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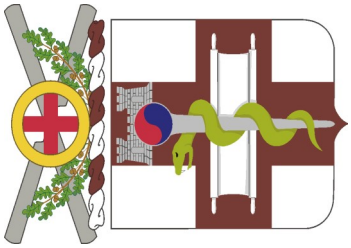

THE 421st MEDICAL EVACUATION BATTALION

October – December 2005

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U.S. ARMY MEDICAL DEPARTMENT
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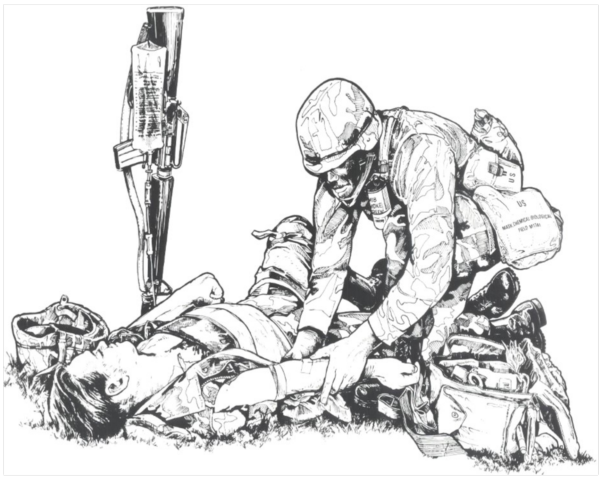

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Perspective

Major General George W. Weightman

Early history reveals that it was the conduct of warfare that served as the catalyst for the development of a systematic and organized care of injured patients. Even the ancient Greeks recognized the importance of systems of trauma care. Injured soldiers were transported to, and treated in, specialized barracks called klisiai or transported to offshore ships for treatment of their wounds. During the Napoleonic Era, the development of an effective French combat casualty transport system was essentially the result of one man's perceptiveness, initiative, humanity, and organizational skills, Baron Dominique-Jean Larrey. In many ways, the impact of Larrey's "flying" ambulances in decreasing combat mortality and morbidity in his day is comparable to that of helicopters in modern warfare.

Unfortunately, history has shown us that subsequent armies (including our own) did not always learn from such lessons, thus contributing to unnecessarily large fatalities. The timely and efficient movement of wounded, injured, or ill persons from the battlefield is a critical task. Over the decades, we have learned that we require dedicated assets to ensure the rapid evacuation of casualties to definitive medical care.

Our signature unit to perform this mission has been the Evacuation Battalion and I can think of no better way to personify the distinct accomplishments of this organization than by examining the proud heritage and legacy of the units of the 421st Medical Evacuation Battalion.

LTC Cambell's article "Legacy of Excellence…" and subsequent articles from his Command Sergeant Major and subordinate commanders, proudly display the battalion's accomplishments, accolades, and demonstrated excellence. Of note is the battalion receiving the 2005 Ellis D. Parker Award, recognizing them as the best aviation battalion in the Army in the Combat Service Support Category. This award is a Department of the Army award given annually and recognizes excellence in aviation units based on achievements in the areas of leadership, safety, training and maintenance.

As the Army transforms, our AMEDD transforms and

so will our Medical Evacuation Battalion. For two decades, our Medical Evacuation Battalion provided command and control of air and ground medical evacuation within the Theater of Operations (TO) and was doctrinally allocated a combination of three to seven medical companies, air ambulance and/or ground ambulance. Transformation has seen the air ambulance companies reassigned to the aviation community under the new General Support Aviation Battalion (GSAB) and downsizing from 15 to 12 UH-60 helicopters. Furthermore, medical experiences in Southwest Asia have identified shortfalls in battalion level medical command structures. The battalion command structure did not provide the necessary tailored medical capability to support the force commander. The resultant action to correct this shortfall integrated the medical battalion (area support), medical battalion (evacuation), and medical logistics battalion into a single Multifunctional Medical Battalion (MMB). The new MMB replaces the single function Medical Logistics, Area Support, and Evacuation Battalions, and will command and control Medical Companies, Detachments, and Teams

as a part of the medical task forces at both Division and Corps levels.

Our new MMB will provide command and control of assigned and attached units, and those under operational control which are executing force health protection support operations to units within its area of operations. The MMB is a modular organization, which is tailored based on the mission, enemy, terrain and weather, troops and support available, time available, and civil considerations. The command will include modular units specifically tailored to provide medical logistics support, Level I and II area medical support, ground evacuation, preventive medicine, combat and operational stress control, dental, and veterinary services.

Although our transformation has changed our "face", the individual and collective talents, accomplishments, and legacy of the Soldiers of the 421st Medical Evacuation Battalion will not be lost. Their great deeds and Warrior Ethos will transcend change and their professional competencies will find a new home nested in transforming medical and aviation units.

Changing gears now and looking at the Balanced Scorecard (BSC), LTC De Lorenzo focuses on the importance of thinking and conducting our daily activities in terms of the BSC. LTC De Lorenzo shows us all that understanding the BSC as a management tool and understanding our AMEDD Strategy Map will lead to enhanced productivity in the Military Healthcare System and the AMEDD. His "The Balanced Scorecard in Military Medicine: What the Clinical Leader Needs to Know" is a must read, not only for clinicians, but all of us.

COL Kiel does a fine job in providing us a brief look back at the beginnings of pathology as a science and the subsequent development of Army pathology here at Fort Sam Houston. His review from the initiation of the Army pathology program through residency to combat vs. no combat experience is well worth the reading.

The final article in this edition, "Transforming the Army Medical Department at War," could not have better timing. The 261st Medical Support Battalion provides us great insight into the employment of the Multifunctional Medical Battalion (MMB) in providing scalable, flexible, and modular Health Service Support in support of the BCT and Division/ Corps forces. Testing the "proof of principle" in OIF has revealed some valuable insights into the administrative and operational functionality of our new MMB in supporting our transforming Army.

As usual, here is another great edition of the AMEDD Journal and I hope you will all take the time to read. There is a nice variety of content and I'm sure you all remain as impressed as I am with what our great AMEDD Soldiers do every day!

Legacy of Excellence: The Soldiers and Families of the 421st

Lieutenant Colonel (P) Kyle D. Campbell

CSM Velarde and LTC Campbell

I want to open this edition of the AMEDD Journal honoring every Soldier and family who has ever served in the 421st Medical Evacuation Battalion (MEB), by thanking them for their demonstrated excellence and unwavering adherence to the Warrior Ethos. It is due to these great DUSTOFF Soldier's exemplary efforts and achievements that the 421st MEB is routinely referred to as the best and most powerful medical battalion in the Army.

This article will briefly outline the ongoing restructuring of the 421st MEB required by the Aviation and Medical Transformation Initiatives and highlight the legacy of sustained excellence demonstrated by the Soldiers of this battalion. Subsequent articles in this special edition of the AMEDD Journal will include comments from the Command Sergeant Major, an overview of the battalion's history and accolade, a review of each of the subordinate companies, and a discussion on the 557th Medical Company (Ground Ambulance) Soldiers earning the Combat Medical Badge.

Restructuring:

In May 2005, after several months of staff coordination, the United States Army in Europe (USAREUR) leadership made the decision to accelerate the Aviation Transformation Initiative timelines for the 421st MEB. The acceleration of ATI was directed due to the battalions planned Fall 2005 deployment in support of Operation Iraqi Freedom 05-07.

As a result, 1 July 2005 marked the restructuring of one of the most successful battalions in the Army Medical Department's history. The 421st MEB, DUSTOFF Europe, began transforming when two of the subordinate air ambulance companies were attached to the Germany-based 2nd Battalion /1st Aviation Regiment and the 1st Battalion / 214th Aviation Regiment in support of Aviation and Army transformation.

Prior to July 2005, the Germany-based 421st MEB consisted of the Headquarters and Headquarters Detachment, the 159th Medical Company (Air Ambulance) and the 557th Medical Company (Ground Ambulance) all in Wiesbaden, and the 45th Medical Company (Air Ambulance) in Ansbach and the 236th Medical Company (Air Ambulance) in Landstuhl. The battalion was comprised of just over 600 Soldiers with 45 UH-60A Blackhawk Helicopters and 40 M997 Wheeled Ambulances with the following mission: On order, rapidly deploy and provide continuous air and ground medical evacuation support and services in support of full spectrum operations in a joint and combined environment.

The deployment plans called for the 421st MEB to deploy as a Medical Battalion headquarters providing command and control over five to seven subordinate units. As part of the deployment preparation, the 30th Medical Brigade executed the certification exercise validating the 421st MEB's ability to successfully command and control two Medical Companies (Ground Ambulance), one Medical Company (Area Support), two Medical Detachments (Preventive Medicine) and one Medical Company (Dental Services). As this article goes to press, we have been informed that the 421st MEB will not deploy and that we will maintain command and control over the 557th Medical Company (Ground Ambulance) and the 236th Medical Company (Air Ambulance). As ATI continues in Europe, the 236th will be re-assigned to the 1/214th Aviation Regiment in February 2006. While the exact future of the 421st MEB is unknown at this time, current plans call for the conversion of one Germany-based Medical Battalion to a Multi-functional Medical Battalion.

Legacy of Excellence:

As the 421st MEB goes through this transformation, it is critically important to note that while the DUSTOFF mission and air ambulance companies are assigned to different headquarters, the personal and collective excellence of the Soldiers and their companies will not change. Their legacy of excellence in the medical evacuation and aviation community is unmatched. These are the Soldiers who earned the LTG Ellis D. Parker Award recognizing them as the best aviation battalion in the Army in the Combat Service Support category in January 2005. This was not a new accolade, the Soldiers of DUSTOFF Europe earned this honor eight of the twelve years since the awards inception in 1993. Few other units, in any category, have come close to the achievements of the 421st MEB.

In May 2005, the V Corps Deputy Commanding General, BG(P) Daniel Hahn, conducted a Battalion-wide ceremony to honor these Soldiers and, at the conclusion, he awarded each of the Soldiers with a commemorative Parker Coin. I have included a portion of the comments made by BG(P) Hahn during the Award ceremony below as I believe they tell the story of the 421st MEB in a very clear and powerful manner.

"Soldiers of the 421st – I am very proud of you and am honored to be part of this great ceremony. I congratulate you for winning the LTG Ellis D. Parker award as the best Aviation Battalion (Combat Service Support) in the United States Army. Your service to the Victory Corps and our Army is tremendous and I want to thank you and your families for your sacrifices, your dedication, and your demonstrated excellence.

You truly are the best and most powerful medical battalion in the Army!

Today, we honor the accomplishments of the Soldiers of DUSTOFF Europe. These Soldiers standing before you now represent themselves and also their teammates who cannot be here today because they are deployed around the world performing lifesaving medical evacuation support. The deployed Soldiers of DUSTOFF Europe include two forward support MEDEVAC teams in Afghanistan, the area support team in Iraq and a company headquarters, and maintenance and flight platoon in Kuwait. Additionally, and on a near continual basis, these Soldiers serve in Hoenfels, Grafenwoehr, and here in Wiesbaden performing immediate response medical evacuation support to the central region.

As I reviewed the facts that earned you this distinction as the best Aviation Battalion (CSS) in the United States Army, I was moved by the fact that your mission never stops. Your business is special and each of you are special. I understand that the majority of you where back out on the training areas of Germany within 60 days of redeploying from Iraq and/or Afghanistan. Your dedication to your fellow Soldiers is what makes the Army the greatest organization in the world. I am aware of your history and am very impressed that you continue to live the immortal words of Major Charles Kelley from Vietnam. When MAJ Kelley was inbound to pick up wounded Soldiers from a landing zone, the ground forces screamed at him to get out, the area was not secure. Major Kelley replied very simply "when I have your wounded." The great Soldiers of the 421st live this very creed today. You have demonstrated it in Iraq, Afghanistan, Bulgaria, Kosovo, Bosnia, Egypt, France, and of course, here in Germany. I certainly don't need to remind you of the warrior creed – you fully understand and practice the fact that as Soldiers you 'never leave a fallen comrade'.

I am exceptionally proud and humbled because I fully understand the tremendous difference you have made for our Soldiers and their families. During the period of this award, you evacuated over 8,800 patients, flew over 9,000 hours (6,300 combat or imminent danger), and drove over 210,000 miles without a single recordable aviation accident or any "at fault" class A-D ground vehicle accident. Most important is the fact that each of these patients represents a Soldier, a son, a daughter or a family member who, because of your excellence, has a second chance to serve this great nation and live their dreams with their families. Your dedication to your mission is inspiring and I thank you! I am very pleased to have been a part of this event and I look forward to coining each of you at the end of the ceremony. Victory!"[1]

BG(P) Hahn's comments ring true and moved the Soldiers, families, and guests alike. I am deeply grateful to BG(P) Hahn for taking the time to spend an entire morning with the remarkable Soldiers of the 421st MEB.

Clearly, the Soldiers and families of the 421st MEB represent the very embodiment of the Warrior Ethos. ***They always place the mission first*** – their first thoughts and actions are always geared to providing the best medical evacuation support and services possible. ***They never accept defeat.*** At no time did these Soldiers or their families stop working to improve the execution of the mission; whether that mission was vehicle maintenance, flight training, or family readiness group fund raisers they always kept working until they achieved success. ***They never quit.*** Whether it was executing medical evacuation missions via ground or air in the 130 degree heat of Baghdad or the minus 10 degree cold in the mountains of Afghanistan, they never quit. ***They never left a fallen comrade.*** In addition to their mission of medical evacuation, they absolutely excel at taking care of each other. Whether it was helping a fellow Soldier complete a maintenance procedure by the book or supporting a family by delivering meals after the birth of a

This is the 421st Medical Evacuation Battalion on line for a ceremony.

baby, the Soldiers and families of the 421st MEB always take care of each other and never leave a fallen comrade.

As I prepared this article, I thought about all the outstanding Soldiers that I have been blessed to serve with throughout my 20 years in the Army. While all of my assignments have been in units with exceptional Soldiers, none of the units have as distinguished a record of excellence as the 421st MEB. As I discussed my thoughts on these Soldiers and families with my colleagues, I struggled to put into words the essence of what makes them so special with their phenomenal legacy of demonstrated excellence. I kept coming back to the same inescapable and simple truth, this excellence is not by chance. It is due to the innate positive attitudes, perseverance, and follow-through that these Soldiers and their families collectively demonstrate on a daily basis. All of the Soldiers, and their families, consistently take that additional step and give that extra effort that allows them to not just execute the mission to standard, but to achieve excellence while always taking care of each other.

This singular aspect transcends the command teams and other transient leaders of the organization and further demonstrates the excellence of the Soldiers and families of the best and most powerful medical battalion in the Army. Again, I thank each and every Soldier and family member who ever served in the 421st MEB for their demonstrated excellence and unwavering adherence to the Warrior Ethos and to each other.

Enjoy this special edition of the AMEDD Journal honoring the Soldiers and families of the 421st Medical Evacuation Battalion. Thank you.

Reference

Hahn, Daniel A., Prepared Comments for the 421st Medical Evacuation Battalion LTG Ellis D. Parker Award Ceremony, Wiesbaden Germany, May 2005.

