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14. ABSTRACT

This paper examines why current aeromedical evacuation is not adequate for the combat zone. Aeromedical evacuation is an important capability that the Joint Force Commander must have in order to successfully conduct combat operations. This paper deals with the intra-theater tactical transportation of wounded personnel via rotary-wing aircraft. The paper summarizes current joint patient movement doctrine from Joint Pub 4-02.2. It also explains the differences in the U.S. Military services' patient movement capability. The paper details three problems with current aeromedical evacuation doctrine. First, attrition of aircraft, due to combat, is not factored in doctrine. Second, because of their medically trained crews and onboard medical suites, dedicated air ambulance capabilities exceed air casualty evacuation in providing lifesaving transportation. Third, although the Army is assigned the responsibility for transfer of patients to afloat medical treatment facilities, this mission is often accomplished by Navy or Marine Corps rotary-wing casualty evacuation assets. The paper proposes a solution to these problems by establishing a standing Joint Intra-Theater Aeromedical Evacuation Task Force (JIAETF) to provide dedicated aeromedical evacuation to the Joint Force Commander.

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JOINT AEROMEDICAL EVACUATION – WHY ISN'T IT ADEQUATE FOR THE COMBAT ZONE?

by

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Commander, United States Navy

A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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18 May 2004

Abstract

This paper examines why current aeromedical evacuation is not adequate for the combat zone. Aeromedical evacuation is an important capability that the Joint Force Commander must have in order to successfully conduct combat operations. This paper deals with the intra-theater tactical transportation of wounded personnel via rotary-wing aircraft. The paper summarizes current joint patient movement doctrine from Joint Pub 4-02.2. It also explains the differences in the U.S. Military services' patient movement capability. The paper details three problems with current aeromedical evacuation doctrine. First, attrition of aircraft, due to combat, is not factored in doctrine. Second, because of their medically trained crews and onboard medical suites, dedicated air ambulance capabilities exceed air casualty evacuation in providing lifesaving transportation. Third, although the Army is assigned the responsibility for transfer of patients to afloat medical treatment facilities, this mission is often accomplished by Navy or Marine Corps rotary-wing casualty evacuation assets. The paper proposes a solution to these problems by establishing a standing Joint Intra-Theater Aeromedical Evacuation Task Force (JIAETF) to provide dedicated aeromedical evacuation to the Joint Force Commander.

Introduction

Thesis

Aeromedical evacuation is an extremely important capability that the Joint Force Commander must have in order to successfully conduct combat operations. This paper will examine why current aeromedical evacuation is not adequate for the combat zone, and it will provide a solution for the ideas offered in the thesis. Aeromedical evacuation is inadequate in the combat zone because the services' lack the rotary-wing assets necessary for aeromedical evacuation, and because joint doctrine doesn't, in all cases, assign responsibility for patient movement based on capability.

Terminology

The services and joint doctrine use different terminology to describe the movement of wounded personnel from the battlefield. To reduce confusion, the following terms and definitions will apply in this paper. The Army uses the term medical evacuation (MEDEVAC) to describe the movement of patients, under medical supervision, either via ground or air transportation. Aeromedical evacuation (AE) is the movement of patients under medical supervision to and between medical treatment facilities by air transportation.[1] The Army is the only service that employs dedicated air ambulances (AA). These helicopters are designed with onboard medical suites and are crewed by medically trained personnel who provide medical treatment and stabilization for wounded patients. AA helicopters are dedicated MEDEVAC assets that are marked with a red cross which affords them protection under the Geneva Convention. Casualty Evacuation (CASEVAC) is the movement of casualties to initial treatment facilities or movement of casualties within the combat zone. CASEVAC does not include en-route

care by medical personnel and implies that non-medical assets are being used to move casualties.[2] All services that employ helicopters can use their assets in the CASEVAC role. CASEVAC helicopters are not marked as dedicated MEDEVAC aircraft and are therefore not afforded Geneva Convention protection.

