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## MEDICAL LOGISTICS BASED ON ISAF OPERATION

***Abstract:** This article describes the functions of the medical logistics system and its role in sustaining the Army Health System mission, based on specific principles. There is also the role and implication of the International Security Assistance Force in medical evacuation missions shown.*

***Keywords:** medical support, medevac, ISAF*

### INTRODUCTION

Logistics is the science of planning, preparing, executing, and assessing the movement and maintenance of forces. Medical Logistics is distinguished from line logistics in that its products and services are used almost exclusively by the medical system and are critical to the success of the Army Health System (AHS) mission. These products and services are used to provide medical support and are focused on the specialized requirements of the multifunctional Military Health System (MHS). To reduce morbidity and mortality among soldiers, whereas line logistics is focused upon the sustainment of major end items and general troop support to maximize combat power.

The Army Medical Logistics (MEDLOG) system is an integral part of AHS in that it provides intensive management of medical products and services that are used almost exclusively by AHS and are critical to its success. Also, the key to this success is the delivery of a MEDLOG capability that anticipates the needs of the customer and is tailored to continuously provided end-to-end sustainment of the AHS mission throughout full spectrum operations.

### 1. MEDICAL SUPPORT

Medical logistics support is characterized by goals, policies, procedures, and organizational structures and is directly related to overall AHS support. It interfaces as a facilitating-type subsystem responsive first and foremost to patient care and secondly to the Army logistics system.

The provision of MEDLOG support requires collaboration between the medical logisticians, clinicians, and other healthcare providers within the operational environment and encompasses the following functions<sup>2</sup>:

- Medical materiel procurement and distribution;

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<sup>2</sup> D. J. Reimer, *Army Medical Logistics*, Training and Doctrine Library, [www.train.army.mil](http://www.train.army.mil) [downloaded on: 29.04.2014].

- Medical equipment maintenance and repair;
- Optical fabrication and repair;
- Management of patient movement items;
- Production of medical gases;
- Blood storage and distribution;
- Medical hazardous waste management;
- Management of medical facilities and infrastructure;
- Medical contracting support.

Logistics support may be executed on the strategic, operational or tactical level. These three levels of logistics support correlate to the three levels of war and are dependent on DOD/Army distribution management systems and platforms for the physical movement and handling of Class VIII supplies.

1. **Strategic logistics** supports the attainment of broad goals and objectives established by the President and Secretary of Defense in national security policies.
2. **Operational logistics** supports the commander's plan in either a mature or austere theater.
3. **Tactical logistics** supports the commander's plan at the operational level. At this level, the essential functions of supply, maintenance, transportation, technical assistance, human resources support, AHS support, and field services are delivered to soldiers to permit them to accomplish their mission. During the tactical phase, the medical services primarily focus on the procurement, management, and accountability of medical material to support and sustain the soldier.

## 2. SIGNIFICANCE OF THE MEDICAL COMMODITY

The material system has long recognized that certain commodities possess characteristics that make them sufficiently distinctive, requiring that specially trained personnel manages them.

Basics of any logistics plan are the principles of anticipated user needs and continued support. These principles imply that the individual directing this support must have a thorough knowledge of the system being supported, as well as an understanding of how and why the particular item being supplied is used. Medical logistics cannot operate on the basis of historical data alone. Many external factors – the judgment of the physician, environmental factors, and the particularities of the patient's medical condition – affect the demand for an item.

Specific commodity particularities include:

- subjects to deterioration (short shelf life and dated items);
- subjects to damage by freezing or high heat;
- subjects to damage if not properly refrigerated or frozen for preservation;
- flammable and corrosive items;
- radioactive materials;
- controlled medical items or controlled substances to include alcohol, narcotics, and precious metals;
- fragile items require special storage, handling, and packaging.

Considerations governing inventory management of the medical commodity include the fact that:

- the request for and actual use of Class VIII is preceded by a professional decision;
- the choice of substitution is extremely limited, professionally directed, and controlled as well as monitored by technical specialists;

- nonstandard items are an integral and significant element of the logistical management effort;
- the functions of medical equipment maintenance and repair parts support, as well as optical fabrication and repair service, are inherent in medical materiel management.

In comparison with some commodities, it is not the significant number of medical items being managed, but rather the criticality, specialization, and unique handling requirements of medical items that differentiate the management effort.