AUTHOR:

Lieutenant Colonel (P) Kyle D. Campbell is the Commander of the 421st Medical Evacuation Battalion located in Wiesbaden, Germany.

Comments from the Command Sergeant Major

CSM Roger A. Velarde, USA

It is a distinct pleasure to serve as the Command Sergeant Major of the 421st Medical Evacuation Battalion (MEB). The 421st MEB is headquartered in Wiesbaden, Germany on Wiesbaden Army Airfield. Although I only recently assumed responsibility for the battalion, I have served in and around this battalion for the past 12 months. During this time I have had the privilege of visiting and working with the Soldiers of the 421st MEB. The personal pride and excellence found throughout air and ground medical evacuation units is readily apparent in the superb Soldiers of the 421st MEB. This pride and commitment was recently confirmed as the unit was once again the proud recipient of the LTG Ellis D. Parker Aviation Unit Award.

I would like to take this opportunity to briefly discuss a few of the many areas where this battalion goes a step farther than simply accomplishing the mission. These Soldiers strive for and achieve excellence in all their duties, both work and volunteer related. Just a few of these areas that I will personally discuss include the Better Opportunity for Single Soldiers (BOSS), our school sponsorship program, and our partnership with our German comrades.

The battalion is known for its continuous efforts that go beyond the standard mission. The unit typically goes a step farther in its supportive functions and volunteerism which positively impacts the Army, the installation, the children, and our local German partnership units. Our Soldiers benefit from a comprehensive and well executed BOSS program here in Germany. Our battalion and company volunteers in this program have done an outstanding job providing insight, feedback, and numerous trips to neighboring countries such as Spain, France, and Italy. Currently, they are very motivated about the haunted house that will be sponsored and executed by BOSS in Wiesbaden. We have ongoing opportunities to visit many of the historical sights and participate in various entertaining events. The BOSS program has conducted ongoing video game tournaments and a local summer jam in the community. This summer was highlighted by the theater show “Beyond Glory” which depicted the events of a number of our heroes who were awarded the Medal of Honor. The BOSS volunteers have gone as far as incorporating the BOSS into the Family Readiness Group, allowing for a complete association of friends, loved ones, children, and spouses. The single Soldiers that volunteer in this program have a passion for what they do and this has a positive impact on the morale of the unit. I am proud of each and every one of these Soldiers.

Another example of the battalion going a step farther than normal duties and responsibilities is the school sponsorship program. The battalion is in partnership with the Wiesbaden American Middle School. As A result of this partnership, the 421st MEB has played an integral part in shaping and molding young students into successful future adults. The partnership has provided the battalion a variety of opportunities with which to interact, and become positive role models, for the young students. Several events we had the pleasure of participating in included the annual health screening, setup and chaperone of holiday dances, and assisting in the facilitation of fun runs and field day. One of the most rewarding events of this partnership includes developing a Mentorship Program. The program allowed the Soldiers to have one-on-one time with a student who may have been experiencing academic difficulty, and to provide guidance and moral support for personal issues. The close relationships created between the Soldiers, teachers, and students foster a positive learning environment and provide positive role models for the students. I believe that the quote from Alexia Venglik, Middle School Principal, captures the accomplishments and spirit of the 421st MEB Soldiers: “The Soldiers of the 421st were enthusiastic and positive in their performance, and they were excellent with our adolescent population. Middle-age youngsters are often sensitive about their health and body image. The Soldiers of the 421st were 100% professional, courteous, and caring. They quickly established rapport and put students at ease while performing their duties.” No award, certificate, letter of appreciation, or public recognition can compare with the self gratification that is attained by the Soldiers who give of themselves in this manner.

I would like to acknowledge and give a special thanks to our German partnership unit, the 4th of the 263rd

Airborne Battalion. This partnership allows our Soldiers and the German Soldiers the opportunity to train together in a variety of settings to enhance our understanding of each other's cultures and to prepare us for future Coalition missions. One of the highlights of this relationship is the opportunity to fire German weapons and for the Soldiers to be awarded each others weapon qualification badges. Soldiers of the 421st MEB fire on German ranges and have the opportunity to earn the German Schuetzenschur marksmanship badge. These opportunities are a direct reflection of the superb leadership of our partnership and honorary Command Sergeant Major, CSM Karl Heinz Alles. CSM Alles has been the lead in the planning and execution of multiple training and cultural events with our German counterparts. He has made it possible for more than 118 Soldiers to attain the German Sports Badge, and more than 1,142 Soldiers to receive the Schuetzenschnur (shooting award) over the past 10 years. As a result of CSM Alles leadership and the outstanding efforts and dedication of the Soldiers of the 421st MEB, we have been recognized as having the greatest number of German awards of any battalion in Germany. This has not only allowed the opportunity to cross-train with each other, but has allowed the opportunity to build our professional relationship and comradery with our German counterparts. We owe a huge debt of gratitude to CSM Alles. We truly appreciate his efforts and accomplishments and know that it will be a tremendous loss to the German Army and the 421st MEB when he retires next year.

The question that remains is what will become of the 421st MEB over the next year. Will it be transformed into a multifunction medical battalion, be redesignated, or deactivated? With its lineage, proven success, superb Soldiers, and rich history, I would expect it to remain. In either case, it is an absolute honor to serve with a unit that continuously lives by its battalion motto of "Anyone, Anywhere, Anytime." It is a privilege and honor to serve with these outstanding Soldiers and I look forward to continued success as we serve our great nation.

AUTHOR

CSM Velarde is the Command Sergeant Major of the 421st Medical Battalion in Wiesbaden, Germany.

CORRECTION

In the July–September 2005 Journal, LTC Colleen M. Hart listed twice as an author of the article "Community Health Nursing in the Army: Past, Present, and Future.". LTC E. Wayne Combs, AN, USA, one of the authors, was not listed. The Journal regrets the omission.

421st Medical Evacuation Battalion History and Accolades

MAJ Andrew Risio, MS, USA
LTC Lee Roupe, MS, USA
LTC Larry Fulton, MS, USA
LTC Robert Goodman, MS, USA

History

Many units in the United States Army Medical Department (AMEDD) have distinguished themselves in the long and storied tradition of Army medicine. Each of these organizations has routinely excelled at the challenges of supporting the fighting Soldiers, Sailors, Airmen, and Marines in theaters throughout the world. Whether in garrison or while deployed, these distinguished units embodied the AMEDD's motto "To conserve fighting strength." Over the 70 years since it was first activated in 1933, the 421st Medical Evacuation Battalion has proven time and again that it is one of these elite AMEDD units.

The 421st was first constituted on 1 October 1933 in the Regular Army as Company C, 31st Medical Regiment and officially activated on 15 July 1942 at Camp Barkeley, Texas. In September 1943, more than a year later, the battalion was reorganized and redesignated as the 421st Collecting Company. The unit deployed to Europe in 1944 and participated in both the Rhineland and Central Europe Campaigns in the European Theater of Operation (ETO). After the end of the Second World War, the company was part of the larger restructuring of the AMEDD in Europe, and associated with this restructuring, it was reorganized and redesignated as the 421st Medical Collecting Company on 19 July 1945.[1]

The 421st's World War II role as a collecting company was to serve as the unit geographically located between the forward battalion aid stations and the clearing companies with the mission of regulating patients to the evacuation hospitals. This "middle ground" was described in a contemporary World War II official history as follows. "Leaving the aid station, wounded were transported by ambulance to collecting and clearing stations where they were tagged for urgent treatment or travel priority. Ambulances were in operation continuously. Much of the work was done at night and some drivers crawled along bomb-pocked roads following the glow of a cigarette cupped in the hand of an assistant driver walking ahead."[2]

For its service in this role during the Second World War, the 421st received campaign credit for both the Rhineland and Central Europe Campaigns. Additionally, the unit received the Meritorious Unit Commendation (Army) for its service during the war in Europe.[3]

On 27 July 1950, the unit was reorganized and redesignated as the 421st Medical Company (Collecting Company Separate). After this redesignation, the unit still continued to operate as a collecting company between the battalion aid stations and the clearing company. With the advent of aeromedical evacuation during the Korean War, the primary method of transportation from the 421st to the evacuation hospitals transitioned from ground ambulance to helicopter. The medical helicopter units evacuated wounded from the collection companies to the Mobile Army Surgical Hospital (MASH).[4] For its service in Korea, the 421st was awarded campaign credit in every campaign from the UN Offensive to the Third Korean Winter, a total of 8 separate campaigns during this conflict. The Republic of Korea (ROK) also recognized the company's selfless service with the award of the ROK Presidential Unit Citation. After 3 long years of service in Korea, the unit was inactivated on 1 April 1953.

Early in the Vietnam conflict, the unit was redesignated as the 421st Medical Company and was subsequently re-activated during August 1961 in Germany. It was established as a Table of Organization and Equipment (TOE) air ambulance company with the mission of providing Medical Evacuation (MEDEVAC) support for the North Atlantic Treat Organization (NATO) forces in Germany. The company model established by the 421st was later adopted by units in Vietnam when the organization of MEDEVAC transitioned from detachments to companies as described in the official history of DUSTOFF in Vietnam. "The company organization for air ambulances was unprecedented in Vietnam. The only other experience of an air ambulance company the 498th could draw on was that of the 421st Medical Company in Europe, which had its platoons, each consisting of six ships, scattered at four bases." The 498th eventually followed and adopted the model set by the 421st.[6]

In 1977, the 421st Medical Company was designated as the 421st Medical Evacuation Battalion (MEB). The concept for the 421st to serve as a Medical Evacuation Battalion was developed by MG Winkler (who later became The Surgeon General of the Army) and approved by Vice-Chief of Staff of the Army General Max Thurman. The goal was to create a battalion that combined both ground and air evacuation capabilities under a single command and control element.

The battalion was thus formally activated as the 421st MEB on 30 October 1987 at Nellingen Barracks, near Stuttgart, Germany. While the 421st MEB was the first to test the evacuation battalion concept approved by General Thurman, the 52nd Medical Battalion (Evacuation) in Korea was officially designated an evacuation battalion in 1985, 2 years prior to the formal activation of the 421st MEB.[7] The formal designation of these units was Medical Battalion (Evacuation) but for the 421st MEB, the early concept name stuck. It has been known in Europe as a Medical Evacuation Battalion since its inception. Upon activation as a battalion, the 421st adopted the former company motto of "Anyone, Anywhere, Anytime," which is prominently inscribed on the units Distinctive Unit Insignia.

The headquarters detachment and each individual unit assigned to the 421st have contributed to the distinguished history of the battalion. Subordinate elements of the battalion deployed to both Saudi Arabia for Operation Desert Shield/ Storm and to Somalia for Operation Provide Comfort. (The deployment to Saudi Arabia conducted by one of the subordinate companies, the 45th, is still the longest helicopter self-deployment in US Army history.)[8] The 421st MEB Headquarters and several companies also deployed in support of Operation Joint Endeavor. For its participation in the Implementation Force (IFOR) from 15 October 1995 to [9] November 1996 as part of the NATO's deployment to Bosnia in support of the Dayton Peace Accords, the 421st MEB earned the Army Superior Unit Award.[9] Eventually, every subordinate element of the battalion would serve in IFOR, the Stabilization Force (SFOR) or the Kosovo Force (KFOR). Since 9/11, the battalion has continued to provide evacuation support to *conserve the fighting strength*. In the ongoing Global War on Terrorism (GWOT), every element of the battalion has been deployed to either OIF or OEF and in some cases, both.

CAMPAIGN PARTICIPATION CREDIT

World War II
- 421st Medical Company
- 45th Medical Company
- 159th Medical Company
- 557th Medical Company

Vietnam
- 45th Medical Company
- 159th Medical Detachment
- 236th Medical Detachment

Operation Provide Comfort
- 159th Medical Company

Operation Restore Hope
- 45th Medical Company

Operation Enduring Freedom
- 45th Medical Company
- 159th Medical Company
- 236th Medical Company

Korean Conflict
- 421st Medical Company
- 159th Medical Company

Desert Shield, Desert Storm
- 45th Medical Company
- 236th Medical Company

Joint Endeavor/Guard/Forge (IFOR/SFOR/KFOR)
- 421st Medical Evacuation Battalion
- 45th Medical Company
- 159th Medical Company
- 236th Medical Company
- 557th Medical Company

Operation Iraqi Freedom
- 421st Medical Evacuation Battalion
- 45th Medical Company
- 159th Medical Company
- 236th Medical Company
- 557th Medical Company

Table 1. Campaign Participation Credit for the 421st Medical Evacuation Battalion and subordinate units. (Source: Each unit's Center for Military History, Lineage and Honors and recent unit history.)

A complete delineation of the campaigns creditable to the battalion and its subordinate units appears in Table 1. Tables 2 and 3 delineate the recent leadership beginning with the battalion's reactivation in Germany in 1961 (commanders and command sergeants major) responsible for executing the assigned missions.

A discussion of the battalion's lineage is not complete without a cursory look at the history of its traditional subordinate units, the companies that have been habitually assigned to the 421st MEB for the past 2 decades. Short histories of the most recent subordinate companies follow:

(1) The 45th Medical Company was constituted 20 August 1943 as the 45th Veterinary Company. Activated 16 July 1944 in Naples, Italy, it was inactivated less than 2 years later on 4 February 1946 in Germany. During the Korean War, the company was activated on 9 August 1951, but, within a year, it was deactivated at Camp

Atterbury, Indiana, never having seen service in Korea. During the Vietnam War, the company was redesignated on 10 May 1960 as the 45th Medical Company and activated on 6 June 1960 at Fort Bragg, North Carolina. Subsequently, the company was redesignated on 31 July 1961 as the 45th Medical Collecting Company (Separate) and allotted to the Regular Army. During the Vietnam War, the 45th saw service as one of the growing numbers of MEDEVAC units in Vietnam. At the end of the war, the company was once again inactivated on 30 April 1971 in Vietnam. With the birth of the 421st MEB, the 45th was reactivated as a Medical Company (Air Ambulance) on 16 October 1988 in Germany and assigned to the battalion. With the transformation of Army Aviation, the 45th was reassigned to the 4th Aviation Brigade of the 1st Infantry Division in July 2005.[10]

421ST MEDICAL COMPANY COMMANDERS 1961-1987

1961-1962	LTC Pfeiffer	1973-1974	LTC Carroll
1963-1964	MAJ Jones	1974-1976	MAJ Lynch
1964-1966	LTC Schmidt	1976-1978	LTC Truscott
1966-1967	MAJ Insley	1978-1980	LTC Scofield
1967-1968	LTC Medford	1980-1982	LTC Berry
1968-1969	MAJ Sandifer	1982-1984	LTC Kinsely
1969-1970	MAJ Colbert	1984-1986	LTC Stahl
1970-1971	MAJ Norris	1986-1988	LTC Snyder
1971-1973	LTC Salmon		

Table 2. Company Commanders from activation in Germany until designation as a Medical Battalion. (Source: 421st Medical Company Unit History.)

