Flight Medics

Introduction:

This article explores the history of the U.S. Army Flight Medic, presents the current training curriculum, and the future direction of training initiatives.

While the helicopter as an air ambulance was first utilized in Burma in 1944,[1] and subsequently proved its utility in the Korean conflict, the modern doctrine of MEDEVAC operations was birthed in the jungles of Southeast Asia. It was in Vietnam, Laos, and Cambodia, in the 1960's, where the helicopter became synonymous with life-saving air evacuation. The comments of the brave men who flew those missions, are especially poignant to today's flight medic.

"It's been said that when Dustoff pilots tell war stories of the "YOU HAD TO BE THERE" caliber, the subject usually locks in on the feats of their grungy MEDIC and CREWCHIEF.

Our "Medic and CrewChief team" aboard was the precious cargo for whom the wounded watched and prayed. Through the Plexiglas we've watched them---and we've watched the wounded watch them---with litter and weapon in hand, trudge through waist-deep rice paddies, through tangled jungle growth, up rocky mountainsides, hang from skids with outstretched hand, jump to watery depths, tear into burning cockpits, hug a jungle penetrator as it takes them through triple canopy—all too often under withering enemy fire. We've watched both as they've emptied clips into treelines, bunkers, and jungle hideouts—buying altitude—before turning to continue tending the wounded, halt hemorrhage, close a sucking chest, start fluids, calm hysteria, breath life, cuddle babies maimed.

As their wounded were off loaded to definitive care—we've watched the "thumbs up" as their tired eyes and muddy faces grin at a life given---and too

often we watched a sudden stiffness—a desperation—as they carefully—almost reverently—slide a lifeless litter from the hold---then resignation---then---clear on the right—and back to the job.

Leaving the flight line at mission's end we've turned and watched them both—in searing heat or monsoon storms and dead of night—tie the blade check the damage, hose the red from their rotten stations---- refit gear and ammo, and begin the tedious and demanding post flight or the too-often twenty five hour inspection. – And we get the high sign as we yell " We'll save chow!". Then as we trot back to the flight line as quickly as we'd left, we watched their fatigue unveil as we yelled " Wind'er up!" got C's on board?" and we watched them suck-it-up again- and scurry to lift off again—to save a poor soul—again—again and again. "

Excerpted from: "The Medic and CrewChief"[2]

BACKGROUND

Flight medics can trace their lineage back to the Second World War, when medical aidmen were used to accompany casualties from the European/Pacific Theater to CONUS[3]. However, the Army's use of flight medics disappeared when the Army Air Corps was redesignated as the U.S. Air Force in 1947. Use of medical aidmen as flight medics reappeared during the Korean War, with the introduction of the helicopter. Although the Army did not use medical aidmen as flight medics on board helicopters, they were used by the Navy and Marine Corps . This was due to the type of rotary wing aircraft each service was using at the time. The Army used a two-seater version called the Hiller H-13. This type of helicopter saw extensive use in Korea. The Hiller helicopter has been featured on many of television's "MASH" episodes. After the cessation of hostilities, improvements in helicopter technology sparked development the aeromedical evacuation doctrine.

In fact, the Army Medical department assisted in developing the next generation of rotary wing evacuation platforms, resulting in the selection of the UH-1 helicopter. The unit to test this new doctrine was the 57th Air Ambulance Detachment as it was deployed for duty in South Vietnam in early 1963. The 57,th known as the " Original Dustoff " set the standard for aeromedical evacuation and in-flight patient care[4].

Before deploying to Vietnam, medical aidmen received the basic 14-week medical aidman training at the Army Medical Training Center, Fort Sam Houston, Texas. Once they arrived in Vietnam, the new medics were either assigned to or volunteered for flight medic duty. Medical skills were reinforced, but it was the intensity of casualties that quickly forced the learning of new skills. The new skills included the basics of trauma medicine, caring for a patient in the aviation environment, operating the on-board high-performance hoist, and the numerous crew-chief maintenance tasks that are part and parcel of being an aircrew member.