Issue

The transportation of wounded personnel from a tactical battlefield to a theater level Medical Treatment Facility (MTF) is the responsibility of the component commander.[3] The Joint Force Surgeon is assigned the responsibility of establishing intra-theater procedures and coordination of service components. Joint doctrine prescribes a mixture of service component assets and responsibilities to accomplish the patient movement mission. Patient movement can be accomplished via ground or air. Due to aeromedical conveyance's enhanced ability to transport the wounded, joint doctrine directs that the evacuation of U.S. Armed Forces be accomplished via air whenever feasible. Although fixed-wing aircraft can be used in intra-theater patient movement, doctrinally the use of rotary-wing aircraft is the predominate method of conveyance within the combat zone (CBTZ). For this reason, the Author has chosen to limit the focus of this paper to the intra-theater evacuation of wounded personnel via rotary-wing assets.

The problem with current aeromedical evacuation doctrine is threefold. First, attrition of aircraft due to combat is not factored. Second, because of their medically trained crews and onboard medical suites, dedicated AA capabilities exceed air CASEVAC in providing lifesaving transportation. Third, although AAs are assigned the responsibility for transfer of patients to afloat MTFs, this mission is often accomplished by Navy or Marine Corps rotary-wing assets.[4]

Why is aeromedical evacuation important to the JFC? First, the use of dedicated MEDEVAC keeps the commander from diverting combat assets for the care and movement of the wounded. Second, AE is important in order to maintain a soldier's will to fight. A soldier must be assured that he will be cared for if wounded. Third, it is critical that trained soldiers are returned to duty. The cost in time and money required to train replacements is prohibitive and takes away from the effectiveness of combat units.[5]

Background

Joint Patient Movement Doctrine

Joint Pub 4-02.2 establishes the joint doctrine for the tactics, techniques, and procedures (TTP) of patient movement. The mission of patient movement is defined as a joint operation designed to minimize the effects of wounds, injuries, and disease by the rapid evacuation of ill and injured personnel. This mission is accomplished by a proactive patient movement program and a phased health care system (echelons of care) that extends from action taken at the point of wounding, injury, or illness through evacuation from a theater for treatment at a hospital in the continental United States (CONUS).[6]

There are several organizations that manage patient movement. The United States Transportation Command (USTRANSCOM) through the Global Patient Movement Requirement Center (GPMRC) is responsible for inter-theater and CONUS patient movement. Regional combatant commanders use their Theater Patient Movement Requirement Center (TPMRC) to coordinate, plan, and direct patient movement within their theater. A Joint Task Force will establish a Joint Patient Movement Requirement Center (JPMRC) subordinate to the

TPMRC. The JPMRC will conduct patient movement operations with assigned units within their assigned Area of Responsibility.

The medical care provided to U.S. Armed Forces engaged in combat is divided into five different echelons. Echelons should be thought of in terms of type of care provided. Echelon 1 (E1) is immediate care consisting of emergency lifesaving measures that are provided in the CBTZ at unit level. Patients treated here are either returned to duty or prepared for evacuation to a higher echelon. Echelon 2 (E2) provides basic resuscitation and stabilization which is also provided in the CBTZ. If evacuation to a MTF is required it would be staged from this echelon. MTF capability in a lower threat environment, within the CBTZ, characterizes Echelon 3 (E3) care. E3 care is different than E2 in that the focus is on restoration of functional health as opposed to stabilization. The first care provided outside the CBTZ is Echelon 4 (E4). E4 care is associated with a MTF located in the Communication Zone (COMMZ) and provides definitive care and specialized surgical procedures. Rehabilitation and recuperation is provided by Echelon 5 (E5) located in CONUS.

The Secretary of Defense and the geographic Combatant Commander (COCOM) set the Theater Evacuation Policy for a specific conflict. It states the maximum number of days a patient may be held in a particular operation zone for treatment prior to onward movement or return to duty.[7] Guidance from the SECDEF and CJCS provide a seven day policy for a combat zone and 15 days for the combined combat and communication zone. A COCOM will desire the longest evacuation policy possible. Longer evacuation policies increase the

number of troops returned to duty, lowers the number of injured troops required to leave the theater, reduces the requirement for replacements, and reduces the requirement for long range medical evacuation air assets.[8]

Medical Regulating is the process which determines which MTF a patient will be moved to and how that patient will be transported through the echelons of care. The process matches patient needs to hospital capabilities and capacity.

