Substances and Pilferable Items of Supply.* (DLAR 4145.11; NAVSUPINST 4440.146B; MCO 4450.11.) 4 November 1985.
FM 8-9. *NATO Handbook on the Medical Aspects of NBC Defensive Operations, AMED P-6(B).* (NAVMED P-5059; AFJMAN 44-151.) 1 February 1996.
FM 55-12. *Movement of Units in Air Force Aircraft*. (AFM 76-6; FMFM 4-6; OPNAVINST 4630.27A.) 10 November 1989. (Change 1, 28 December 1992.)
TM 8-340. *Methods of Preparing Pathologic Specimens for Storage and Shipment.* (NAVMED P-5083; AFM 160-28; VA IB 11-13.) 15 October 1980.
TM 38-250. *Preparing Hazardous Materials for Military Air Shipments.* (AFJM 24-204; NAVSUP PUB 505; MCO P4030.19G; DLAI 4145.3.) 1 March 1997.
TM 55-603. *Movement of Military Impedimenta by Commercial Carriers*. (NAVSUPINST 4600.72B, AFR 75-5; MCO P4600.24C.) 28 October 1977. (Reprinted with basic including Change 1, 15 October 1979.)

Army Publications

AR 15-6. *Procedures for Investigating Officers and Boards of Officers*. 11 May 1988. (Change 1, 30 September 1996.)
AR 25-1. *Army Information Management.* 15 January 2000.
AR 25-30. *The Army Publishing and Printing Program*. 21 June 1999.
AR 25-55. *The Department of the Army Freedom of Information Act Program*. 14 April 1997. (Change 1, 1 November 1997.)
AR 27-10. *Legal Services: Military Justice*. 24 June 1996. (Change 1, 20 August 1999.)
AR 30-1. *The Army Food Service Program*. 1 January 1985. (Reprinted with basic including Changes 1 5, 15 August 1989.)
AR 30-21. *The Army Field Feeding System*. 24 September 1990.
AR 40-66. *Medical Record Administration and Health Care Documentation*. 3 May 1999.
AR 40-400. *Patient Administration*. 1 October 1983.
AR 190-11. *Physical Security of Arms, Ammunition, and Explosives*. 30 September 1993. (Change 1, 12 February 1998.)
AR 215-1. *Morale, Welfare, and Recreation Activities and Nonappropriated Fund Instrumentalities*. 25 October 1998.
AR 220-45. *Duty Rosters*. 15 November 1975.
AR 310-25. *Dictionary of United States Army Terms (Short Title: AD).* 15 October 1983. (Reprinted with basic including Change 1, 21 May 1986.)
AR 310-50. *Authorized Abbreviations and Brevity Codes*. 15 November 1985.
AR 385-40. *Accident Reporting and Records*. 1 November 1994.
AR 600-8-1. *Army Casualty Operations/Assistance/Insurance*. 20 October 1994.
AR 600-8-10. *Leaves and Passes*. 1 July 1994.
AR 600-8-101. *Personnel Processing (In-and-Out and Mobilization Processing)*. 12 December 1989. (Reprinted with basic including Change 1, 26 February 1993; Change 2, 1 March 1997.)
AR 600-9. *The Army Weight Control Program*. 1 September 1986. (Reprinted with basic including Changes 1 2, 10 June 1987.)

AR 614-200. *Enlisted Assignments and Utilization Management*. 31 October 1997.
AR 635-200. *Enlisted Personnel*. 5 July 1984. (Reprinted with basic including Changes 1 14, 17 September 1990; Change 15, 26 June 1996.)
DA Pam 25-30. *Consolidated Index of Army Publications and Blank Forms.* (48X Microfiche or CD-ROM) (Issued Quarterly)
DA Pam 600-8. *Management and Administrative Procedures*. 25 February 1986. (Reprinted with basic including Change 1, 1 August 1986.)
FM 8-10. *Health Service Support in a Theater of Operations*. 1 March 1991.
FM 8-10-7. *Health Service Support in a Nuclear, Biological, and Chemical Environment*. 22 April 1993. (Change 1, 26 November 1996.)
FM 8-55. *Planning for Health Service Support*. 9 September 1994.
FM 8-250. *Preventive Medicine Specialist*. 27 January 1986. (Reprinted with basic including Change 1, 12 September 1986.)
FM 41-10. *Civil Affairs Operations*. 11 January 1993.
FM 55-9. *Unit Air Movement Planning*. 5 April 1993. (Reprinted with basic including Change 1, 14 October 1994.)
FM 55-15. *Transportation Reference Data*. 27 October 1997.
FM 55-20. *Army Rail Transport Units and Operations*. 31 October 1986. (Reprinted with basic including Change 1, 3 October 1988.)
FM 100-10. *Combat Service Support*. 3 October 1995.
FM 101-5. *Staff Organization and Operations*. 31 May 1997.
TM 55-601. *Railcar Loading Procedures*. 11 August 1971. (Reprinting with basic including Change 1, 18 December 1972.)

Army and Air Force Exchange Service Manual

24-4. *Food Operations.* (Available from US Government Printing Office, Washington, DC 20402.)

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