As the conflict in Vietnam continued, air ambulance units were deployed in ever increasing numbers. At the height of the war, approximately 116 UH-1 Hueys served as "Dustoff" helicopters in Vietnam. From 1962-1973, more than 490,000 MEDEVAC missions were flown and over 900,000 casualties were evacuated by helicopter[5]. This latter number includes U.S. personnel, allies, and civilian casualties. Of the wounded who were transported and reached higher levels of medical care, 97.5% survived, a tremendous accomplishment considering that the flight medic had only a limited knowledge of pre-hospital

trauma care. Unfortunately the enormously successful rescue and survival rate made possible by the flight medic and crew came with a terrible price. During a two-year period, 39 crewmembers were killed and 210 were wounded. With the eventual end of U.S. involvement in Southeast Asia, the last remaining air ambulance unit, the “Original DUSTOFF”, ceased operations on 11 Mar 73 and re-deployed to CONUS.

During the late- sixties and early- seventies, civilian agencies looked at the successful medical evacuation system used in Vietnam and wondered if the same system could be applied to the civilian sector to support local emergency medical services.

Taking the lead, an inter-service effort between the Department of Defense, Department of Transportation, and the Department of Health and Human Services initiated the Military Assistance to Safety and Traffic (MAST) program to determine whether or not military helicopters could effectively augment existing civilian emergency medical services.

The MAST program became operational in 1971, and today provides military personnel and helicopters in support of civilian emergency services when local resources are inadequate or not available. In addition, it provided a training source for

MEDEVAC crews to maintain proficiency in those skills learned during the Vietnam conflict. It also afforded the MEDEVAC community the opportunity to use lessons learned in the civilian experience to improve medical evacuation doctrine.

During this time, medical aidmen were, once again either assigned to or volunteered for MEDEVAC duty. An agreement between the Department of Transportation and the Department of Defense stated that all medical personnel providing support must receive training as an emergency medical technician (EMT). They were either trained by the unit, or by local civilian agencies.

This type of training continued until 1981, when the Aeromedical Concept Review Committee (ACRC) agreed to formalize and standardize flight medic training. The purpose of the agreement, as described in the 1981 concept letter, reads: "to provide a formal course of instruction for emergency medical skills required by the flight medic during aeromedical evacuation."[6] The committee realized that Flight Medics must be capable of assuming the responsibility for the injured; and the immediate care provided often determines the difference between life, death, full recovery, or incapacity. Additionally, the flight medic could also staff Aviation Medicine Clinics to assist the flight surgeon and augment the crash rescue teams.

A validation course was held from 12 July-12 August 1983, covering 59 subjects. Among those subjects taught were flight physiology, emergency medical treatment of specific injuries or conditions, hypobaric (altitude) chamber, and in- flight hoist operations. In addition, the course included an animal model

laboratory to practice those skills (identified by the American College of Surgeons' Committee on Trauma) that would be needed by the flight medic to provide trauma life support. Upon successful completion of the validation course, the Flight Medical Aidman program was established as a required Army course for medical aidman responsible for performing the duties of a flight medic.

The first flight medic course was held in early 1984 at Fort Rucker, Alabama, graduating thirty students. Because of this success, four classes a year were scheduled for a total annual training commitment of approximately 120 students.

The program of instruction (POI) remained the same until March of 1986, when a task selection board was held to update and select tasks that should be taught in the flight medic course due to the changes in doctrine and improvements in aircraft.

A task selection board, composed of officers and enlisted subject matter experts, reviewed the POI and recommended changes based on doctrine, training requirements, what could be taught in the unit, and what should be taught in the school. After a consensus was obtained, a new POI was produced and forwarded to the AMEDD Center & School for approval.