Evacuations are performed by the next higher echelon moving patients from forward echelons to the rear. Patient evacuation in the CBTZ--from E1 to E2, from E2 to E3, or between MTFs positioned within the same echelon where E3 level of care is provided--is normally the responsibility of the service component commands of the JFC and usually occurs along established routes of evacuation.[9] All forms of transport can be used based on the tactical situation and the needs of the patient. The Army is responsible for helicopter MEDEVAC from ship-to-shore and from shore-to-ship. Requests for Army AE support are prioritized by precedence not by service of origin. Planning should reflect this guidance when it supports the commander's concept of operations. If not, the Navy and Marine Corps have responsibility for ship-to-shore and shore-to-ship patient movement.[10] The Air Force is responsible for the intra-theater fixed-wing AE movement of patients between the CBTZ and COMMZ. They also have responsibility for the AE patient movement inter-theater between the COMMZ and CONUS.

There are a few doctrinal differences between patient movement procedures for stability operations and for combat operations detailed above. In some cases, where a local MTF is not available, a point-to-point evacuation system may be used to transport

patients directly from the operating area to CONUS. AE planning must also consider the requirement to support allied and host-nation personnel and refugees.[11]

Special Operations Forces (SOF) lack a dedicated patient movement system and the ability to perform E3 and E4 level medical care. In a mature theater, SOF personnel use the existing patient movement system. In an immature theater or when operations dictate, wounded SOF personnel are evacuated by any means available. Organic SOF aviation assets are used for CASEVAC to the maximum extent possible. The use of conventional aircraft configured for AE or the use of elements of the intra-theater AE system can be tasked as required.[12]

Army Capability

The Army's dedicated aeromedical evacuation unit is the AA Company. An AA Company is comprised of 15 UH-60 Blackhawk helicopter ambulances. Each division is assigned one AA company and each Corp is assigned an additional AA company for general support. In each theater an AA company is responsible for transportation to hospital ships. The National Guard and Army Reserve have numerous AA companies that they employ in both Title 32 and Title 10 roles.

Marine Corps Capability

The Air Combat Element (ACE) is the task organized aviation element of a Marine Air Ground Task Force (MAGTF). An ACE will be comprised of varying numbers of helicopter assets based on the mission. The largest MAGTF is the Marine Expeditionary Force (MEF) which will have approximately 130 helicopters capable of CASEVAC. The Marine Expeditionary Brigade (MEB) will have 92 CASEVAC capable helicopters. The smallest MAGTF is the Marine Expeditionary Unit (MEU) which has

19 CASEVAC helicopters. It is important to note that only a few of the helicopters available to the Marine commander will be designated as CASEVAC via the Air Plan.

Navy Capability

Most Navy ships have helicopter landing decks and embarked helicopters that are capable of designated or lift of opportunity CASEVAC. An aircraft carrier has six helicopters embarked, an amphibious assault ship has two Navy helicopters embarked, and surface combatants, such as cruisers and destroyers, have one or two helicopters embarked. For ships that are not helicopter capable, boat transfer or helicopter hoist transfer procedures are used for patient movement.

Analysis

As stated in the introduction, attrition of rotary-wing assets is a problem with current aeromedical evacuation doctrine. The US Army has an organic AA company in the organizational structure which provides for replacement or reinforcement of AA if required. However, the Marine Corps MEU, which utilizes designated or lift of opportunity CASEVAC, has an extremely limited ability to replace aircraft lost in combat because they have a finite number of aircraft from which they can draw replacements or reinforcements. Therefore, when an ACE asset is lost, the commander must determine how the total rotary-wing force will be adjusted. Will a designated CASEVAC helicopter be re-tasked in a combat role, or will a combat asset be reassigned to CASEVAC? The implication, either way, is that combat fighting ability will be degraded. The decrease in fighting ability will either be caused by the reduction in aircraft available or from flagging morale of the Marines in the field, who know that their ability to survive if wounded has been reduced.

