
FIELD SANITATION TEAMS, PREVENTIVE MEDICINE MEASURES KEY DURING DEPLOYMENTS

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There are few veteran commanders who can relate their combat experiences without at the same time vividly describing the overwhelming influence that the physical environment, climate, and disease had on their decision making and on their mission execution. In combat, disease has always taken a greater toll on manpower than has battle injury. This is true even in the 20th century when man has allegedly conquered his age-old microscopic enemies.

In Vietnam, over two-thirds of U.S. Army hospital admissions were due to disease. In 1968 alone, there were 943,809 man-days lost due to disease, which in theory translates into a bit more than two division-months. There are few indications that this grim health picture will be any different in future wars, but the incidences of disease can be materially reduced through cooperation between combat commanders and their supporting medics.

History

The forerunner of the field sanitation team (FST) was established during WWII when it became apparent that the control of malaria and other arthropod-borne diseases was beyond the capabilities of engineer and medical units. Commanders of company-size units were then required to appoint malaria control details. In 1956, animal pests were added to the duties of the malaria control details. In 1958, health problems encountered in the field by the American task force in Lebanon focused on the need for a team with broader training and knowledge of the relationship of effective preventive medicine measures (PMM) to individual Soldier health

and unit mission accomplishment.

Later, the malaria control detail became the field sanitation team. Training was expanded to include field water supply, food service sanitation, waste disposal, and personal hygiene. The effectiveness of the FST in reducing disease and non-battle injuries (DNBIs) is firmly established in military history. DNBI describes a person who is not a battle casualty, but who is lost to his organization by reason of disease or injury. This includes those dying from disease or injury, or by reason of being missing where the absence does not appear to be voluntary, due to enemy action, or to being interned.

Impact

Communicable diseases are illnesses that can be transmitted from person to person or from animal to person. These diseases are caused by: direct contact with infected person(s); exposure to bodily discharges; bites of animals, insects and rodents; or

found in the air, food, water and milk products. Communicable diseases can be broken down into five different categories: respiratory diseases (common cold and pneumonia), intestinal diseases (dysentery, cholera, typhoid, paratyphoid fevers), insect borne diseases (malaria, typhus, yellow fever, dengue), sexually transmitted diseases (syphilis, gonorrhea, chancroid, AIDS), and miscellaneous diseases (tetanus, rabies, dermatophytosis, tuberculosis). It is the inherent responsibility of the FST to individually assess the risk and minimize the impact of the aforementioned communicable diseases on combat operations. Above all, personal hygiene is the most important factor in the prevention of communicable diseases.

Diarrheal disease is contracted from contaminated water and food, and can have a catastrophic impact on the fighting force. Not one of Rommel's highly successful generals was available to help him when he needed them most for his desert campaign in North Africa at El Alamein. They had all been medically evacuated due to illness. Rommel himself was not even available because he was in Germany recovering from hepatitis. His chief of staff, intelligence officer, and operations officer were all evacuated prior to or during the battle with Patton's 3rd Army due to amoebic dysentery. In today's force, the impacts of contracting a lifelong disease such as hepatitis have second and third order effects that include non-deployability of the service member, an elevated level of lifelong healthcare, and decreased quality of life. The FST helps provide safe water for drinking and bathing by monitoring the unit water supply for



U.S. Army photo

A malaria control unit receives training in drainage construction at Camp Plauche, Louisiana.

chlorine and disinfecting as required. Water is essential to the army in the field, both for drinking and bathing. Routine inspection of water containers and the unit's water supply helps eliminate such waterborne diseases as hepatitis, typhoid, and amoebic dysentery and preserve combat power vital to the mission.

The conditions under which food is transported, stored, prepared, and served can have a direct bearing on the success of a mission. Monitoring a unit's field food operations is vital to Soldiers' health as well as the overall morale of the unit. The FST monitors the preparation, distribution, and serving of all food to their organic units.

The proper disposal of all wastes is essential in preventing the spread of disease. This duty is perhaps second only to ensuring safe drinking and bathing water for the unit. Camps with improper waste disposal facilities soon became breeding grounds for a multitude of pests such as flies and rats.