Today's Flight Medic Aidman Course

Today, the U.S. Army School of Aviation Medicine (USASAM) provides Flight Medic training, at Fort Rucker, Alabama. Based on the most recent task selection board that was convened in 1996, the current four week resident POI[7]

reflects the needs of today's aeromedical community, taking into account current doctrine, equipment, and aircraft changes. In keeping with the initial mandate of providing enhanced medical training for the flight medic, the Flight Medic Aidman Course conducts training in the following areas:

- Medical Subjects consisting of 86 academic hours.
- Aeromedical Subjects consisting of 19 academic hours
- Aviation Subjects consisting of 44 academic hours[7]

1. Medical subjects provide the flight medic with the skills and knowledge necessary to perform critical patient care in pre-hospital setting, and in the aviation environment. Subjects taught are:

- Basic Trauma Life Support (BTLS): skills necessary to triage, treat, and prepare for evacuation casualties with multiple injuries and to transport them in a safe manner. Students are trained to certification standards.
- Advanced Cardiac Life Support(ACLS): skills necessary to identify lethal arrthymias, and initiate treatment under the guidance of a physician. Students are trained to certification proficiency as required for state certification.
- Pediatric Advanced Life Support (PALS): skills necessary to identify serious conditions in the pediatric patient. Students are trained to certification proficiency as required for state certification.

2. Aeromedical Subjects provide the flight medic with the skills and knowledge to be an effective aircrew member and enhance the medic's ability to

progress in the unit's Readiness Level (RL) program. Topics covered in the aeromedical block:

- Aviation Toxicology
- Aviation Medicine Orientation
- Stress and Fatigue
- Spatial Disorientation
- Night Vision and Depth Perception
- Noise and Vibration
- Altitude Physiology
- Gravitational Forces
- Altitude Chamber Orientation

3. Aviation subjects provide the students with the rudiments of introductory aviation skills necessary to familiarize them with the flight environment and in-flight equipment.. Key subjects taught are

- Night Vision Goggle Lab and Flights
- Aircraft Radio Communication
- Commander's Aviation Training Program
- Combat Search and Rescue
- Installing, Loading, and Unloading Litters
- High Performance Hoist Operation
- Limitation of In-flight Patient Care
- Introduction to UH-60, Pre-Flight, and UH-60 Communications
- Aviation Safety
- Crew Passenger Brief
- MAST
- Aeromedical Evacuation Systems
- Crash Rescue Operations

These USASAM training experiences cover over 180 academic and practical exercise hours which ensure that the newly assigned flight medic is expeditiously integrated into the unit's MEDEVAC and readiness level (RL) progression programs, minimizing the training burden on the unit.

The high-quality, demanding training provided by USASAM, coupled with the immediate impact that the highly motivated, well-trained graduates bring to their units has appealed not only to the U.S. Army, but to our sister services and EURO-NATO allies as well. Recent years have seen an increase in the attendance of Allied and other U.S. military students.

By the end of calendar year 2000, the School of Aviation Medicine will have trained over 2000 active duty, National Guard, and EURO-NATO allies since the inception of the Flight Medic Program in 1984.

FUTURE

The future of the Flight Medic Course and its flight medic graduates is bright but challenging. As we move into the 21st century, improvements to the course will be sought to meet the changing demands of the MEDEVAC community. These new demands are extensive, and formidable considering the limited availability of training dollars that compete with the funding of a robust operations tempo throughout the Active and National Guard components. This places a premium on resident training slots.

The following areas of concern are currently under study:

1. PERSONNEL:

    a. 91W program and how it will affect attendance at the flight medic course.

    b. Re-evaluating the course admission standards to reflect the increasing competency requirements of the 91W program.

    c. Assisting PERSCOM with assignments of flight medics, ensuring that they are appropriately utilized in flight slots.