History is full of statistics that prove the vulnerability of helicopters. During the Vietnam War 17,700 helicopters were lost during combat. The loss rate for AE helicopters was three times higher than that of any other aircraft. During the Mayaguez rescue in Cambodia in 1975, eight of the nine helicopters used were lost or unable to complete additional missions. During the first 18 months of their occupation of Afghanistan, the Russians lost 250 helicopters. The United States lost nine of 88 helicopters during the invasion of Grenada.[13] Helicopter losses in recent conflicts, such as Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF), have been relatively light. One would have to go back to the Vietnam War to find statistics that show the kind of helicopter losses that are considered significant and that would support the argument that the loss of helicopters would affect the Military's ability to conduct AE. However, a conflict could arise that will rival the Vietnam War with respect to the enemy's ability to inflict significant losses to the United States Military.

Research by the Naval Postgraduate School in 1997 studied the implications of aircraft losses on the Marine Corps' Operational Maneuver from the Sea (OMFTS) concept. The study assumed that the probability of shoot down per 100 nautical miles traveled would be one percent. When the number of sorties and average distance per sortie were applied to the probability, a daily aircraft loss number was calculated. Statistically, a MEU would lose 40 percent of its ACE aircraft in an OMFTS combat operation lasting 15 days.[14] If the study's math was applied to the complement of ACE aircraft capable of CASEVAC, only 11 aircraft would remain available for operations including CASEVAC, after fifteen days. The loss of eight of the ACEs 19 CASEVAC

capable aircraft would have a significant impact on the commander's ability to fight the force and provide aeromedical evacuation.

An argument to counter the implications of the cited OMFTS example would be that in a joint operation the Marine ACE would not be the only force available to the JFC to execute the patient movement mission. The joint doctrine, detailed previously in this paper, provides that the Army, Navy, and Marine Corps are partners in a collective patient movement operation. It would follow then that the Army would deploy AA companies to the theater and the Navy as a team member would be available to reinforce the Marine losses with their embarked helicopter assets.

This would seem to be a solid counter argument except that not all operations are joint and even those that are do not always have the required forces available to support the joint AE doctrine. A recent example of this would be the Marine Task Force 58 mission during OEF. Task Force 58 was a MAGTF comprised of the 15th and 26th MEUs. Their objective was to secure airfield Rhino as a forward operating base. The mission, which commenced on 25 November 2001, was the first conventional force action of OEF. To that point in the operation, only SOF had been employed in Afghanistan. The Marines of TF 58 used OMTFS concepts by flying, from their base at sea, to the objective 400 miles inland. The mission was a success but medical evacuation was not supported by the Army or by the Navy. There were moderate casualties that were evacuated by Marine C-130 aircraft from E1 or E2 to E4 much like one would expect in a stability operations scenario, but not from a combat operation.

Army doctrine states that if the situation requires movement of a large number of casualties, or if the force commander believes that reinforcing existing MEDEVAC assets

is necessary, he may elect to use utility and cargo helicopters to move casualties to a treatment center.[15] This would seem to be a reasonable option for the commander, but two United States Central Command (USCENTCOM) unclassified joint lessons learned made the observation that the availability of air assets, particularly Army rotary-wing, was limited during OEF. One lesson learned cited cargo and transport helicopters lack of systems required to fly safely in a non-linear environment as the reason why these CASEVAC assets were effectively taken out of the patient movement asset pool. Another lesson learned detailed the general lack of rotary-wing assets in theater. The lesson learned went on to praise the efforts of other service components that filled the gap in resources. These factors point out a short sighted allocation of aircraft capable of medical evacuation by the joint force commander.