(2) The 159th Medical Company was constituted 7 October 1944 as the 159th Medical Service Detachment. Activated 22 November 1944 in France, it was inactivated after 1 year of service on 12 November 1945. For the Korean War, the 159th was redesignated on 27 September 1951 as the 159th Maxillo-Facial Detachment. It served in Korea from 15 November 1951 until the end of the war, inactivating on 24 January 1953. Reborn as a MEDEVAC unit on 18 October 1963, the 159th Medical Detachment was activated on 24 December 1963 at Fort Riley, Kansas. The 159th served with distinction in the Republic of Vietnam from 1968 to 1971 as a DUSTOFF unit and continued to serve as a MEDEVAC detachment in the United States and Germany throughout the next 2 decades. Like the 45th, it also was reorganized with the birth of the 421st MEB, transitioning from the 159th Medical Detachment to the 159th Medical Company (Air Ambulance). On 30 October 1987, it was assigned to the 421st. With the transformation of Army Aviation, the 159th was reassigned to the 1st Battalion of the 214th Aviation Regiment in Germany in July 2005.[11]

(3) The 236th Medical Detachment was activated as a MEDEVAC Detachment on 1 July 1968 in Fort Polk, Louisiana. (Notably, the 236th has always been a MEDEVAC unit throughout its history.) The unit was deployed to Vietnam on 26 November 1968. With the drawdown in Vietnam, the 236th was relocated to Fort Sam Houston, Texas, on 30 March 1972 and further relocated to Augsburg, Germany, in March 1973. Upon arrival in Augsburg on 28 March 1973, the unit was assigned to the 421st Medical Company located in Nelligen. On 15 October 1989, the 236th was deactivated as a detachment then reactivated as a company by combining elements of the 63rd, 15th,

421ST MEDICAL EVACUATION BATTALION COMMANDERS AND CSMS 1988 TO PRESENT

1988-1990	LTC Hapner	1988-1990	CSM Scott
1990-1992	LTC Keith	1990-1992	CSM Williams
1992-1994	LTC Davis	1992-1996	CSM McCloud
1994-1996	LTC West	1996-1999	CSM Hogue
1996-1998	LTC Crook	1999-2002	CSM Burke
1998-2000	LTC Akins	2002-2004	CSM Jeffers
2000-2002	LTC Doyle	2004-2005	CSM English
2002-2004	LTC Sargent	2005-Present	CSM Velarde
2004-Present	LTC Campbell		

Table 3. Battalion Commanders and CSMs from Designation as a Medical Battalion until Present. (Source: 421st Medical Battalion Unit History.)

and 236th Medical Detachments to form the 236th Medical Company (Air Ambulance). It was the last MEDEVAC company to be assigned to the 421st MEB. The company's rear detachment is currently still assigned to the 421st while the main company is deployed to OIF and OEF.[12]

(4) The 557th Medical Company was designated as the 557th Medical Ambulance Company (Motor) on 31 July 1943 in the Central Pacific area. The unit has always been a ground ambulance company. On 30 November 1945 (after the end of WWII), the unit was inactivated. It was again activated on 7 August 1951 at Camp Pickett, Virginia, and ultimately shipped aboard the USNS General Darby to Europe. On 20 November 1960, the 557th Medical Company (AMB) was assigned to the 34th Medical Battalion of the 31st Medical Group. In October 1978, the unit was then reassigned to the 68th Medical Group which was a sub-unit of the 3rd Support Command. In 1984, the company was moved to its current home on Wiesbaden Airbase, and in 1987, the 557th was the first subordinate element to become part of the 421st MEB under the evacuation battalion concept. It is still assigned to the battalion today.[13]

Accolades

The Soldiers of the 421st MEB have always been, and will continue to be, the unit's greatest strength. The campaign streamers and unit awards are visible testaments to the will, resolve and strength of the Soldiers past and present. In addition to these accolades, the unit received many additional noteworthy awards. First and foremost, the unit has earned the Lieutenant General Ellis D. Parker Award as the Army's Best Aviation Battalion in the Combat Service Support Category multiple times. The Parker Award is a Department of the Army level award that recognizes demonstrated and sustained excellence in the areas of leadership, training, maintenance and safety over the course of the full year. The competition is open to all active duty, National Guard, and reserve component Aviation Battalions. The Soldiers of the 421st MEB have earned this distinction as Best Aviation Battalion in the Army eight out of the last 12 years (1993, 1995, 1997, 1998, 1999, 2000, 2003, and 2004) a feat unmatched by any other aviation battalion in the US Army. The 421st MEB also competed in and won the US Army Europe (USAREUR) Supply of Excellence award 3 consecutive years, in 2002, 2003, and 2004. In 2002, the 421st MEB won the Army level Supply of Excellence Award. The unit was recognized in 1995 by PM Utility Helicopter, Department of the Army, for the best Operational Readiness level in the entire Army for the Blackhawk helicopter. The Army Aviation Association of America (AAAA) recognized the battalion or its subordinate unit 5 times as Aviation Unit of the Year (1979, 1988, 1989, and 1993).[14] The 421st MEB was also recognized at the Army level for safety achievements, receiving six different Accident Prevention Awards of Excellence. These awards are only a small sample that demonstrate the dedication and spirit of the Soldiers who make up the 421st Medical Evacuation Battalion, DUSTOFF Europe.

At the individual level, recent history in support of the Global War on Terror provides an insight into the type of Soldiers represented in the 421st MEB. Over the last 2 years, the battalion Soldiers deployed in Iraq and Afghanistan have earned at least 1 Distinguished Flying Cross, 3 Soldiers Medals, 5 Bronze Stars, 163 Air Medals (11 with V Device), 131 Army Commendation Medals and more than 17 Combat Medic Badges.[15] These recent awards highlight the steadfast courage and ability of the Soldiers, both past and present, who have served in the battalion.

The 421st MEB today is a proud example of AMEDD Soldiers continuing the 70 year old legacy of the battalion providing support to their fellow troops. The Soldiers continue to support the fighting forces even in the midst of change and transformation. Whatever the future holds for the 421st MEB, the Soldiers of this proud organization will continue to carry on the battalion's tradition and conserve the fighting strength by providing care for "Anyone, Anywhere, Anytime."

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14. Unit Records, Wiesbaden Army Airfield, Germany, as of August, 2005. Includes some awards to the 15th Medical Detachment and the 63rd Medical Detachment that were assigned to the 421st and eventually merged to become the 236th Medical Company under the battalion.

13. Battalion S-1 Records, Wiesbaden Army Airfield, Germany, as of August, 2005.

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45th Medical Company (Air Ambulance)

MAJ Robert A. Kneeland, MS, USA
MAJ Andrew Risio, MS, USA

The 45th Medical Company Air Ambulance (AA) has a rich and dynamic history. It is one of the few select units in the Army that can claim to have participated in every major US and NATO operation since the Korean War with the exception of Operation Just Cause. The unit's MEDEVAC history began in Vietnam from 1967 until 1971. The 45th later became the first MEDEVAC Company from Europe to participate in Desert Shield/Storm. In addition to supporting operations in Somalia, the 45th also participated in both Implementation Force (IFOR) and Stabilization Force (SFOR). The 45th was then chosen to deploy to Kosovo as part of Kosovo Force (KFOR). At the beginning of the new millennium, the 45th has deployed elements to both Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) in support of the Global War on Terrorism (GWOT). Throughout the past forty years, the 45th has upheld the call of MEDEVAC, living the motto "When I have your wounded."

The 45th traces its early lineage back to World War II and Korea, when it was first constituted on 20 August 1943 as the 45th Veterinary Company and activated in Italy on 16 July 1944. After the war, the 45th was inactivated while still in Germany around February 1946. During the mobilization for the Korean conflict, the 45th guidon was again raised when it was redesignated the 45th Medical Collecting Company, (Separate) on 31 July 1951 and activated at Camp Atterbury, Indiana, on 9 August 1951. This was short-lived as the unit was inactivated just over a year later on 15 August 1952 without ever deploying to Korea.[1]

The company's history as an Air Ambulance unit began when it was again resurrected by the Army as the 45th Medical Company (AA) in June 1960 at Fort Bragg, North Carolina. It served in a variety of locations before finally winding up in Vietnam in 1967. As the war spun down to its conclusion, US forces were drawn down and the company was inactivated in Vietnam on 30 April 1971. The unit was again activated as an Air Ambulance Company in Germany on 16 October 1988, where it remains on active duty today.[1] The company will soon reorganize under Aviation Transformation, becoming Charlie Company (Medevac) in the General Support Aviation Battalion as part of the Multi-Functional Aviation Brigade in Ansbach Germany. This reflagging action is scheduled for April 2006.

Because of the Second Berlin Crisis, the 45th Medical Company (AA) was ordered from Fort Benning to Germany in October 1961 where it spent 18 months. The 21st Medical Platoon (AA), which had been stationed at Fort Benning, Georgia, became the Third Platoon of the 45th Medical Company on 5 April 1961. In Germany, the Third Platoon was located at Schweinfurt. The Headquarters and the Second Platoon were at Greisheim Army Airfield near Darmstadt, the Fourth Platoon was located at Illesheim, and the First Platoon was at Wertheim. While in Germany, the unit was equipped with H-19D and a few UH-1B helicopters. During most of its European deployment, the 45th was seriously undermanned and ill equipped.

The 45th returned to Fort Bragg in April 1963. From then until it deployed to Vietnam in July 1967, the unit was equipped at what would now be considered a C-5 rating for personnel and equipment. It received a hodgepodge of H-19 and sometimes UH-1 aircraft that came and went based on shifting Army priorities. The 45th participated in various exercises while it struggled to cobble together a cohesive unit.

Upon deploying to Vietnam in July 1967, it received a full complement of 25 UH-1H's. While temporarily located at Bien Hoa, several pilots were exchanged for pilots from other units who had Vietnam flight experience; the Vietnam War version of a right-seat ride and transfer of authority. The unit eventually arrived at Long Binh adjacent to the 24th Evacuation Hospital and became fully operational by September 1967. The unit provided support within III and IV Corps tactical zones. It supported not only US troops but Korean, Australian, and New Zealand Forces, as well as South Vietnamese units.[2] It was during this period that CW3 Michael Novosel was assigned to the 82nd Medical Detachment under the 45th Medical Company. His heroic actions earned the second Medal of Honor awarded to a MEDEVAC pilot in Vietnam.[2 (pg 96)] The company was heavily involved in both the US and South Vietnamese operations in Cambodia during April-June 1970. As Vietnamization proceeded and the war wound down, the ratios of US/Allied casualties as compared to RVN and civilian casualties changed. In 1969, the ratio was about 30% US and Allies to 70% RVN and civilians. By the time the unit was inactivated in April 1971, the ratio was down to 10% and 90% respectively. In the spring of 1971, the company was deactivated as the war in Vietnam began to draw down.[3]

The ever-changing Army in Europe included a significant reorganization of Army medical units in Germany in the late 1980s. On October 16, 1988, the 421st Medical Company was redesignated a medical evacuation battalion, subordinate to the 30th Medical Brigade.[4] The 45th Medical Company again returned to Germany for the third time and was re-formed and assigned to the 421st.[5] The 45th served in

Operation Desert Shield / Desert Storm; the first war with Iraq. It was among the first units from US Army Europe (USAREUR) to deploy to Saudi Arabia. The 45th deployed in August 1990 executing what remains as the longest helicopter self-deployment in Army history. That is, the unit flew its UH-60A Blackhawk helicopters from Darmstadt, Germany, to Dhahran, Saudi Arabia, without US Air Force military airlift. This freed critical space that the Air Force needed to deploy other units to the theater. The historic deployment of 12 aircraft began on August 20, 1990, with the first set of six crossing the Alps to Brindisi, on Italy's southern coast. On day 2 and 3 they went to Athens. Day 4 took them to Cyprus, day 5 to Cairo West and day 6 to Tabuk, Saudi Arabia. Day 7 saw them arrive in Riyadh and on day 8 they safely arrived at their final destination in Dhahran, Saudi Arabia.[6]

The company began its mission in August 1990, supporting the 82nd Airborne Division and the 24th Infantry Division at Assembly Area Vidallia. On 15 December, the unit was chopped to Army Central Command's (ARCENT's) Medical Command as an Echelons Above Corps (EAC) asset to provide hospital ship mission coverage in the gulf. During EAC operations on 25 February, the unit responded to the SCUD missile attack mass casualty in Dhahran which caused over 130 casualties and 28 deaths. The unit also operated 3 forward support teams at Bahrain, Jubail, and King Khalid Military City while maintaining a 6 aircraft Area Support Section at Dhahran. During this time, the unit moved patients from key airheads into EAC hospitals and to the hospital ships Mercy and Comfort.

Following Desert Storm, the 45th returned to Germany and shortly thereafter, it deployed to Somalia, serving there from May through August 1993. During this time, the 45th supported the UN humanitarian relief operations as well as operations against Somali warlord militias. Elements of the 45th redeployed from Operation Restore Hope in August 1993 and returned to duty in Germany supporting training primarily at Grafenwöhr and Hohenfels.

During the initial support for the Dayton Peace Accords, the 45th deployed a Forward Support MEDEVAC Team (FSMT) of three aircraft, and along with an FSMT from the 159th Medical Company (AA), creating a 21-helicopter company under the command of the 236th Medical Company (AA).[7] In October 1996, the 45th, recovering the 3-ship FSMT, deployed 15 helicopters to replace the 236th Medical Company (AA) as part of the Covering Force for Operation Joint Endeavor, the US contingent of NATO's IFOR in the Balkans. By November 1996, the number of US troops dropped from 8,500 to 5,300 as the IFOR Covering Force transitioned to the SFOR. The American participation changed to Operation Joint Guard. During the 6 month rotation, the 45th operated aircraft from three locations: Kaposjulak, Hungery; Slavonski Brod, Croatia, and Tuzla, Bosnia. The 45th headquarters remained near Tuzla, co-located with the Norwegian Medical Company in what was known as the "Blue Factory" (the name was derived from a nearby Bosnian truck stop painted a faded blue). At the end of the first SFOR rotation, the 45th returned to Germany in April 1997. The company's support of the IFOR Covering Force and SFOR earned the unit the Army Superior Unit Award.[8] The 45th would again be called back to the Balkans in 1999. This time, it was Kosovo and support of the NATO led KFOR. The company deployed to the region and provided support from 2 locations: Skopje, Macedonia, and Camp Bondsteel, Kosovo. At the end of the first KFOR, the 45th returned to duty in Germany and later, in 2002, the unit returned to Kosovo for a second tour. The 45th participated in four separate deployments in support of NATO during the 1990's but they did not mark the last time the 45th would be called upon to support NATO in contingency operations.[9]

During the run-up to Operation Iraqi Freedom, in the spring of 2003, the 45th was alerted to begin preparations for deployment to Turkey as part of the 4th Infantry Division's northern operations into Iraq. Advance party elements had already arrived on the ground in Turkey when those plans were aborted and the company was told to stand down. Later in September of 2003, the unit was directed to prepare for a December deployment to Iraq of 12 helicopters and an October deployment of 3 helicopters and crews to Afghanistan in support of the NATO-led International Security Assistance Force (ISAF) in Kabul. This afforded the company less than 2 weeks notice for the ISAF mission and cut the normal company by a fifth for its deployment to OIF in December. The ISAF deployment to Afghanistan again demonstrated the abilities of the 45th in supporting NATO forces. This was the third time the unit was called upon to work with NATO in contingency operations (IFOR/SFOR, KFOR and ISAF). The Forward Support MEDEVAC Team performed flawlessly and the mission has continued under various units up to the present day supporting the NATO forces deployed in support of the Global War on Terrorism.[9]

During the deployment in support of OIF II, the 45th was deployed first to Baghdad International Airport and then moved to Camp Cooke near the city of Taji. During the entire deployment, the unit operated inside the area that became the heart of the counter-insurgency. The uprisings at Najaf and Tikrit, as well as the operation to take back the city of Falluja, were all directly in the company's zone of support. The 45th acquitted itself admirably and did true homage to its Dustoff history. During the year-long deployment, the unit flew over 4000 hours and evacuated over 1500 patients – a record only rivaled in the units history with its time in Vietnam. During the same period, while flying in the most hostile environment in the theater, the company did not lose a single aircraft to enemy fire or aviation accidents.[9]

Throughout these last 40 years, the 45th Medical Company

has consistently lived up to the reputation first established over the killing fields of Vietnam. The geography has changed, but the desire to complete the mission hasn't. The 45th has performed lifesaving missions in the USA, the Far East, Southwest Asia, Africa, Central Europe, the Balkans, and Eastern Europe. From its history in Vietnam up through an expected return to Iraq in its future, the 45th will continue to demonstrate a complete commitment to the DUSTOFF motto: Dedicated, Unhesitating Support To Our Fighting Forces.