Arthropod-borne illnesses can adversely affect military operations. Only 100,000 of Napoleon's 600,000-man army returned to France from Russia in 1812. They were destroyed by guerrillas, disease, and cold injury, which forced their retreat. There were 70,000 combat losses, but 430,000 DNBI losses. It's estimated that more than 100,000 soldiers of Le Grand Armèe were lost due to louse-borne typhus. During the campaign for the Solomon Islands, malaria infection resulted in eight times more casualties than were caused by the Japanese. The Department of Defense Arthropod Repellent System consists of a properly worn (sleeves down with pants tucked into boots) uniform treated with permethrin and DEET lotion applied to all exposed skin and is 100-percent effective against arthropod-borne disease. It is also necessary to bathe regularly and sleep under a bednet. The FST is responsible for ensuring uniform standards and the distribution and education pertaining to the use of arthropod repellants.

Heat is the most lethal of all the factors working against field forces. Heat can be a tactical weapon as was proven in the 1967 Egyptian-Israeli conflict. The Egyptians suffered 20,000 deaths due to heat when the Israelis severed the Egyptians' water supply lines. In the 1982 U.S. Sinai Peacekeeping action, 35 Soldiers from an airborne company were so badly dehydrated that they required intravenous fluids to recover. Cold is also incapacitating on the battlefield. More than 90,000 U.S. Soldiers were admitted to hospitals with cold injuries during WWII. The FST conducts daily monitoring of the heat index in order to properly advise their respective commands of the heat category and subsequent work-rest cycles.

The FST is an invaluable asset as it is responsible for those PMM that affect units as a whole or are beyond the resources of the individual Soldier. This is key, as unit effectiveness is dependent on the health of its Soldiers. When PMM breakdowns occur and units are unable to carry out their missions due to sick Soldiers, the success of an army, the outcome of a war, and the fate of a nation may be seriously impaired. The success of operations is directly related to how well DNBI is prevented through effective PMM in the units. As a tactical measure, the units with sound PMM can maintain and exploit fighting strength, particularly when the enemy may expect weakness due to DNBI in light of historical data.

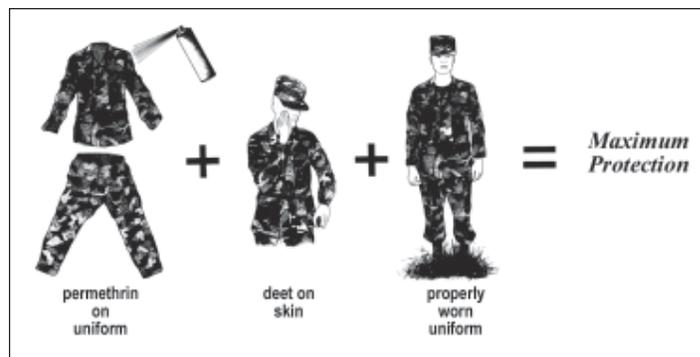


Figure 1 — DoD Insect Repellent System

Composition

A field sanitation team must consist of at least two personnel, one of which must be an NCO. For units with organic medical personnel, they will be made a part of the FST due to their established medical knowledge. The important thing to remember is that the team should have enough members to accomplish its mission throughout the unit's area of operations. To successfully execute its mission, FST members must be selected from personnel whose normal field duties will allow ample time for their duties as an FST member. Every FST member will be trained and certified in Field Sanitation by supporting Preventive Medicine assets and have no less than six months time remaining with the unit. Units that consist of teams that operate individually (as is often the case in COIN), FST members should be placed in each team to provide support for the Soldiers. In Operation Iraqi Freedom V, the security had to be "won" before progress can be established, and it was necessary to put coalition forces in a position to replicate, for lack of a better term, police forces. This is referred to as the combat outpost (COP) model. Unfortunately, in many instances, Soldiers previously chosen to perform FST functions were separated from their company/teams. This left the company/team command without that resource and dependent on the brigade PM asset.

When a commander encounters a problem beyond the best efforts of the FST, assistance is requested from supporting preventive medicine assets. This support is located in the brigade support medical company of each brigade combat team (BCT) and consists of one Environmental Science Officer (72D/E) and one Preventive Medicine Specialist (68S). They comprise the Level II preventive medicine capability and work with unit-level FSTs to ensure the health of the command is protected.