The delay in treatment due to evacuation lag is tantamount to denial of care to soldiers who could have survived had they received timely medical attention.[16] The Army learned this lesson during the Vietnam War and developed the AA concept that delivered the ability to transport the wounded, from the battlefield to a MTF, within 30 minutes of injury. The Army went further by providing their AA helicopters with the medical capability to stabilize and restore vital functions while in flight.[17] The AA concept resulted in the survival rate of 97.5% of all wounded. The ability of modern AAs to transport wounded soldiers can be seen in statistics taken from OIF. The 507th and 82nd Medical Companies of the 36th MEDEVAC Battalion evacuated 740 casualties and flew more than 2,400 combat flight hours from March to May 2003.[18]

Why is the Army the only service that provides dedicated AA service for the Military? The answer lies somewhere between the high cost of the capability and the

inherent need of the two sea services to employ multi-mission aviation assets due to the lack of space aboard ships. The JFC should be concerned that the CASEVAC assets organic to the Navy and Marine Corp will not be competitive in terms of lifesaving ability with the Army's AA. CASEVAC does not provide the level of care required to ensure that the wounded soldier has the best chance for survival. Concerns about their lack of ability to survive an injury can have a negative effect on a soldier's will to fight. Additionally, the loss of soldiers who otherwise would have been returned to duty, if adequate initial care had been provided via AA MEDEVAC, will have a detrimental effect on the force due to the loss of trained experienced fighters.

The argument can be made that establishing a MEDEVAC capability for both the Navy and Marine Corps would be a logical solution to overcome their current inability to conduct AE missions at the same level of care that the Army is capable. That proposition goes beyond the scope of this paper because that proposal would require changes in those services' force structures and the acquisition of aeromedical evacuation systems.

The Army has responsibility for the transportation of all the services' wounded to and from the Navy's afloat MTF. When called upon, the Army can and does accomplish the mission. However, there is anecdotal evidence that this mission is oftentimes completed by Marine or Navy CASEVAC aircraft.[19] It is often easier for the Navy medical decision maker, stationed onboard the afloat MTF, to employ organic CASEVAC assets for patient movement from shore-to-ship or ship-to-shore. They do so because they are more comfortable with the their own CASEVAC. The delays that are inherent in gaining Army AA support through the JPMRC can cause the afloat physician,

for the benefit of the patient, to opt for the speed that organic patient movement operations can generate.

The problem stated above has been validated by an unclassified USCENTCOM lesson learned, submitted by the Central Command Surgeon General, that observed that Army rotary-wing transport to the Navy hospital ship was problematic during OIF. It went further to state that, "MEDEVAC support was not part of the Army support plan and during execution shortfalls occurred."[20]

Not all Army AAs have the proper navigation equipment to operate in the shipboard environment. The Navy uses the Tactical Aid to Navigation (TACAN) system for shipboard operations. TACAN provides range and bearing information to the ship, which provides the pilot the ability to find the ship in the open ocean and facilitates the approach to the ship during inclement weather conditions. Not all Army pilots are trained on the use of the system. The navigation systems are available, and can be installed when required but they are not standard on all Army AAs.[21]

Army pilot shipboard qualification requirements are the same as for Navy and Marine Corps pilots. The initial requirement to be fully day and night deck landing qualified requires five day and five night landings. This is a minimum qualification standard which does not indicate the pilot's proficiency. In addition to deck landing qualifications, pilots and crew are required to complete helicopter "dunker" training and emergency underwater breathing device training. These qualifications are part of the Army's training requirement. However, due to other heavy mission tasking, lack of money, and the distance that most Army bases are from Navy ships and training facilities, the requirements are often a low priority for unit commanders. When the AA units are

placed on the Time-Phased Force and Deployment Data (TPFDD), the Army assumes that the units are fully trained for the ship-to-shore mission. If the units are not trained they are often required to attain the qualification once in theater.[22]

When Army AA pilots arrive in theater they are given "deck time" to satisfy the shipboard landing requirement. Once initially qualified, a re-qualification only requires two landings every six months. Pilots can therefore maintain their currency during operational landings. The ability for all pilots in an AA company to gain their shipboard deck landing qualification can be a fairly time consuming event. Notionally, if all of the pilots in an AA company participate in and gain their day only landing qualification, it would take over 15 hours to complete the entire evolution. For the ship to commit that amount of time to training, during the beginning or build-up phase of a conflict, would be extremely taxing on the ship's ability to operate. The time required would increase significantly if night landing qualifications were needed or multiple AA companies requested qualification. It is therefore necessary that the AA companies only qualify a cadre of shipboard deck landing qualified pilots for any specific operation.