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SOLDIERS OF THE 159TH MAINTAIN THE DUSTOFF LEGACY

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"That pilot knew what he had to do – he put that bird down in an area that allowed for no error on his part. If you walk the area, you would know what I mean… and this was the same feeling our Soldiers had which built their confidence that if they required MEDEVAC, these pilots would risk their own lives to save theirs."[1]

Introduction

The 159th Medical Company (Air Ambulance) continues to maintain the proud legacy of DUSTOFF in both peacetime and war. The Soldiers that make up this outstanding organization embody the finest qualities of professional military service and are truly dedicated to "Never leaving a fallen comrade." This mission focus not only serves as a critical part of our Army's Warrior Ethos, but truly defines the DUSTOFF heritage forged by those who came before us, like Randy Millican (Medic, Vietnam 69-70), Douglas Moore (Commander, Vietnam 68-69), Bruce Nelson (Flt Opns Off, Vietnam 70-71) and Bruce Zenk (Pilot, Ft. Riley 65-67). The purpose of this article is to highlight the proud history of the 159th Medical Company (AA) and to put a face on the Soldiers of today who continue the noble mission of evacuating the sick and injured from the modern-day battlefield.

Proud Lineage

Like many Army Medical Department units, the 159th Medical Company has a proud history dating back to the Second World War. The unit was originally constituted on 7 October 1944 as the 159th Medical Service Detachment. The unit began service on 22 November 1944 in France only to be deactivated less then a year later on 12 November 1945. The unit did not serve in any named World War II campaigns, but later distinguished itself in four Korean War campaigns as the 159th Maxillo-Facial Detachment. Following the Korean War, the unit was once again deactivated on 24 January 1953, but would not lie dormant for long. With the dawn of the age of the air ambulance came exciting changes for those charged with the evacuation of patients, laying the foundation for the unit of today.[2]

The 159th Medical Detachment (RA) was activated on 24 December 1963 at Fort Riley, Kansas, beginning dedicated service as an air ambulance unit. Initially, the unit was not allocated helicopters, but in early 1964, five H-21s were assigned. Unfortunately, over the next two years, all five aircraft sustained crash damage during blood transport and training missions. The worst accident resulted from a fatal mid-air collision involving an F-105 trainer[2]. The unit would require almost complete reconstitution in order to become combat effective. This became even more critical as the unit would soon be called to support operations in Vietnam.

Long Binh DUSTOFF

Evacuation missions during combat operations in Vietnam forever changed the emotions associated with the term "DUSTOFF". In August 1967, the 159th was alerted for movement to Vietnam. Six new UH-IH helicopters were flown from the Bell Helicopter plant in Fort Worth, Texas, to meet up with the unit and prepare for overseas processing. The main body sailed for Vietnam 3 October 1967 and arrived in Cam Ranh Bay on 25 October 1967. The helicopters were assembled and flown to Cu Chi. The 159th was

assigned to the 67th Medical Brigade and was directed to be combat ready within 30 days. By the end of the 30 days, all six aircraft had sustained combat damage.[2]

The principal mission of the 159th was to support the 25th Infantry Division and its counterpart, the 25th ARVN Division. In addition, the unit also supported the 1st Infantry Division, Special Forces camps along the Cambodian border, and later, elements of the 1st Cavalry Division (Airmobile). On 16 February 1968, the 159th was reassigned to the 68th Medical Group and placed under the operational control of the 45th Medical Company (AA) located in Long Binh. During 1968, the 159th evacuated 20,511 patients.[2]

On New Year's Day, 1969, a 159th aircraft commanded by MAJ Douglas E. Moore flew to a confrontation site on the Cambodian border where three American Prisoner's of War were released by the National Libertarian Front. The three were safely evacuated to the hospital complex at Long Binh. The 159th evacuated approximately 12,000 patients during 1969.[2]

In the first 3 months of 1970, the 159th evacuated another 4,272 patients. After control of the Cu Chi and Tay Ninh base camps was turned over the South Vietnamese, the 159th joined the 45th at Long Binh on 7 November 1970. Together they were known as 'Long Binh DUSTOFF'. In early March 1971, the 45th Medical Company stood down and the 283rd Medical Detachment moved to Long Binh from Tuy Hoa. They continued to be known as "Long Binh DUSTOFF" until the 283rd stood down in November 1972.[2]

In spring, 1971, the 159th began training the South Vietnamese Air Force to take over medical evacuation responsibilities. Combined crews comprised of an American Aircraft Commander and Crewchief, and a South Vietnamese Pilot and Medic began performing DUSTOFF missions. Gradually, the South Vietnamese Air Force took over complete operation of Long Binh DUSTOFF, allowing the 159th to depart Vietnam for Fort Benning, Georgia, on 30 November 1972.[2] Unfortunately, the 159th redeployment did not occur prior to the loss of CW2 Robert Horst on 7 April 1972. He has the unfortunate distinction of being the last DUSTOFF pilot killed in Vietnam. This served as a grim reminder of the countless DUSTOFF Soldiers who paid the ultimate sacrifice defending the cause of freedom while saving fallen comrades.[2] During the 159th's service in Vietnam, the unit earned thirteen campaign streamers and three Meritorious Unit Commendations, in addition to several Republic of Vietnam decorations.[3]

DUSTOFF Europe

The 159th's stay at Fort Benning was short-lived and the unit packed up again for another overseas move. The unit departed Fort Benning on 25 June 1973 enroute to West Germany. It arrived at its new station at Fuerth, West Germany, on 25 June 1973, where it remained until 1977. The unit then moved to Garlstedt until 1986 when it relocated to the Army Airfield at Gresham outside Darmstadt, Germany. It remained there through its reorganization as a full-up Medical Company (Air Ambulance) on 16 October 1986. In October 1987, the 159th Medical Company (Air Ambulance) became an official member of the "DUSTOFF Europe" team as a separate company under the 421st Medical Evacuation Battalion. With the closure of the Gresham Army Airfield in June 1992, the unit was relocated to Wiesbaden Army Airfield, where it remains today.[4]

As proud members of the DUSTOFF Europe team, all of the air ambulance companies remained decisively engaged in both training and deployments. During the Gulf War, the 159th provided evacuation support at the communications zone level, while continuing European mission support. On 22 April 1991, the unit self-deployed fifteen aircraft to Turkey in support of Operation Provide Comfort where a portion of the unit remained on station until 22 October 1991. The rest of the company was split to augment operations in Saudi Arabia until December 1991, when the unit returned to Wiesbaden.

In December 1992, the 159th was called upon to deploy fifteen aircraft to the civil war-torn region of Somalia in support of Operation Restore Hope. Commanded by MAJ Pauline Knapp, the unit operated out of the airfield at Bali Doggle. Aircraft requirements were reduced from 15 down to six and the unit was replaced by its sister-company, the 45th Medical Company (AA) on 31 May 1993. The 159th was awarded the Meritorious Unit Citation for its participation in support of deployed forces.

In May 1998, the 159th was assigned to support United States and United Nations peacekeepingforces in Bosnia as part of the Stabilization Force (SFOR) near Tuzla, Bosnia. Commanded by MAJ Bill Layden, the unit expertly supported joint and coalition forces operating throughout the dangerous and unpredictable Balkan region.

Operations Enduring Freedom and Iraqi Freedom

The operational tempo of all DUSTOFF units remains relatively unchanged. When units are not deployed, they are either providing real world medical evacuation support in garrison or they are training for deployment. From 1999 to 2002, the 159th had the

opportunity to deploy multiple times throughout the EUCOM area of responsibility, conducting operations in Nigeria, Tunisia, England, Italy, Slovenia, Hungary, Bosnia, Czech Republic and even some short stints in Germany.

Things would not slow down for the unit, and the year 2002 would bring the 159th to the front lines of the Global War on Terror. As the unit was participating in a major V Corps exercise in Poland, they were directed to deploy a Forward Support MEDEVAC Team in support of Operation Enduring Freedom in Kuwait. Major Dustin Elder led the first 159th team out the door in October 2002. The team augmented 2-6 Cavalry and provided 24-Hour MEDEVAC support to all deploying forces as they conducted reception, staging, onward movement, integration, and training in Kuwait. Little did anyone know that this team would serve as an Advanced Party for the company main effort.

In February 2003, the commander of the 159th, MAJ Arthur Jackson, was initially handed the important mission of facilitating the deployment preparation and execution for the 45th Medical Company (AA). The 421st Medical Evacuation Battalion selected the 45th to serve as the lead company deploying first to Turkey with the anticipated follow-on mission into the heart of Iraq. In a dramatic turn of events in late February, the 159th was called upon to deploy to Iraq. Within 2 weeks of initial notification, the unit deployed 12 aircraft, ground support equipment, and 102 personnel to Camp Doha, Kuwait, and began preparation for combat operations. During combat operations, the unit provided medical evacuation support to virtually every major combat unit operating in the Central Command area of responsibility. Unit aircrews covered the entire airspace of Iraq, reaching all of its borders during their yearlong deployment. Ground crews operated over unsecured routes, traveling the expanses of the hostile desert, typically without escort or air coverage. The mission statistics of the 159th are legendary. The unit operated in the most dangerous and unpredictable areas of Iraq, flying single-ship without escort. They averaged an astounding 13 missions per day for the duration of the deployment, evacuation numbers not seen since Vietnam. All told, the unit flew over 5,000 combat hours, conducted over 2,300 lifesaving missions and evacuated over 5,200 patients. For their efforts, unit Soldiers were awarded four Soldier's Medals, seven Bronze Star Medals, more then 70 Air Medals, 40 Army Commendation Medals, and 75 Sikorsky Rescue Awards.[5]

Perhaps the most impressive accomplishment or unit accolade of all is that the 159th did not lose a single Soldier in nearly 16 months of continuous combat operations. The battle-proven unit redeployed to Wiesbaden, Germany, in February 2004, further enhancing their mark on the DUSTOFF legacy. Unfortunately, the unit would not have much time to recover.

Within 100 days of redeploying from OIF, the 159th would be called again to support ongoing combat operations in Afghanistan. The unit deployed a Forward Support MEDEVAC Team consisting of three aircraft and 18 personnel in support of the NATO led International Security Assistance Force (ISAF), conducting a relief in place with the 45th Medical Company (AA). Several of the deploying crewmembers consisted of volunteers that had only recently returned from combat operations in Iraq, demonstrating the incredible nature of selfless service and dedication to duty witnessed daily in DUSTOFF. CPT John Hoffman's team augmented 'Afghan DUSTOFF' a team from the 68th Medical Company (AA) serving in support of OEF and commanded by MAJ David Spero. The deployed crews were awarded two Bronze Star Medals, 19 Air Medals (including one

for Valor), and eight Army Commendation Medals. Additionally, one of the 159th flight medics, SSG(P) Makonen Campbell, was submitted for the Distinguished Flying Cross for a heroic lifesaving hoist mission conducted under hostile fire.[6]

The mission is not over in Afghanistan, with DUSTOFF crews flying an average of 100 missions or more a month.[7] A team from the 421st Medical Evacuation Battalion currently supports Operation Enduring Freedom and the International Security Assistance Force. The team of 18 Soldiers is currently led by CPT John McGuire from the 45th Medical Company (AA).

The Face of DUSTOFF

Talk with any DUSTOFF Soldier, past or present, and most will tell you that serving in DUSTOFF fills them with a sense of pride. This pride is warranted when you truly consider the number of lives that are positively affected by their actions. The Soldiers of the 159th Medical Company (AA) are not unlike others serving in DUSTOFF units throughout the Army, but their accomplishments are incredibly significant. Quite simply, theirs is a story that needs to be told. It would be impossible to capture all the amazing stories of the 159th in one brief article, but the following vignettes are offered to show the face of today's DUSTOFF Soldier.

DUSTOFF 552

Late in the evening on 1 October 2003, DUSTOFF 552 responded to an Urgent-Surgical MEDEVAC request in central Baghdad. The crew, consisting of CW3 Clint Miller (Pilot-in-Command), 1LT Thomas K. Powell (Co-Pilot), SSG Eric Hartman (Medic) and SPC Doug Holm (Crewchief) lifted off within 5 minutes of notification and headed into the heart of the city. A U.S. Soldier was shot in the face by an Iraqi. The crew arrived at the pick-up site and searched for a more suitable landing zone because the area selected by the maneuver force was a narrow street surrounded by power lines, poles, and buildings. As the crew was searching, a call came over the radio crying, 'DUSTOFF, we need you down here now, my buddy is dying.' The crew made their final approach to the landing zone and touched down just before 'browning out' from the dust. The crew quickly loaded the patient on board and departed the site, enroute to the hospital. The crew would later receive word that their patient did not survive the wounds.[8]

Unfortunately, this would not be their last mission that night. Just after midnight, the crew received another MEDEVAC call from a familiar location. The request to evacuate an Iraqi insurgent who was shot in the chest came from the same unit. The evacuee was the man who had shot the Soldier evacuated earlier. 1LT Powell related that "We put him on the same litter as our Soldier a few hours earlier, and the medic performed CPR on him with the same intensity as he did for ours. And we saved his life."[8]

This was not the only occasion where the 159th would evacuate both the wounded U.S. Soldier and the enemy that caused the wound. Powell went on to describe the feelings of some of the crewmembers, when he said "Some days the medics come back saying they hate their job, but then they're back at work the next day with the same intensity." He went on to say that "I've looked back there sometimes and I don't know how they do it. Now I just keep my eyes forward and fly."[8] As mentioned in the opening of this article, the Brigade Commander on the scene of this incident later recognized the crew for their actions, saying that his Soldiers knew that "…if they required MEDEVAC, these pilots would risk their own lives to save theirs."[1] Soldiers know that if they are wounded, their fellow Soldiers and specifically DUSTOFF Soldiers will do everything in their power to evacuate them. This understanding allows Soldiers to mentally prepare for the challenges of war. Additionally, it allows large numbers of our fallen to fight another day, by rapidly evacuating them to an appropriate level of medical care allowing many to return to duty.[9]

Baghdad Prison Mass Casualty

While supporting combat operations in Iraq, the 159th responded to multiple mass casualty (MASCAL) events. These missions placed significant stress on the hospitalization, evacuation, and patient regulation systems in theater. As always, the DUSTOFF crews showcased their ability to remain flexible and adaptive in the conduct of their mission. Air and ground crews were often charged with providing command and control of air evacuation assets on the scene, as well as critical patient regulating services to ensure that patients were transported to "open beds" in the various treatment facilities. The Baghdad Prison MASCAL was an example of this adaptive coordination in clearing the battlefield.