Duties

The commander is ultimately responsible for ensuring the health of the troops. Therefore, the commander must have a clear understanding of the direct relationship between a Soldier's health and the success of a mission, and emphasize this at all levels. The commander appoints a functional FST to assist in ensuring preventive medicine measures are practiced at all levels. Command emphasis cannot be overstated at this point; units where PMMs are not stressed suffer significantly higher DNBI rates.

To properly assist the commander in assessing the medical threat, FST members must be able to perform several tasks. FST members participate in the Operational Risk Management (ORM) process in

identifying Occupational and Environmental Health/Endemic Diseases (OEH/ED) hazards and assessing the threat associated with these hazards. Commanders will therefore be able to make better-informed decisions and risk assessments based upon valuable input from the FST.

To perform its function, the FST must be equipped properly. Commanders must make it a priority to ensure all equipment items are on hand, serviceable, and repaired/replaced as necessary. A common misconception is that a FST “kit” exists. The equipment necessary to perform FST duties is actually better explained as an assemblage of items, most of which can be obtained through normal supply channels. Enough items should be acquired to support the entire unit, and these supplies should be placed where they can be used by the FST members or issued to Soldiers as needed (See Figure 2 for minimum recommended list per Soldier). One central location may not accomplish this.

Counterinsurgency and the “Surge”

In the multi-phased approach to conducting COIN operations, phase one concentrates enough armed forces to destroy or expel the main body of armed insurgents to prepare the area for the rest of the counterinsurgency processes. As a surge brigade, we began this process on or about May 2007. In phase two, the counterinsurgent switches targets from the armed insurgents to the population. Counterinsurgent forces are assigned to sectors, subsectors, and other divisions with the principal mission of protecting the population and civic action teams. The troops are deployed to locations where the people are, not to locations deemed to possess military value. This is how Soldiers lived during OIF V from our brigade — on remote outposts where either you brought what you needed or you went without at least for several weeks. Phase three consists of maintaining contact with and control of the population. These objectives included reestablishing authority over the population, physically isolating the population from the guerrillas, and gathering intelligence that leads to the next step. Phase four consists of eradicating insurgent secret political organizations

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which requires time and patience.

The most important military assets in COIN are disciplined Soldiers and with adaptive, intelligent, and self-aware leaders — one important aspect of self-awareness is PMM and field sanitation. So the fact that command emphasis on an imperative such as preventive medicine is a no-brainer; what commanders care about, their troops care about. FSTs can even be stood up during a deployment and equipment acquired.

During pre-deployment training and preparation, all our 2nd BCT units practiced tactics, techniques and procedures (TTPs) that had been gleaned from lessons learned in previous combat rotations during Operation Iraqi Freedom. Everything was rehearsed and well planned by leaders with previous combat experience with the 3rd Infantry Division. Everything that is except being split-up and dispersed over hundreds of miles and operating out of patrol bases, combat outposts, and joint security stations. The current mind-set in areas such as Iraq and Afghanistan is that contractors will augment and, in some cases, perform FST duties. However, during the surge when forward operating bases were at maximum capacity, these tasks proved to be challenging at best. In addition, with the establishment of combat outposts and joint security stations wherein Soldiers “live with” the population, small unit commanders quickly found themselves without adequate support and were forced to rely on brigade-level Preventive Medicine assets which were unable to perform the needed tasks with the required frequency. COIN (as defined by FM 3-24) has changed the face of battle from that of a linear environment to adapting to an asymmetric/nonlinear fight without the necessary doctrinal adaptations. For example, contractors were challenged to provide hot meals during this time of rapid expansion. Also, many Soldiers bartered on the local

economy for food due to repeated consumption of MREs (Meals, Ready to Eat). While locations with 150 personnel or greater were authorized hot meals, others had to provide their own meals via field kitchens (mobile kitchen trailer [MKT], containerized kitchen trailer [CKT], etc.). This was an issue as personnel that performed those functions were tasked to support gun truck escort details and were therefore unavailable for operation of the MKTs. It’s not that PMMs are more or less important during COIN versus other types of military operations; on the contrary — PMMs are essential to successful mission accomplishment no matter what the battlefield “looks” like. However, operations like those we executed during OIF V required small, self sufficient decentralized units that operated independently.