As previously stated, joint doctrine assigns the responsibility for AE ship-to-shore and shore-to-ship operations to the Army. The doctrine also requires that plans reflect this arrangement when it supports the commander's concept of operations.[23] It is never in the JFC's best interest to develop a concept of operations that does not include the ability to achieve the Theater Evacuation Plan, and at the same time consider the morale and fighting spirit of the forces employed. An AA is the best asset available for patient movement. However, the Army does not plan, equip, or train to the degree necessary to support its full doctrinal mission.

Recommendation

A standing Joint Intra-Theater Aeromedical Evacuation Task Force (JIAETF) should be established to provide dedicated MEDEVAC to the JFC. All intra-theater aeromedical evacuation will be supported by JIAETF. The Army will be the lead agent for development of tactics, techniques, and procedures for the AE mission. The services will retain their train, equip, and organize functions for the crews and assets assigned to the JIAETF. The services will provide crews, equipment, and their associated support structures to the JIAETF. The JIAETF will be located in CONUS near a Navy fleet concentration area so that full benefit of shipboard training will be assured. The JIAETF will be under the administrative control (ADCON) of the USTRANSCOM. When deployed, the geographic COCOM will assume operational control (OPCON) of the JIAETF and its assigned assets. JIAETF will be OPCON to United States Special Operations Command when deployed in support of that COCOMM. The JIAETF commander will be an Army Medical Service Corps officer pilot. The JIAETF will be task organized for deployment in varying sizes appropriate to the mission. It is beyond the scope of this paper to determine the specific size and configuration of the JIAETF, but it is important to note that each service will provide only a limited number of aircraft and crews to the command. With all services providing a proportionate share of the responsibility, the economy of scale derived would not cause a drain on the individual services. Aircraft will rotate back to the services when required for depot level maintenance and a replacement in kind will be delivered to the JIAETF. The pilots, crews, and support personnel from all services, including Army National Guard and

Reserves, will be assigned to the command on a regular tour rotation basis or equivalent. Officers will be given joint credit for the assignment.

The Army AA will be the workhorse of the JIAETF. The Army, National Guard, and Reserve assets will also be integrated into the JIAETF. The Navy and Marine Corps will assign current legacy CASEVAC helicopters to the JIAETF. To improve the capability of the CASEVAC helicopters, the Navy and Marines will provide a modular medical suite capability for all of the helicopters they assign to the JIAETF. The 22nd MEU utilized such a modular medical suite in their H-46, H-53, and H-1 helicopters during their deployment during OIF. The suite included: general medical supplies, equipment and medicine, oxygen equipment, patient monitoring equipment, defibrillator, trauma bag, traction kit, and litters. A flight surgeon and two corpsmen trained in Trauma Life Support and Naval Special Warfare Tactical Combat Casualty Care were included on each mission. The cost of the kits was approximately $18,500.[24] The JIAETF concept will generate an AE requirement for the Navy and Marine Corps. That requirement will ensure that all future rotary-wing procurement programs consider this new mission capability.

The Army AE capabilities will continue to be required in CONUS for additional missions such as disaster relief and at overseas bases for general support. Therefore, the Army will continue to maintain a significant AE capability outside of the JIAETF concept. The Navy and the Marine Corps will maintain their designated CASEVAC capability but the JIAETF will provide a dedicated AE capability that they currently do not possess.