On the night of 16 August 2003, the Baghdad Prison, located approximately 12 miles west of the city, came under heavy mortar fire. Over 50 Iraqi Enemy Prisoners of War were injured in the attack. The 159th responded with three aircraft, the first arrived within 6 minutes of the initial call for help. The 54th Medical

Company (AA) also answered the call by deploying aircraft. SFC Robert Hanna, a 159th Aircraft Component Repair Supervisor by trade, was transported to the scene of the MASCAL in the back of an aircraft with a "man-pack" radio. Once on the ground, he assumed command and control of MEDEVAC assets, evacuating casualties to two Combat Support Hospitals (CSH), five Forward Surgical Teams (FST), and the Air Force Expeditionary Medical Support (EMED) surgical unit operating in the area. The first 12 casualties were evacuated to the 28th CSH, but this immediately filled the hospital to capacity and forced the remaining 30 casualties to be evacuated to the 21st CSH and the FSTs. In just 3 intense hours, the 159th aircrews evacuated 42 patients. The mission complexity and the actions that night by SFC Hanna and the aircrews were simply amazing. The tactics, techniques, and procedures executed during this mission would set the conditions for success for what would soon become, perhaps the most significant day of the war for the 159th.[10]

UN Bombing

For the 159th, 19 August 2003, appeared to be another typical day in Baghdad. The unit maintained three aircraft and crews on duty to provide continuous MEDEVAC coverage for the area. A call came in to DUSTOFF Operations relaying that there was a 'possible mission' in the vicinity of the UN and to ready the crews. The aircraft performing 'Third Up' commanded by CW3 Clint Miller, overheard the radio transmission and diverted to what was considered 'ground zero' arriving within 8 minutes of the call. DUSTOFF Operations learned that the United Nations headquarters in downtown Baghdad had just been bombed and they took immediate action to launch additional crews. The second aircraft arrived only minutes after Miller's crew. Within 30 minutes, the rest of the 159th evacuation team, consisting of four additional aircraft, arrived on the scene to provide medical evacuation support to the tragedy. Within 90 minutes, two additional aircraft from the 54th Medical Company (AA) and three aircraft from the Air Force Combat Search and Rescue team arrived on the scene as well to augment the ongoing rescue and recovery operation.

As Miller's aircraft touched down in the designated landing zone, SSG Eric Hartman (Medic) and SPC Douglas Holm (Crewchief) immediately exited the aircraft to survey the disaster area. Their aircraft then departed allowing additional crewmembers to be dropped off at the site to assist in the ground rescue efforts as needed. As the aircraft began stacking up over downtown Baghdad, it became apparent that airspace command and control needed to be rapidly established to maintain aircraft separation, especially with the high volume of traffic. At one point during the mission, there were 11 aircraft in the 'pattern' over the rescue site. This daunting task fell squarely on shoulders of the 159th Operations Officer, CPT James Hannam, who was picked up by CW3 Roger Hopkins and flown to the site. Upon his arrival, he immediately gained control of the airspace and directed the patient flow. As the city-wide patient regulator, he coordinated with the 11 medical treatment facilities in the area to receive and sort the mounting casualties. As the aeromedical evacuation operations were underway, a desperate ground rescue operation was initiated by military and civilian authorities.

Without regard for their personal safety, 159th Soldiers helped spearhead the rescue efforts on the ground, providing triage for the numerous patients and assisting in the recovery of the survivors buried underneath the rubble. SSG Hartman, SPC Holm, CPL Jason Bierman, SPC Levi Vasquez, and several other 159th crewmembers managed the recovery operation, entering the dangerously unstable building to aid in the search efforts. They provided much needed support to the seemingly endless flow of casualties. After 12 hours of effort, the site was finally cleared and the crews returned to base. The 159th commander, MAJ Jackson, anxiously received each of his crews at the end of the day and with the help of the fire department, personally led the efforts to scrub the blood and debris from the six aircraft so that his crews could rest and prepare for the next urgent call. At the end of the day, the 159th treated and evacuated 38 patients directly from "ground zero" and over 80 patients related to the bombing, flying over 45 combat hours.[10]

The entire unit either directly or indirectly supported the overwhelming chaos of that day. SSG Eric Hartman and SPC Doug Holm however, were singled out for their heroic actions that went far above and beyond the call of duty. They were both awarded the Soldier's Medal for their efforts. When asked about their bravery, SGT Holm said "We would have done the same for anybody" and SSG Hartman humbly remarked "I didn't do anything another crew member wouldn't have done."[11] These two Soldiers and all the others that participated that day, embody the 'so that others might live' call to selfless service witnessed in their outstanding outfit. The 159th was also awarded the DUSTOFF Association Rescue of the Year Award for the unit's heroic actions in response to the tragic bombing.[12]

The Future of the 159th

The 159th recently underwent a major transition when

it was reassigned from the storied 421st Medical Evacuation Battalion, eight time winner of the prestigious Ellis D. Parker Award, to the 1st Battalion, 214th Aviation Regiment. The command re-alignment was executed as part of the Aviation Transformation Initiative (ATI). The ATI includes reorganizing and restructuring Air Ambulance companies from 15 aircraft, 150 Soldier organizations into 12 aircraft and 85 Soldier organizations under the command and control of General Support Aviation Battalions. As this article was written, the 159th prepares once again for operations at the 'tip of the spear' as the unit prepares for deployment to Afghanistan in support of Operation Enduring Freedom. At the end of their tour, the unit will transform into C Company, 3-10 General Support Aviation Battalion, stationed in Fort Drum. The unit name may change, but the storied history of the 159th will never fade.

Conclusion

This article represents a proud unit with dedicated and proven Soldiers, committed to excellence in both peacetime and war. Whether delivering a baby onboard a helicopter in the mountains of Afghanistan, responding to a gunshot wound on the Grafenwoehr Training Area, or conducting an urgent patient evacuation of a Soldier wounded in combat, no one does it better then the Soldiers of the 159th. Our proud legacy lies safely in the hands of today's DUSTOFF Soldier. The Miller's, Hartman's, Holm's, Powell's, Hanna's and every other Soldier serving in DUSTOFF across the globe gallantly represent the spirit and tradition forged by MAJ Charles Kelly and the others who came before us. The Soldiers of the 159th Medical Company (Air Ambulance) clearly 'have the controls' and stand vigil as the successful guarantors of our most noble profession.

"When I have your wounded."

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421ST EVAC BN
159TH
MED
DUSTOFF EUROPE

236th Medical Company (AA): 37 Years of Saving Lives

CW2 Russel Toeller, USA
MAJ Michael Breslin, MS, USA
MAJ Andrew Risio, MS, USA

The 236th Medical Company has one mission: saving lives. Whether in the jungles of Vietnam, the forests of the Balkans, or the deserts of Afghanistan and Iraq, the 236th is there to answer the call. In its 37 year history, the company has flown countless missions and medevaced thousands of patients, many of whom would not have made it without Dustoff. MSgt. Stan Hutchson, a Vietnam vet, wrote a poem entitled, simply, "Dustoff," and it opens like this: "They come in fast and furious. Sliding in over the top of a tree. A better sight on all this earth. Believe me, you'll never see."[1] For a wounded Soldier, Sailor, or Airman, truer words were never spoken. The 236th Medical Company has a distinguished service record, which serves as the epitome of a modern air ambulance unit.

The 236th Medical Company's history dates to 1 July 1968 where it was originally activated at Fort Polk, Louisiana, as the 236th Medical Detachment. After extensive training, it was formed as a combat ready unit on 1 September 1968. On 26 November 1968, the unit was deployed to the Republic of South Vietnam. Initial assignment was to the 44th Medical Brigade, with further assignment under command of the 67th Medical Group located at Camp Paddock, (Red Beach) Danang. From the time the 236th was activated until it's redeployment to the United States and Fort Sam Houston, Texas, on 30 March 1972, it had evacuated a total of 41,000 patients, flying 19,072 missions with a total of 13,106 flying hours. The 236th was awarded the Meritorious Unit Citation for exceptionally meritorious service in the performance of its duties while in Vietnam.[2]

The 236th remained in San Antonio, Texas, until March 1973 when the unit relocated to Augsburg, Federal Republic of Germany. Upon arrival on 28 March, the unit was assigned to the 421st Medical Company located in Nelligen. On 15 October 1989, the 236th Medical Detachment was deactivated with subsequent activation as the 236th Medical Company (Air Ambulance). The company was formed in Landstuhl, Germany, combining personnel from the recently deactivated 15th Medical Detachment (Grafenwoehr) and the 63rd Medical Detachment (Landstuhl). The unit was the last of three Medical Companies (Air Ambulance) to be activated under the 421st Medical Evacuation Battalion. Immediately following the end of the cold war, the unit was deployed to Southwest Asia for Operations Desert Shield and Storm. The company was attached to the 32nd Medical Brigade, 7th U.S. Corps. There the unit provided far forward medical evacuation in support of one of the most rapid, awe inspiring campaigns ever waged. Tragically, a brave MEDEVAC crew from the 236th was lost on the last day of the ground war while performing a lifesaving extraction deep in enemy territory. Their spirit and commitment to the Dustoff mission lives on in every Soldier that wears the 236th patch.[2]

On 20 December 1995, the 236th deployed to Tuzla, Bosnia, in support of Operation Joint Endeavor. In true 236th fashion, the unit broke new ground and soon established operations in an austere environment immediately flying literally hundreds of Soldiers and civilians to American treatment facilities. While assigned to Task Force Eagle of the 30th Medical Brigade, the 236th flew over 4300 hours and transported an amazing 500 patients. The 236th safely re-deployed to Germany in November 1995. During this deployment in support of NATO's Implementation Force (IFOR), the 236th earned the Army Superior Unit Award.[3]

Living up to its reputation as the workhorse of MEDEVAC in Europe, the 236th was once again deployed to Bosnia in July 1998. The 236th had flight crews in Tazar, Hungary; Blue Factory, Bosnia; and Slavinski Brod, Croatia logging over 765 flight hours while providing medical support throughout the region while continuing the unit's mission in Germany.[4]

As a key member of the NATO organization formed to support operations in Kosovo, the 236th deployed there in Dec 1999 for 5 months with six aircraft. One of the first deployed units in support of Operation Joint Guardian, the unit flew 165 missions totaling 1210 hours. Support in this region continued over the next 2 years which saw the 236th continually rotating six aircraft and crews to Kosovo while providing mission support throughout Europe. While serving in Kosovo, a crew from the 236th bravely rescued a dying Soldier from a mine-field. Their courageous service and skill further distinguished them as one of Europe's premier Dustoff units and also garnered the crew a Rescue of the Year Award.[5] Simultaneously, the 236th self deployed three aircraft to Tunisia in support of Operation Atlas Drop as well as Operation Victory Strike in Poland. This unprecedented OPTEMPO has yet to be matched by any other European MEDEVAC unit and continues to this day.[6]

Today, the 236th Medical Company remains actively

engaged in support of the Global War on Terror. The 236th Medical Company (AA) is currently deployed in three hostile fire areas including Iraq, Afghanistan, and Kuwait. Originally deployed to Kuwait and Iraq, the 236th answered the call when no other MEDEVAC unit could. Recognizing a dire need for additional MEDEVAC aircraft in support of Operation Enduring Freedom, an urgent request for help went out to all Dustoff companies both stateside and in Europe not currently deployed. Despite being split between two countries and an already demanding OPTEMPO, the Soldiers of the 236th answered the call. Within days, the 236th executed a C-17 loadout to Afghanistan to support our comrades and brothers-in-arms with two much needed UH-60 MEDEVAC Blackhawks and crews. This additional deployment left 236th crews responsible for all of Kuwait and Southern Iraq as well as a portion of Afghanistan. This unprecedented feat is a true testament to the undying spirit and legacy of Dustoff that exists in every Soldier of the 236th. Though only mid-way through the deployment, the unit has flown over 1,000 hours, conducted over 500 missions and evacuated over 750 patients to a medical treatment facility.[7]

The 236th Medical Company (AA) has served honorably for 37 years. Thousands of missions in Vietnam, Desert Shield and Desert Storm, the Balkans, and now Afghanistan, Kuwait, and Iraq have proven how dedicated the men and women of this company are to the mission. Untold thousands of service members can thank 236th Pilots, Crew chiefs, and Medics for helping to save their life. The 236th Medical Company (AA)'s record serves as a reminder to those it saved and an inspiration to those that serve.

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236th Medical Company Unit Patch

Upper Left – background is colors of the German flag.

Castle is from the coat of arms of Baron Sickingen of Burg Nanstein.

Lower right – blue and white checkered Bavarian flag from when the 236th was stationed in Augsburg.

The black hawk represents the UH-60A Blackhawk helicopter.

The Red Cross signifies the dedication to Medical Evacuation.

The History and Role of the Medical Company (Ground Ambulance)

CPT John Hoffman, MS, USA
1LT Shanna L. Summy, MS, USA
LTC Robert L. Goodman, MS, USA

The continued evolution of the Army Medical Department and the requirements of the Global War on Terrorism have brought about changes in both the structure of the Medical Company Ground Ambulance (GA), and the methods in which the ground ambulance company is utilized. While the organization of the ground ambulance company has changed throughout the years, the traditional and doctrinal role has remained largely unchanged since it's inception in the 19th Century.[1] This article will briefly look at the recent history of one such unit, the 557th Medical Company (GA), its contributions during the War on Terrorism, and how that has affected the change or expansion of roles and training requirements for the ground ambulance company.

While the concept of battlefield evacuation and platforms for performing evacuation were given some thought by European armies early in the 19th Century, Dr. Jonathan Letterman was responsible for implementing the first organized system for the medical evacuation of wounded from the Civil War battlefields. Letterman is credited with organizing and equipping the first dedicated ambulance units at the Regimental, Brigade, Division, and Corps level. Letterman was described by a Union Chaplain as "virtually a Medical Dictator", for mandating the control of evacuation units by medical personnel.[2] The battle of Antietam proved the worth of Letterman's concept. Although Letterman's fledgling evacuation units had only been organized for half of the Union forces involved at Antietam, the Union forces which had dedicated evacuation units assigned to them had much more success evacuating casualties and had a correspondingly lower mortality rate than those units without evacuation assets.