2. TRAINING

a. Similar to other resident courses, USASAM is faced with dwindling resident training dollars. Computer-based Training is one initiative that is being explored. The intent is to decrease time away from the unit, provide a student with an innovative self-paced course and still retain the quality of resident training.

b. Adding the UH-60Q Medical Mockup Suite to the POI to familiarize medical personnel in its operation.

c. Adding Pediatric Basic Trauma Life Support to the POI in lieu of PALS training, to be more in line with real world peacekeeping missions.

d. Adding medical training/certification to RL progression requirements of the flight medic.

e. Developing a "Tank Table VIII" type scenario for flight medics. This training, conducted semi-annually, would improve and sustain the competency of flight medics.

f. Developing and standardizing treatment protocols in the pre-hospital setting when a physician/physician assistant is not readily available.

g. Seeking FORSCOM and TRADOC Force Modernization assistance in using UH-60 helicopters for in-flight training versus the UH-1. Of note, Flatiron, the Ft. Rucker based MEDEVAC unit has been and still are instrumental in providing aircraft for all flight medic training events. Recently, the 498th MEDEVAC Company, FT. Benning GA, has started supporting flight medic training.

3. Equipment

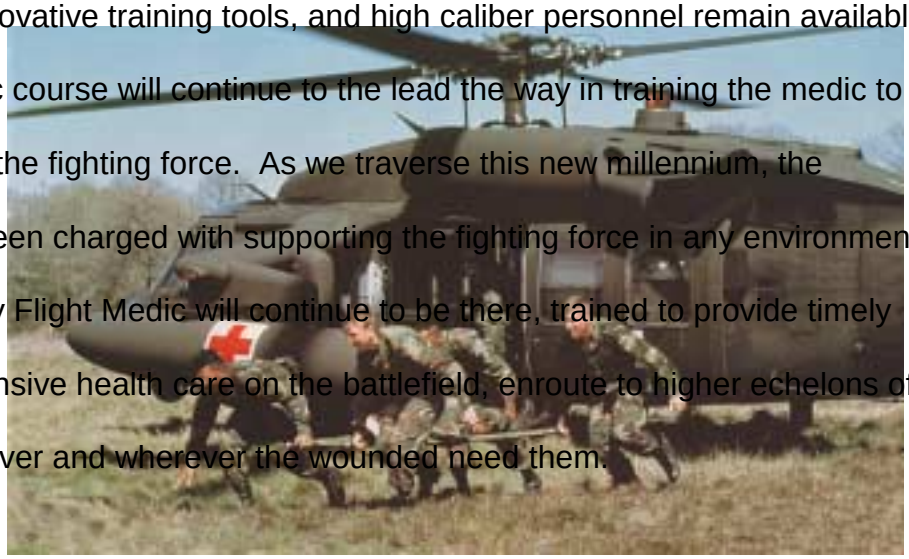
a. Fielding of the UH-60Q. The UH60Q model is the newest upgrade of the MEDEVAC helicopter. The new on-board litters, oxygen, suction, and cardiac-monitoring systems will allow the flight medic to enhance pre-hospital casualty care. Training the flight medic on these systems prior to arrival in his unit will benefit the MEDEVAC community.

b. Review of the Medical Equipment Sets: Air Ambulance. USASAM is working with the Combat Development Review of Medical Equipment Sets committee, providing input on the upgrading, standardization, and airworthiness information on the sets, kits, and outfits.

In addition to these initiatives, the instructors of the flight medic course work closely with civilian air evacuation organizations in developing a National Standard Curriculum for Air Medical crewmembers. The School of Aviation Medicine's representatives for the Aviation Resource Management Survey(ARMS) and Directorate of Evaluation and Standards(DES) teams are working initiatives to enhance the flight medic task in the aircrew training manual. These initiatives are in the exploratory stage. Wide dissemination across the AMEDD will be provided when these efforts come to fruition.

CONCLUSION

The flight medic story has consistently been one of inspiration, responsibility and solid training. The skills and abilities of the flight medic have continued to develop since the early war years of the 1940's. As better equipment, innovative training tools, and high caliber personnel remain available, the flight medic course will continue to the lead the way in training the medic to better support the fighting force. As we traverse this new millennium, the AMEDD has been charged with supporting the fighting force in any environment. Thus, the Army Flight Medic will continue to be there, trained to provide timely and comprehensive health care on the battlefield, enroute to higher echelons of care, or whenever and wherever the wounded need them.



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