The purpose of the JIAETF is not to consolidate all AE and CASEVAC under a single command. Its purpose is to gather a joint core of aircraft, crews, and support personnel that are resourced to train and operate under the current joint patient movement doctrine. The JIAETF would be capable of deployment as a complete unit. In that configuration it would be able to provide concurrent support to a Corps size unit and a Marine Corps MEB within the same theater. The JIAETF would alternately be able to support routine ESG and CSG deployments with an appropriately sized AE detachment. As an example, the JIAETF would be available to support Special Operation Forces, stability operations, and to deploy in support of JTFs such as Combined Joint Task Force 180 at Bagram, Afghanistan.

A significant benefit of the JIAETF is that it will provide increased joint training opportunities for the pilots and crews. The JIAETF will be a truly "purple" unit. Army pilots will be trained for and deploy with afloat units. Navy and Marine pilots will train for and deploy with the JIAETF in land operations. Pilots from different services will fly together on the same mission in the same aircraft.

The JIAETF construct solves the problems that have been proposed in this paper in the following ways. First, the potential loss of AE assets, due to combat, will be mitigated by a larger force. As mentioned, the economy of scale that the JIAETF provides will allow a larger AE force to be employed. The JFC will be able to keep his combat assets in the field and not have to divert them to AE if aircraft losses start to mount. Second, the JIAETF concept will provide a more capable rotary-wing AE force for the patient movement mission. Instead of being supported by aircraft of differing medical capabilities, the JFC will have, at his disposal, a varied selection of rotary-wing

assets. The JIAETF aircraft will provide varied yet complementary range and payload configurations with the same robust medical capability. Future rotary-wing AE assets will be procured with the same extensive medical capability. Finally, the cross-training benefit that the task force concept provides will ensure that pilots are not only qualified but more importantly, proficient in shipboard operations. The use of different model aircraft will allow the JIAETF commander to tailor his force packages to ensure that the aircraft chosen for the mission are configured with the proper equipment for the operating environment.

Conclusion

This paper examined intra-theater aeromedical evacuation and how it influences the Joint Force Commander's decisions in the combat zone. It provided a solution via the Joint Intra-Theater Aeromedical Evacuation Task Force concept to overcome several of the problems that currently exist in the rotary-wing force structure and in joint patient movement doctrine. The JIAETF will improve the commander's ability to conduct combat operations by increasing the total number of helicopters, both AE and combat, available in the theater. Similarly, it will ensure that AE capable helicopters are employed to the maximum extent possible, and it will improve the ship-to-shore and shore-to-ship patient movement mission.

Aeromedical evacuation is a force multiplier for the JFC. It keeps the commander from diverting combat assets for the care of the wounded, it maintains a soldier's will to fight, because of the knowledge that he'll be given quality care if wounded, and it is a vital element of the health service support mission that ensures trained soldiers are returned to duty as quickly as possible.

Notes

[1] Joint Chiefs of Staff, Joint Tactics, Techniques, and Procedures for Patient Movement in Joint Operations, Joint Pub 4-02.2 (Washington, DC: 30 December 1996), GL-4.

[2] Department of the Army, Utility and Cargo Helicopter Operations, FM 1-113 (Washington, DC: 12 September 1997), 6-1.

[3] Joint Chiefs of Staff, Joint Tactics, Techniques and Procedures for Patient Movement in Joint Operations, vii.

[4] Mary J. Herden, interview by author, verbal, Newport, RI., 5 May 2004.

[5] Department of the Army, Employment of the Medical Company (Air Ambulance), FM 8-10-26 (Washington, DC: 30 May 2002), 1-5.

[6] Joint Chiefs of Staff, Joint Tactics, Techniques and Procedures for Patient Movement in Joint Operations, I-1.

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[9] Joint Chiefs of Staff, Joint Tactics, Techniques and Procedures for Patient Movement in Joint Operations, I-5.

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[15] Department of the Army, Utility and Cargo Helicopter Operations, 6-1.

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[17] Department of the Army, Employment of the Medical Company (Air Ambulance),1-7.

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