With the onset of World War II, the U.S. Army had to significantly expand the size of its military forces. Along with the rapid expansion of the Army Medical Department, the U.S. Army needed to expand medical evacuation capabilities to meet the needs of its burgeoning forces. This was true in all theaters of war, to include the Pacific Theater, where large numbers of U.S. Army forces were employed in such places as New Guinea, the Aleutian Islands, the Philippines, and Saipan. The 557th Med Co (GA) was formed during this turbulent period.[2 (pg 15)]

The history and lineage of the 557th Med Co (GA) dates back to 1943. The unit was activated in Hawaii and provided support throughout the Central Pacific area. Following the war, the company was deactivated in Hawaii only to reactivate on 7 August 1951 at Camp Pickett, Virginia, in order to move to the European Command (EUCOM). During the Cold War, the 557th Medical Company went through several variations in its designation such as 557th Medical Company (Separate) and 557th Medical Company (Ambulance), as well as being assigned to a number of medical battalions and groups within the European Theater.[3] In November 1984, the 557th Medical Company (GA) relocated to its present home at Wiesbaden Air Base, Germany, as part of the 421st Medical Evacuation Battalion, 30th Medical Brigade.[4]

Throughout the Cold War, the 557th Med Co (GA) provided routine and emergency medical evacuation support to elements of the United States Army Europe (USAREUR) during numerous large scale maneuver training, airborne operations, and intra-hospital patient transfers, to name a few. With the successful conclusion of the Cold War, the roles and missions changed for USAREUR. The focus shifted to stabilization throughout Europe and the continent of Africa. Likewise, the roles and utilization of the 557th Med Co (GA) changed and expanded. One such example is the deployment of 557th Med Co (GA) personnel and equipment to Kosovo in 2002-2003 in order to provide ground evacuation support as part of the medical task force for NATO forces in that country.

With the initiation of the Global War on Terrorism came new challenges for the 557th Med Co (GA). The 557th Med Co (GA) deployed to Iraq in early January 2004 to provide ground evacuation support to U.S. and Coalition Forces fighting in that country. Throughout the deployment in Iraq, the 557th Med Co (GA) platoons were separated by significant geographical distances. The 557th Med Co (GA) was attached to the 429th Med Bn (Evac) while deployed to Iraq for Operation Iraqi Freedom II (OIF II), with the company headquarters performing command post duties and other support functions such as maintenance and food service. The 557th Med Co (GA) First and Third Platoons were co-located in Tikrit with the Company Headquarters, although their roles were somewhat different. The First Platoon was tasked with supporting the outlying Forward Operating Bases which included providing ground evacuation support for units of the 1st and 25th Infantry Divisions. The Third

Platoon provided ground evacuation support at the 67th Combat Support Hospital and the Fire Station on Camp Speicher. Later in the deployment the ambulance platoons, as well as the company headquarters section, began providing ground evacuation support to the convoys of the 167th Area Support Group.

The Second Platoon of the 557th Med Co (GA) was located in Al Asad in western Iraq for the duration of the unit's deployment to OIF II, initially providing medical evacuation support to the 3rd Armored Cavalry Regiment (ACR). In true joint force fashion, when the 3rd ACR was replaced by the 1st Marine Expeditionary Force, the Second Platoon found itself providing direct support to the U.S. Marines. Demonstrating the adaptability of today's young military leaders, the Second Platoon was able to overcome any differences in doctrine or Standard Operating Procedures with the Marines and the Naval Surgical Company to provide ground medical evacuation support for the Marines of other members of the Coalition.

The Fourth Platoon of the 557th Med Co (GA) was tasked with providing support to the 31st Combat Support Hospital, the 332nd Air Force Theater Hospital, and Logistic Support Area (LSA) Anaconda in Balad, Iraq. The platoon's support mission included ground evacuation support to helipad operations, the Air Force Aeromedical Staging Facility, the flight line, and to several Entry Control Points of the LSA.[4]

The new non-linear battlefield and insurgent nature of the threat dictates that units which traditionally or doctrinally were regarded as unlikely to encounter enemy action, must now be prepared to accept changing roles of direct or general support to combat units. Those units must also be prepared to accept a higher likelihood of direct enemy contact. Doctrinally, the Medical Company (GA) is attached to a Medical Battalion (Evacuation) for command and control, and tasked with supporting the Corps and Echelons-Above-Corps (EAC) units with ground medical evacuation. Additionally, the ground ambulance company will doctrinally augment the ground evacuation assets of Divisions within the Corps, in order to evacuate casualties from Division, and possibly Brigade-level medical facilities back to the Corps and Communications Zone (CZ) medical facilities.[5] During OIF II, the 557th Med Co (GA) was attached to the 2nd Medical Brigade while supporting combat divisions and separate combat brigades. While these doctrinal roles remain unchanged, the non-linear nature of the War on Terrorism and task-oriented force structures have provided new roles for the ground ambulance company.

The 557th Med Co (GA) deployed to Iraq in January 2004 organized under a Medical Force 21st Century (MF2K) MTO&E, consisting of four ambulance platoons with 10 M-997 ground ambulances each. This MF2K structure gave the company the capacity to transport up to 160 litter patients or 320 ambulatory patients simultaneously. Using the MF2K structure, the Soldiers of the 557th Med Co (GA) completed 3,127 evacuation missions and evacuated 5,258 patients during OIF II. Many Soldiers of the 557th Med Co (GA) were recognized by the award of the Combat Medical Badge for their life-saving efforts in Iraq. Incredibly, the company drove over 185,000 miles while completing these missions, and returned to Germany after the 1-year deployment having sustained no casualties from enemy fire, despite battle damaged vehicles and constant exposure to hostile situations while operating in convoys which routinely came under enemy fire.

While the performance of the 557th Med Co (GA) in Iraq during OIF II was clearly a success in terms of casualties evacuated and evacuations completed, the wide geographical area and dispersion of assets provided numerous challenges to the command and control of the entire company. The size and structure of the MF2K company, in both personnel and

equipment, was cumbersome. Now back from its deployment to Iraq, the 557th Med Co (GA) is undergoing conversion to a new MTO&E resulting from implementation of the Medical Re-engineering Initiative (MRI). The size of the company under the post-MRI MTO&E is reduced by nearly one-third. After MRI, the number of ambulance platoons is reduced by half – from four to two platoons. The MRI reduces the number of ground ambulances in the company from 40 M-997 ambulances to 24. While the total number of patients the company is capable of transporting simultaneously is reduced to 96 litter or 192 ambulatory, each of the two remaining platoons is equipped with two additional ambulances. Under MRI, the company's two ambulance platoons have two evacuation sections, thus retaining the modular capability of the company to support various missions, while providing for better control of the company's assets with additions to key leadership positions such as a company Executive Officer.

The overall result is a smaller and leaner unit which is more manageable for performing the ground evacuation mission, while retaining the modular capability necessary to support various task-oriented missions in either the direct or general support role. The 557th Med Co (GA) continues to adapt to the changing environment within the Global War on Terror, just as it has done throughout its history. The organization of the ground ambulance company may change, but the basic mission of the Medical Company (GA) remains largely unchanged from the mission of the ambulance companies organized by Jonathan Letterman nearly 150 years ago.

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557th Medical Company and the Combat Medical Badge

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The 557th Medical Company (Ground Ambulance) located at Wiesbaden Army Airfield, Germany, recently returned from a year-long tour in support of Operation Iraqi Freedom (OIF) II. While deployed, several of this unit's Soldiers were awarded the Combat Medical Badge (CMB). This article will discuss the background of the CMB, the requirements for award of the CMB and the specific actions of the Soldiers of the 557th Med Co (GA) that earned the CMB.

Initially titled the Medical Badge, the CMB was designed by the War Department during WWII as a companion badge to the Combat Infantryman Badge (CIB). The CIB was strictly reserved for the infantryman who suffered the harshest conditions in combat, sustained the most casualties, and received very little recognition for their actions. Combat Medics suffered all these same hardships, often becoming casualties themselves, while aiding their wounded comrades, but were not eligible for the CIB as medics.[1] Therefore, the CMB was created as an equally exclusive award to honor the Combat Medics who shared the same peril under fire as the infantry units they supported.[2] Historically, the prerequisites to be eligible for the CMB included performing medical duties while assigned or attached to an infantry unit and engaged in active combat. As the nature of warfare evolved, so too have the criteria for awarding the CMB. For example, the CMB can now be awarded to medics who have served with other types of combat units, such as Armor, while under fire.[1]

The CMB was not originally intended to be awarded to medics who served in the combat support roles. Those medical units not organic to combat units, to include air and ground evacuation companies, division-level medical companies, Combat Support Hospitals (CSH), and Mobile Army Surgical Hospitals (MASH) were not authorized to receive the CMB. The only exception to this rule would be cases in which a combat unit had lost its medics and had to pull male Soldiers from support assets.[3]

Today's Global War on Terrorism is very different from conflicts in the past. The enemy is elusive and highly mobile, operating in small independent cells. The battles of today have no distinct lines, as any area can become a combat zone without warning. Medics, in general, are becoming more involved in combat situations with the Global War on Terrorism. This type of warfare has dramatically altered the traditional support role of the 557th Med Co (GA), placing their medical personnel into more multiple direct combat situations than any previous American conflict. Both male and female Soldiers, previously regarded as strictly medical support personnel, were drawn into the fight against terror extending the opportunity to be awarded the CMB to medics who would not have been eligible in the past.

The 557th Med Co (GA) deployed to Iraq in January 2004. Once on the ground, 557th Med Co (GA) was task organized by platoon to provide evacuation coverage for various areas and spent the majority of the deployment geographically separated. The First and Third Platoons were both located in Tikrit along with the Company Headquarters. However, First Platoon provided evacuation support to the Forward Operating Bases (FOB) which included 1st and 25th Infantry Divisions, while Third Platoon was evacuation support for the 67th Combat Support Hospital and the Camp Speicher Fire Station. Additionally, all 557th Med Co (GA) Soldiers stationed in Tikrit provided evacuation coverage and convoy support for 167th Area Support Group operations.[4]

The Second Platoon, located in Al Asad in western Iraq, was tasked to support the 3rd Armored Cavalry Regiment (ACR). The 3rd ACR was eventually replaced by the 1st Marine Expeditionary Force. The Second Platoon provided support to the U.S. Marines and the Naval Surgical Company, adapting to the differences in Army and Navy doctrine. The Fourth Platoon supported the 31st Combat Support Hospital, the 332nd Air Force Theater Hospital, and Logistic Support Area (LSA) Anaconda in Balad, Iraq. Their responsibilities included ground evacuation coverage for the Air Force Aeromedical Staging Facility, the flight line and helipad, and Entry Control Points.[4]

The separation of the platoons within 557th Med Co (GA), both in geography and responsibilities, provided daily challenges to provision of traditional command and control. In order to adapt to the fluid situation, individual platoons began operating more independently, while attached to the units they supported. This fluid command and control relationship

ultimately set the stage for involvement in combat missions.

On 8 July 2004, the Iraqi National Guard (ING) Headquarters was attacked in Samarra, Iraq. A week prior, Task Force 1-26 had turned over control of the Operational Detachment Alpha 575 Compound to local civil authorities, leaving the 202nd ING Battalion as the last Coalition-led force in that area. An Iraqi National Police truck, rigged with a vehicle borne improvised explosive device (VBIED) was allowed access to the compound which destroyed part of the headquarters building. The explosion left 20-25 Soldiers buried under rubble with many others critically injured. The 202nd ING immediately radioed for support in the mass casualty situation, as they had few medically qualified Soldiers.

SPC Mia Geurts and PFC Joanna Jovenal of First Platoon were on duty when the ING headquarters was attacked. Not knowing what to expect, they joined the Quick Reaction Force (QRF) convoy into the compound to begin evacuation and treatment of the wounded. The convoy was hit with sporadic small arms fire, and the compound came under heavy small arms fire and mortar rounds before they had even finished assessing their first patients. They continued to triage and evacuate patients despite the attacks.

SPC Geurts said that she knew that as female Soldiers in a Corps-level support unit, they weren't expecting to be in a close combat situation, but that didn't stop her from coming to the aid of fellow Soldiers. "I just wanted to do my job," she said. PFC Jovenal echoes that same sentiment. Her initial reaction to being under fire was simply, "If I don't go, there's going to be nobody there." Both Soldiers received the CMB for their selfless service and their actions that day.[5]

SGT Thomas Tucker of Fourth Platoon was on a different type of mission when he earned his CMB. On 22 October 2004, SGT Tucker had volunteered to serve as a line medic with 16th Field Artillery at FOB Gabe when the Iraqi Police station came under heavy fire. The QRF responded immediately in defense. SGT Tucker joined them to attend to and evacuate potential casualties, though FOB Gabe remained under attack. "In the middle of all this," SGT Tucker reported, "you could hear the ricochets everywhere. If there was one day you thought your number was up in Iraq, it was that day for me."[6]

Fellow medics supporting FOB Gabe were also drawn into the battle. There were insufficient line medics for the conditions, so SGT Lindsey Miller and SPC Matthew Takahashi joined in evacuating casualties off the battlefield. "It was all very surreal," SGT Miller said of her experience, "this was really happening, but you're busy and you've got things you need to do." At one point during the firefight, SGT Tucker and SGT Miller crossed paths. They agreed that even though events were unfolding quickly, time seemed to stop. They were friends and comrades, joined in the single mission of saving lives, lending each other hope and courage. "It was like the two of us against the whole world," SGT Tucker reported.[7]

Many 557th Med Co (GA) Soldiers answered the call for help on the battlefield and earned the CMB for their heroic actions. These distinguished Soldiers include SSG Anzio Cork, SSG Jacqueline Brown, SSG Michelle Holland, SGT Dawson Shephard, SGT Jared Zinsmeister, SGT Ivyfer de La Cruz, SGT James Lewis, SPC Leonard Strazza, SPC Kyle Bowler, SPC Megan Downing, SPC Zachary Hall, and SPC Jeana Calleva. They too responded under fire to attacks on Iraqi Police stations and Coalition Forces, saving the lives of Soldiers and Iraqi Nationals alike despite the ever-changing conditions they faced daily. In the words of General Schoomaker, Army Chief of Staff, "The world has changed. Ambiguity is the rule. Uncertainty is the norm. And so our Army must change to build the force that can defeat the challenges that lie ahead."[8] Regardless of gender or military occupational specialty, every Soldier must be a Soldier first, and a warrior, to face today's conflicts. In the midst of a changing world, fighting a different type of war, the Soldiers of the 557th Med Co epitomize the Warrior Ethos.

Each CMB recipient from the 557th Med Co (GA) has a different idea about what the CMB means for them. For some, their experiences are personal memories kept close and shared only with the medics who served to their left and right. For others, it's a badge of honor shared proudly and openly with friends and family. Some simply shrug their shoulders and insist that anyone in the company would have done the same. For all of them, however, the CMB is a reflection of their dedication to duty. When asked of their experiences, the answer was always the same…"I was just doing my job." The CMB symbolizes the extraordinary personal courage and professional competence exhibited by Soldier Medics while encountering the worst of battle conditions. Soldiers of the 557th Medical Company (Ground Ambulance) assumed this responsibility and demonstrated unparalleled valor worthy of the Combat Medical Badge.

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The Balanced Scorecard in Military Medicine: What the Clinical Leader Needs to Know

LTC Robert A. De Lorenzo, MC, USA

Introduction

The military health system (MHS) is comprised of all the service medical departments of the Army, Navy, and Air Force, as well as that portion of the Tricare managed care system that is controlled by the government. The deployable medical assets, fixed medical treatment facilities, and all of the medical infrastructure of the military, to include most of us, can be considered part of the MHS. Like all large organizations, the MHS needs a system of management. In the late 1990s, the Office of the Assistant Secretary of Defense for Health Affairs, in conjunction with the three surgeons general, followed the lead of the Department of Defense by adopting a management tool called the Balanced Scorecard (BSC). (For those interested in the fundamental concepts of the balanced scorecard, please read the appendix entitled "The Balanced scorecard – A Primer.")