### **3. HOW CAN MEDICAL LOGISTICS PLANNING BE IMPROVED?**

The medical logistics system should adopt a more comprehensive approach to anticipating their medical logistics needs. More specifically, there are six factors that medical staff commanders and decision makers should take into account while planning their operations, support and resource requirements:

1. The population at risk due to the operation – in addition to military personnel, this includes civilian staff, multinational forces, prisoners of war, and detainees. Military forces must also sometimes provide medical treatment to local civilians, who are affected by their operations.
2. The “naturally occurring” rate of disease and non-battle injuries that a force will sustain during an operation – planners need to use peace-time statistics to estimate the number of personnel likely to report sick each day, along with the percentage hospitalized.
3. The health intelligence, which includes different information components: topography, epidemiology, and health infrastructure – health intelligence requires that medics are part of the theater reconnaissance group to identify health threats in the area of operations, including diseases and industrial and environmental hazards.
4. The battle casualty estimate – this is calculated by operational planners with the assistance of operational analysis specialists.
5. The involvement of operational commanders, working with medics, to determine the theater holding policy.
6. Building in a reserve to meet the demands of major incidents that could produce mass casualties.

### **4. ISAF OPERATION INVOLVING MEDICAL LOGISTICS – A MEDEVAC CASE**

The allied ISAF has been working feverishly in recent years to build up the Afghan military ability to evacuate its wounded back to hospitals. It has trained local pilots and purchased Russian-made Mi-17 helicopters. Afghans have become proficient at ground-borne evacuations, but still rely on American evacuations when they get into a jam. A CASEVAC is an aircraft that is not dedicated to transporting wounded fighters and usually does not have medical personnel on board. A MEDEVAC is comparable to an ambulance, where the specially trained crew can keep wounded troops alive long enough to get back to a field hospital (Fig. 1).



**Fig. 1. UH-60 Black Hawk MEDEVAC in Afghanistan**

Source: *Security Force Assistance Medical Advisor*.

When a service member is injured, his unit will bring him to the closest hospital. As there are few regional medical centers, this will usually be the unit's own battalion aid station. It will usually be done by ground transportation, as this is the normal mode of transportation for all ANSF units. The unit will radio its immediate headquarters and notify the location. In most cases, they should use ground medevac, but if it is impossible, then they should request air medevac. Air Medevac is not as simple as requesting a helicopter. The enemies of Afghanistan have been known to attack clearly marked medical aircraft, which are unarmed. Therefore, the medical helicopters are accompanied by attack aircraft, whose job is to protect the medical helicopter. It takes time to assemble the aircraft and direct them to where the injured service member is. Also, Afghanistan does not have enough medical helicopters (and their escorts) to have them always on standby.

There are specific criteria for requesting an air medevac. First, when a service member is in danger of dying, losing a limb or their eyesight. Second, when ground transportation is not available (i.e. a small outpost on the top of a mountain is attacked). Last, when the distance to the nearest hospital is too large to ensure timely care.

Due to the limited air resources, an air medevac request for a minor gunshot wound to the arm might be denied while a serious gunshot wound to the chest would probably be approved. While a patient is being transported by ground to the nearest treatment facility, a request for air medevac is made to the OCC-R<sup>3</sup> medical officer, a doctor, who will quickly review the details of the injury. If the doctor believes the injury meets the criteria for air medevac, he will then submit the request to the Afghan Air Command and Control Center. If the request is approved and an air mission is launched, then there is coordination between the air and ground units to ensure a safe and timely transfer of a patient.

If the request is denied (i.e. all available aircraft are already transporting patients) then the request is submitted to the Coalition Forces who repeat the same procedures.

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<sup>3</sup> A planning and coordination unit.

## CONCLUSION

To sustain and improve the requirements of the Military Health System, military planners need a more comprehensive approach to medical logistics planning and also specially trained personnel. The MEDLOG system has to respect its functions in a proper way to accomplish its mission successfully.

The main purpose of the International Security Assistance Force is to train the Afghan National Security Forces (ANSF) and assist Afghanistan in rebuilding key government institutions. The basic function of the ANSF is to provide timely and effective healthcare for Afghan National Security Forces members, especially for those injured in combat against the enemies of Afghanistan. When it comes to injured or wounded medical personnel, the priority is to treat a patient who is being done.

From medical evacuation to training and supplies, International Security Assistance Force was the primary lifeboat for the care of wounded and sick Afghan forces prior to the adoption of the security forces assistance brigade model.

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## LOGISTYKA MEDYCZNA NA PRZYKŁADZIE OPERACJI ISAF

**Streszczenie:** *Artykuł opisuje funkcje systemu logistyki medycznej oraz jego rolę w utrzymywaniu Wojskowego Systemu Zdrowia w czasie misji zagranicznych, który jest determinowany przez specyficzne warunki. Ukazano również rolę oraz wpływ Międzynarodowych Sił Wsparcia Bezpieczeństwa (ISAF) na rozwój ewakuacji medycznej.*

**Słowa kluczowe:** *wsparcie medyczne, MEDEVAC, Międzynarodowe Siły Wsparcia Bezpieczeństwa (ISAF)*