Conclusion

The U.S. Army has taken remarkable strides to adapt to the demands of counterinsurgency in Iraq in a process it calls the “Modular Army.” Stepping away from the 15,000-Soldier division as the center of gravity of the Army, this program creates more nimble 4,000-Soldier units of action able to operate independently over a wide area. The Army is also taking steps to increase the numbers of Soldiers with much-needed special skills including counterintelligence and civil affairs Soldiers. These special skills should also include training on individual preventive medicine measures, which are just as necessary as combat lifesaver skills.

Counterinsurgency requires the integration of all elements of national power — diplomacy, information operations, intelligence, financial, and military — to achieve the predominantly political objectives of establishing a stable national government that can secure itself against internal and external threats. Our Soldiers performing these multi-faceted missions need to focus on the mission — not on preventable health problems. Integration and emphasis are the keys to successful long-term power projection in COIN. We as leaders cannot afford to lose any Soldiers due to preventable illness.

It will pay dividends to train all Soldiers in individual PMMs, and pre-deployment preparation is the key. Every Soldier should complete Diseases of Military Importance

Figure 2 — Supply Items for Individual Preventive Medicine Measures

ITEM	NSN	UI	AUTH QTY	CL	COST (EA)	REMARKS
Water Purification Tablet Chlorine (720 tablets)	6850-01-352-6129	PG	1/10 indiv	2	\$102.15	May substitute with Iodine Tablets (6850-00-985-7166) below
or						
Water Purification Tablet Iodine, 8 mg (50 tablets)	6850-00-985-7166	BT	2/indiv	2	\$1.55	May substitute with Chlorine Tablets (6850-01-352-6129) above
Sunscreen, SPF 15, 4 oz	6505-01-121-2336	EA	2/indiv	8	\$1.39	
Lipstick, Anti-chap, SPF 15 (144 tubes/PG)	6508-01-436-0607	PG	2/indiv	8	\$107.69	
Hand Sanitizer	8520-01-490-7358	BX	2/indiv	NA	\$40.08	
Insect Repellent, Personal Application, 2 oz tube (12 tubes/BX)	6840-01-284-3982	BX	4 tubes/indiv	3	\$30.33	Special handling requirements (MSDS required)
Insect Repellent, Clothing Application IDA Kit (12 kits/BX)	6840-01-345-0237	BX	4 kits/indiv	3	\$36.02	Special handling requirements (MSDS required)
Insect Repellent, Clothing and Bednet Treatment, Aerosol, 6 oz (12 cans)	6840-01-278-1336	BX	1 can/indiv	3	\$38.35	
Insect Net Protector, Field Type (Bednet)	7210-00-266-9736	EA	1/indiv	2	\$28.40	Bednet mesh size not suitable for protection against sandflies; may substitute with Pop-Up Bednet (3740-01-518-7310) below
Pole, Folding Cot, Insect Net Protector	7210-00-267-5641	SE	1/indiv	2	\$5.60	For use with Insect Net Protector /Bednet (7210-00-266-9736) above
or						
Bed Net, Pop-Up, Self-Supporting Low Profile Bed Net (SSLPB), Treated with Permethrin Repellent	3740-01-518-7310	EA	1/indiv	NA	\$76.80	May substitute with Insect Net Protector/Bednet (7210-00-266-9736) & Poles (7210-00-267-5641) above
Plug, Ear, Noise Protection, Universal Size, Vinyl Foam, Cylindrical (400 earplugs/box)	6515-00-137-6345	BX	1/100 indiv	8	\$29.58	

(MD0152) at <https://atiam.train.army.mil>, and every staff sergeant (E6) and above should complete the Field Sanitation Team Certification Course. Caring leaders will equip their Soldiers with these skills, which are every bit as important as individual weapons qualification and combatives. In fact, they are listed under “Fight” in the Warrior Tasks and Battle Drills.

Our continuous missions within other countries that potentially expose us to hazards increase the importance of the FST mission. Today, more than ever, commanders must be aware of the hazards their Soldiers face and enforce PMMs. The expeditionary nature of today’s U.S. Army requires all assigned to be fit to fight and ready

to win. Preventive medicine conducted through field sanitation teams helps ensure that vital combat power is preserved so that it may be brought to bear on the enemy.

It was truly an honor and an inspiration to serve in Iraq with a few of the finest Soldiers our country has ever produced. Their spirit of selfless service, professionalism, and determination to fight so that others can live in freedom should humble all of us.

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