The chief benefits of using the BSC relate primarily to organizational alignment and focus. In particular, the BSC can focus a healthcare entity's strategy, improve decision-making, help management set priorities, and improve accountability. Leaders at all levels, and certainly this includes all military emergency physicians, should have a basic appreciation for the BSC and how it fits with the MHS mission. The BSC validates what we do on a daily basis in medical treatment facilities (MTFs), in line units, and in other military settings. It offers the opportunity for junior and mid-level medical managers (senior NCOs and captains through colonel) to understand the motivations and directives of senior leaders and help position their service, department, or unit to best serve the organization.

The Balanced Scorecard in the MHS

To understand the BSC, it is useful to examine the management at the executive level – that of the Office of the Assistant Secretary of Defense for Health Affairs. Officially, this DoD-level healthcare management system is termed the military health system or MHS. The MHS is one of the largest healthcare organizations in the world with 9 million beneficiaries and an annual budget of $21 billion. To fully appreciate the mission and scope of the MHS, and understand the role of the individual in executing the larger mission, it is useful to review the MHS mission statement:

> "To enhance DoD and our nation's security by providing health support for the full range of military operations and sustaining the health of all those entrusted to our care."

In turn, the MHS vision statement is:

> "A world-class health system that supports the military mission by fostering, protecting, sustaining, and restoring health."

Together these two statements are used to build the MHS strategy architecture (Figure 1). The learning and growth perspective forms the base of the strategy and focuses on the military personnel and support systems. The military GME system, USUHS, the various military medical research laboratories, the military unique curriculum, and other elements of the training and research base directly reflect this foundation. The internal perspective is characterized by three themes: readiness (for war and military contingencies), quality (healthcare), and efficiency (budget and productivity). Many junior and mid-grade medical officers are focused on this perspective in their daily jobs of patient care and running their clinics and services.

The customer's perspective is represented by the military service members the MHS serves. It is important to reflect that a critical population we serve – beneficiaries and retirees – are not explicitly present on the strategy map. This lack of strategic focus on our most frequent customer may help explain the ambivalence the system seems to have for retirees and beneficiaries. The financial perspective reflects cost-effectiveness, transparency, and accountability. In an era of budget constraints, cost concerns, in particular, seems to take special emphasis and at times seems to overshadow the other perspectives in the strategy map but is in reality only one portion of one component of the strategy map. Finally, the stakeholder perspective at the pinnacle is represented by the congress, the commander-in-chief, and ultimately, the American public. Interestingly, not represented amongst our stakeholders are the commanders, their unit members, and the servicemembers' families we serve. This reminds us that, ultimately, we respond not to the market force of

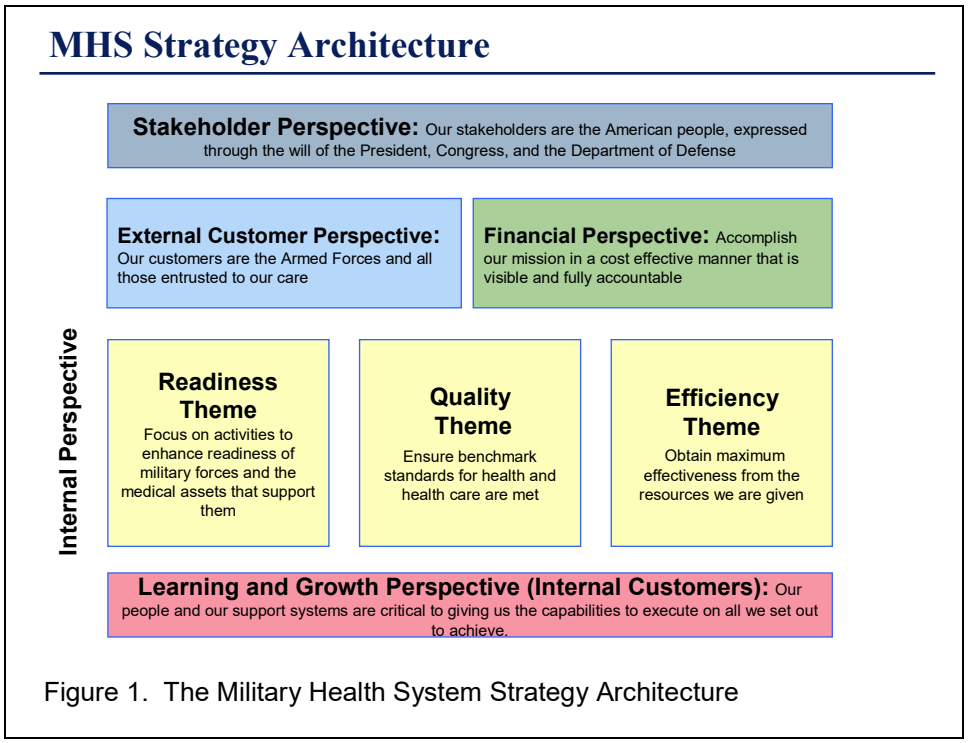

Figure 1. The Military Health System Strategy Architecture

our customers (patients and military units), but rather, to the political will of the civilian leadership in charge of the military.

With the architecture (Figure 1) established, the MHS strategy map is assembled, as depicted in Figure 2. Prominent on this map is the emphasis on people and personnel, systems, and customer focus. While not explicit, the left-hand portion of the map focuses on the chief business of the MHS, providing a capable medical force and sustaining a fit fighting force. At the top of the map, the stakeholder position is held by the MHS mission statement.

Utilizing the MHS Balanced Scorecard

With the strategy map in hand, it is easy to identify the MHS priorities and drivers, even for personnel located relatively deep within the organizational chart. Collectively our priorities start with the readiness theme: personal readiness (e.g., weapons qualifications, physical fitness, etc) as well as medical readiness of the servicemembers in our care. It also encompasses training to provide a capable medical force. This latter component is the leverage needed by military GME, military medical centers, USUHS, and other institutions trying to justify their existence. Quality is the management theme for excellence in patient care – something we can all appreciate and strive for. The quality theme validates our effort to ensure all patients in the military receive the best possible medical treatment by board-certified physicians. The cost-effectiveness theme represents everyone's efforts to achieve what the tired cliché implores: do more with less. While every leader needs to be cost conscious, not every aspect of this theme swings the budget ax. The renewed interest in third-party collections, for example, offers significant opportunity for those clinics, services, and departments able to capture this revenue stream.

One critical aspect of the BSC not discussed here is the use of metrics to measure and define success. While implicit in the design of the BSC, it is important to realize that accurate, valid data coupled with realistic and achievable benchmarks provide the feedback necessary to make the BSC work as a management tool.

The Balanced Scorecard in the AMEDD

As a matter of organizational priority, each BSC in the hierarchy builds on the missions of the next higher headquarters. Thus, the overarching MHS BSC strategy architecture and map (Figures 1 & 2) drives the next lower echelon - the Army Medical Department (AMEDD) – BSC. In turn, one would expect that subsequent echelons – the regional medical commands and ultimately the MTFs – would follow this pattern, and in fact, this is the case. Although the BSC could be implemented all the way down to the lowest organizational levels, in practice, the MTF or medical activity is the smallest AMEDD organizational element that formally uses the technique. However, all elements of an organization, including individuals, remain responsible for aligning their efforts along their parent organization's strategy map.

The current AMEDD strategy map is depicted in Figure 3. As would be expected, initial inspection of the AMEDD strategy map suggests a close relationship to its parent MHS strategy map. A similar basic architecture permeates both and the same mission focus is apparent throughout. Additionally, many of the individual map elements reflect similar content and objectives.

Closer inspection of the AMEDD strategy map, however, reveals the increased level of detail or "concreteness" characteristic of lower-echelon strategy maps. Gone are the MHS abstractions of "provide a ready medical capability" and "deliver high quality care anywhere," replaced by the more operationally-phrased "provide countermeasures to health

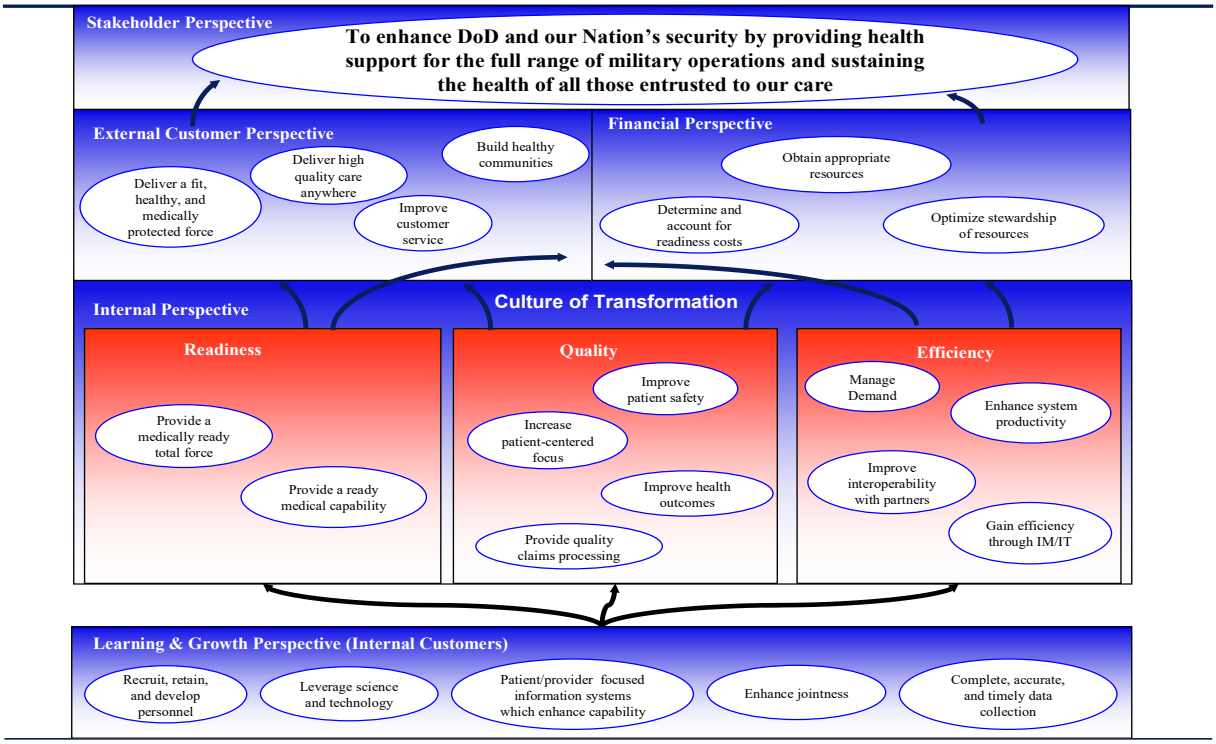

Figure 2. The Strategy Map for the Military Health System

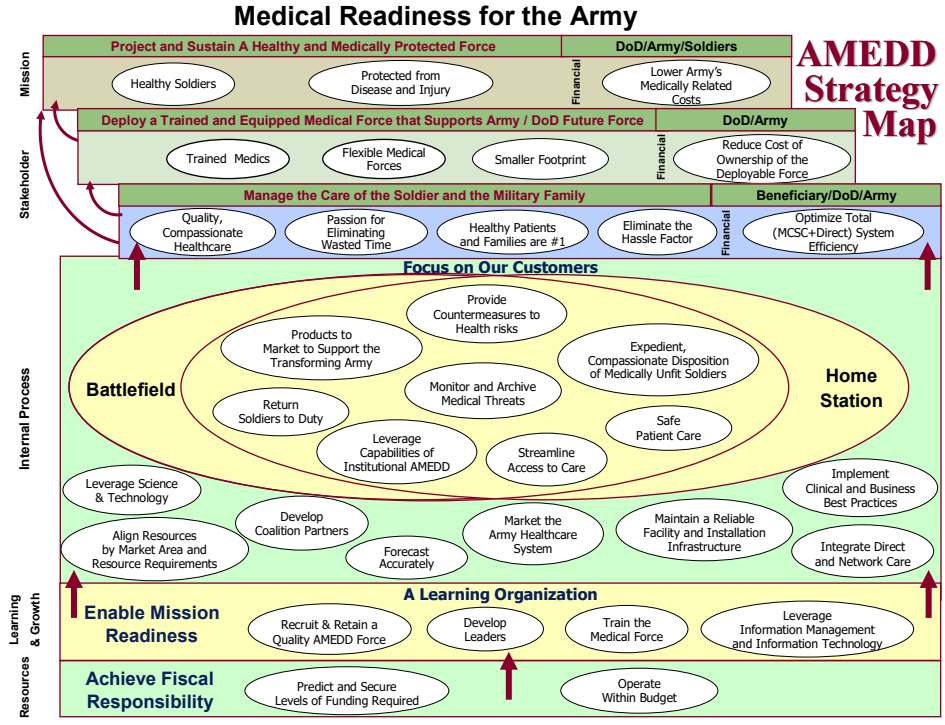

Figure 3. The Strategy Map for the AMEDD as of October 2003

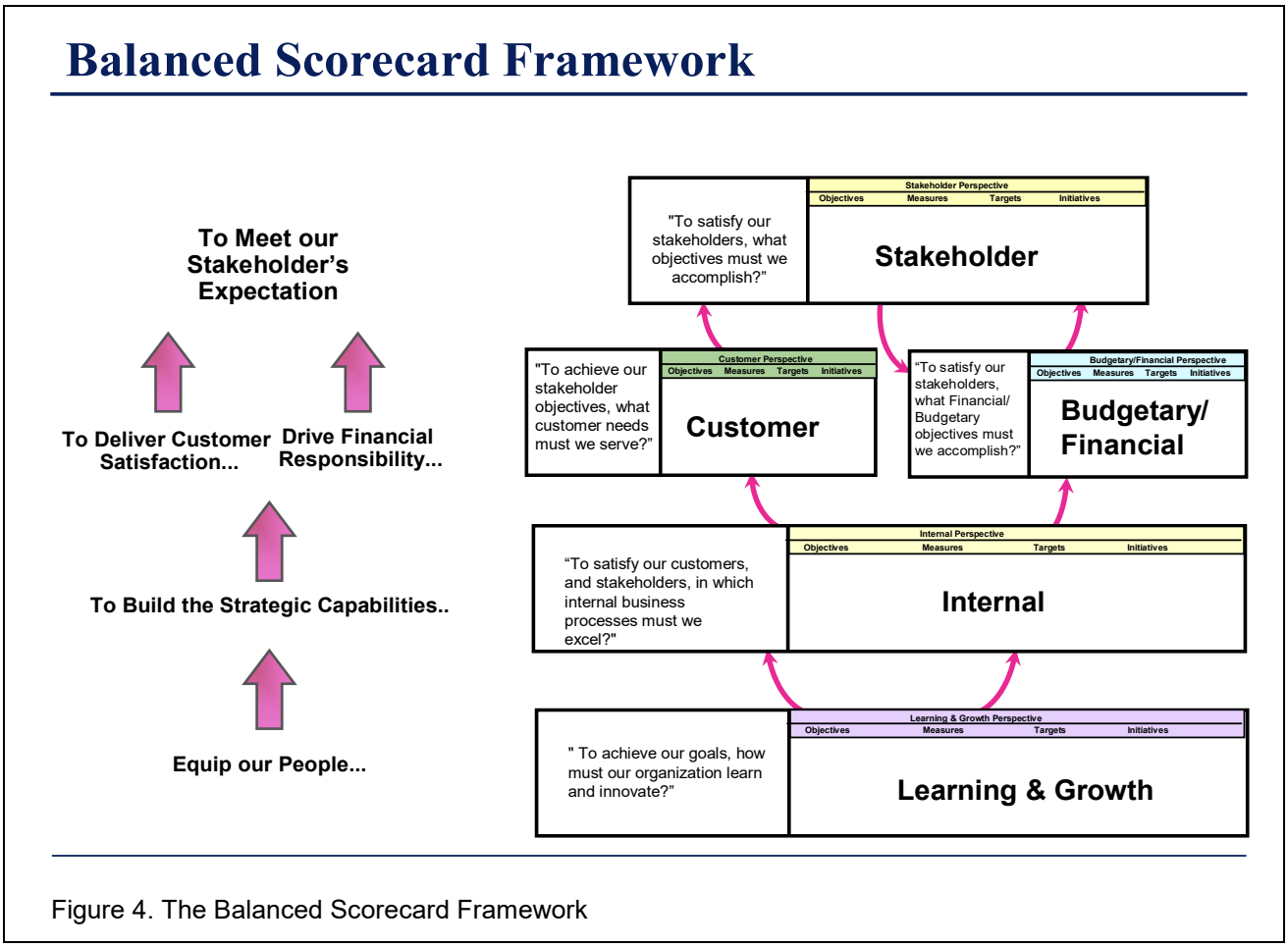

Figure 4. The Balanced Scorecard Framework

risks" and "recruit and retain a quality AMEDD force." Thus, the AMEDD strategy map links the functional units of the AMEDD – the MTFs, medical activities and operational units – to the larger DoD mission.

The AMEDD strategy map serves as an important guide for managers at all levels. Simply compare the missions and functions of your section, service, office or unit to the AMEDD strategy map. Ideally, every major function of your local unit should relate directly or indirectly to the AMEDD strategy map (although not all objectives on the AMEDD strategy map will be present in every local unit or activity). Better still, the strategy map of the organizational closest in echelon (such as that of the Army Medical Center or Army Medical Department Activity) should be consulted. By using this approach, a local unit can be assured its energies and resources are being utilized in a way that maximizes its parent organization's and ultimately the AMEDD's effectiveness.

Conclusion

Personnel at all levels can begin to think of their daily activities in terms of the BSC. Customers, whether they are Soldiers, Sailors, or Airmen as part of a fit, healthy, and medically protected force, or as beneficiary patients, can easily determine the outlines of benchmarks that define the MHS and AMEDD productivity and effectiveness. In short, the BSC links all the components and perspectives into a unified strategy for the entire organization.

APPENDIX

The Balanced scorecard – A Primer

The balanced scorecard (BSC) is a management approach to measuring all aspects of an organization's performance. The balanced scorecard was developed by Robert S. Kaplan and David P. Norton in 1992 when their concept was published in the Harvard Business Review.[1] A decade later, about 50 percent of Fortune 1000 companies use the technique, along with many departments and agencies of the US government.[2]

Fundamentally, the scorecard balances traditional financial measures of success with non-financial measures that ultimately affect organizational performance in the future. In the basic model, four perspectives, financial, customer, internal, and learning and growth are linked together as depicted in Figure 4. Each of these

perspectives' measures is derived from the organization's vision, strategy, and objectives.[3]

The BSC was originally intended for use in traditional for-profit enterprises and, not surprisingly, finds its greatest application there. The company's vision and, mission statements provide the foundation for developing a BSC.[4] The vision and mission statements drive the company strategy, which the BSC will exploit in terms of the four perspectives and their inter relationships.

Organizations other than private, for-profit firms can also take advantage of the balanced scorecard. Both governmental and private nonprofit organizations make extensive use of the technique; however, financial performance is replaced by measures of effectiveness in providing services to constituents or the public.[4] The four perspectives are depicted in the BSC architecture diagram (Figure 4 shows the MHS architecture) and are detailed on the following page.

Financial Perspective. In for-profit enterprise, the financial perspective gets the primary emphasis since it is the ultimate measure by which companies are measured. Indices of profitability are central to the financial performance of the company as measured in the BSC. Such measures typically fall into three broad categories: a) revenue growth, b) cost management, and c) asset utilization.[5] Together, cost management and asset utilization are sometimes categorized together as measures of productivity.

Customer Perspective. The Customer perspective represents those customer-focused areas where the company competes. Typical examples fall into five subcategories of which customer satisfaction is perhaps best known. The other subcategories are market share and customer acquisition, retention, and profitability.[4]

Internal Perspective. This aspect of the BSC pertains to the internal business processes of the company. While managers at all levels should be concerned with the internal perspective, typically it is middle and lower management that is immersed in the details. Four subcategories may be considered including operating, customer management, innovation, and regulatory and social processing.[4] In a traditional manufacturing process, this may be conceptualized as the market identification, design, build, deliver, and post-sales service steps.[5]

Learning and Growth Perspective. The learning and growth perspective is concerned with personnel, organization, and support systems of the enterprise. The components of this perspective, therefore, are competencies, organization, and technology.[3] Alternatively, these components may be viewed as employee capabilities, information technology, and motivation and alignment, respectively.[5] The learning and growth perspective provides measures for a company's employees and their ability to help the enterprise remain profitable.

Strategy Map. The strategy map shows how each of the four perspectives drives one another and ultimately drive increased profits and improved shareholder value. Figures 2 and 3 depict strategy maps for the MHS and AMEDD.

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Development of Army Residency Programs: Pathology at Fort Sam Houston

Frank W. Kiel, COL (Ret.), MC, USA

Introduction

As World War II ended, the recruitment of physicians into the Army Medical Service was in question.[1] In 1946, COL Floyd Wergeland originated the idea to establish a resident training program.[2] In 1946–1949, COL Raymond Duke, who succeeded Wergeland as Director of Education and Training at the Office of The Surgeon General in 1946, implemented the program.[3] Readily assimilated into the residency program was the large group of Regular Army officers commissioned in the 1930s, who advanced during the War to Lieutenant Colonel or Colonel, largely in administrative or command positions. They wished to return to clinical medicine.

Brooke, Fitzsimons, Gorgas, Letterman, Madigan, Oliver, and Walter Reed Hospitals all had abundant clinical material, but they lacked a full staff of preceptors. Civilian consultants alleviated the shortage of board-certified staff. Slowly, the various residency programs gained approval by the specialty boards.

In pathology, the American Board of Pathology representative, Robert Moore, accepted the Army alternative of using civilian consultants. After only three talks, the Board approved the pathology residency programs for the Army. This residency was 3 years long, largely in anatomic pathology, since clinical pathology was considered less important than tissue work at that time.

Background

Pathology as a specialty developed in Berlin and Vienna in the late 1800s. American pathology progressed simultaneously in New York and Chicago and peaked at Johns Hopkins University in 1884 with the appointment of William Henry Welch as Professor of Pathology.[4] Teaching and research in pathology in Texas, in the late 19th and early 20th centuries, centered at the Medical Branch of the University of Texas at Galveston and at Baylor University in Dallas.[5]

Army pathology paralleled the civilian accomplishments and the Army Medical Museum (later known as the Army Institute of Pathology, and still later as the Armed Forces Institute of Pathology), established during the Civil War, became a leader in the field. Autopsy and surgical specimens submitted from the field enhanced the collection.[6]

Although Washington DC had the Army Medical Museum, other centers of excellence of Army medicine were in different regions of the country-Michigan, California, Colorado, Texas, Washington-and overseas in the Panama Canal Zone. Fort Sam Houston, at San Antonio, was the major hospital base of the south-central area, home of many medical units and principal training base for many medical specialties.

Early construction at Fort Sam Houston, after the Quadrangle in 1876, included a two-ward hospital building on Staff Post that saw service during 1881-1908. The construction program of 1905-1912, on Cavalry and Artillery Posts, included an 84 bed hospital that expanded with the Mexican border mobilization in 1916, the World War I training mission in 1917-1918, and the influenza epidemic of 1919.[7]

In 1918, the Eighth Corps Area Laboratory opened across the street from the hospital. It served as the primary hospital laboratory, as well as the reference laboratory for the corps area (Texas, Oklahoma, Colorado, New Mexico, and Arizona). Colonel Walter H. Moursund (1884-1959), USAR, a professor of pathology at Baylor College of Medicine in Dallas, commanded the unit.

Harvey Livesay, recently returned from Europe, became the Laboratory bacteriologist in 1919. A 1914 graduate of the University of Louisville School of Medicine, he took 2 1/2 years of residency in laboratory medicine at the University of Louisville before coming into the Army in 1917. After initial service in Europe as a division medical officer, he transferred to the Central Medical Department Laboratory of the American Expeditionary Force in Dijon where he participated in the anaerobic culture study of gas gangrene complicating war wounds. He later transferred to the Third Evacuation Hospital where the early use of blood transfusion was underway; type "O" blood contributed by German prisoners-of-war into gallon jugs, iced and packed in sawdust, was administered to American wounded in shock.[8] Back in Texas, at the Eighth Corps Area Laboratory, Livesay worked in water analysis for outlying border stations and in a study of Malta Fever (brucellosis) involving testing of goat milk and blood. He also performed autopsies at the hospital, but the Army Medical Museum did the microscopic examination and case completion.[9] (Figure 1)

In 1938, a 350-bed station hospital opened at Fort Sam Houston named, in 1942, after Brigadier General Roger Brooke. Pneumonia, meningitis, and mumps accounted for many patients. Colonel Charles G. Sinclair (1889-1945) was the first Chief of the Laboratory. Colonel Alfred R. Thomas, who was previously Chief of the old station hospital laboratory in the early 1930s, again became Chief of the hospital laboratory in World War II (1941-1946). A 1912 graduate of the University of Pennsylvania School of Medicine, Thomas entered the Army in 1917. He recalled laboratory activities in the 1930s, such as serologic tests for syphilis, using Noguchi's modification of the Wasserman test. For the hospital, there were surgical specimens and frozen sections, and about 100 autopsies per year. The favorite clinical axiom for fever was: "If it responds to quinine, it's malaria; if not, it's typhoid." During World War II, the laboratory usually had four staff officers. William Tigertt, and later Herbert Davenport, did surgical and autopsy pathology. In bacteriology were Max Levine and Robert Ingersoll. Paul Priesler and later Tom Wallace had the chemistry section. Beecher F. Stout (1877-1957), who in 1921 had been one of the original eleven founders of the Texas Society of Pathology, was the civilian consultant from San Antonio.[10]

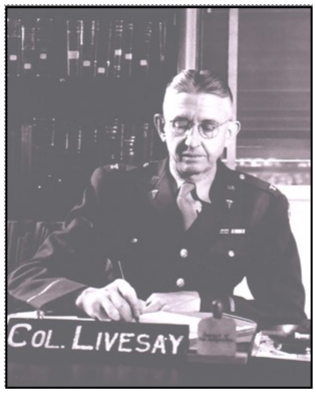

Figure 1. (Left) Lieutenant Harvey R. Livesay as a young Medical Corps officer in 1918. (Source: George B. Livesay). (Right) Colonel Livesay, Commander, 8th Service Command Laboratory, Mar 41 to Aug 46. His ribbons are the World War I Victory Medal with four Battle Clasps and the American Defense Service Medal for service between 8 Sep 39 and 8 Dec 41. (Source: LTC Thomas J. Casey, BAMC Pathology Department)

During World War II, four large general laboratories were assembled on Dodd Field at Fort Sam Houston-the First (under COLs Mallory and Cornell) scheduled for Italy, the Fourth (under COLs Muchenfoss, Angevine, and Smadel) scheduled for England, the Eighteenth (under COL DeCoursey) scheduled for the Central Pacific, and the Nineteenth (under COL Coons) scheduled for the Southwest Pacific.

Initiation of Pathology Residency

In 1945, as the last training division left Fort Sam Houston, the hospital expanded into the vacated buildings on the east side of MacArthur Field. Colonel Thomas chose a ground-level portion of a former regimental barracks (later called Annex IV, and later still, Beach Pavilion) because of its potential to provide a good autopsy amphitheater.

Colonel Elbert DeCoursey, board-certified in pathology at the first examination in 1936, returned from the Pacific in 1946, to become Chief of the Laboratory Service. A 1928 graduate of Johns Hopkins University School of Medicine, he entered the Army in 1928 as an intern at Fort Sam Houston. At that time, the principal activity in the Corps Laboratory was the preparation of antivenin for the treatment of snakebite. After training in clinical pathology, tropical diseases, and epidemiology at the Army Medical School at Carlisle Barracks, and training in anatomic pathology at the Army Institute of Pathology, he went to Gorgas Hospital in the Panama Canal Zone (1932-1934), where he recalled performing 1000 autopsies. He gained advanced training in pathology with Army-sponsored assignments in New York City with A.M. Pappenheimer, James Ewing, and Arthur Purdy Stout, and in Freiberg, Germany, with Ludwig Aschoff. During World War II, he commanded the Eighteenth General Laboratory in the Central Pacific, with diverse roles such as applying DDT by aerial spraying on Saipan to reduce disease transmission. When the War ended, COL DeCoursey (Figure 2) became part of the Commission assessing the atomic bomb casualties.[11]

The first trainees were Robert Holmes, William W. Hurteau, and Gilbert Stansell. Hurteau resigned after a few months to pursue neuropathology interests. Philip Flynn, John Ellis, and Frank Vellios held the staff surgical pathologist position in sequence. Joseph Ackroyd was the hematologist. To enhance the teaching program, DeCoursey recruited three consultants-Dr. Joseph M. Hill, a hematologist and blood transfusion expert from Dallas, Dr. Eric Muirhead, a kidney researcher from Southwestern University School of Medicine in Dallas, and Dr A.O. Severance, a surgical pathologist from San Antonio.

First Group of Residents – Wartime Officers

Robert Holmes was the first resident. A 1940 graduate of Tulane University School of Medicine, he entered the Army in 1940 as an intern at the station hospital of Fort Sam Houston, including 2 months elective in pathology with COL DeCoursey. After receiving his basic officer training at the Medical Field Service School at Carlisle Barracks, he went to Camp Barkley at Abilene, Texas, to create an officer candidate school for the hundreds of new doctors entering the Army. In 1943, he went to Europe and served in England, France, and Germany. He was Operations Officer in the 66th Medical Group assigned to Patton's Third Army. He entered Paris with the Free French units under GEN LeClerc in his role as

Figure 2. Major General William Shambora (left), Commander, BAMC, with BG Elbert DeCoursey (right), Director of Armed Forces Institute of Pathology, at Fourth Army Area Medical Laboratory Symposium, 4 Nov 54. General DeCoursey was first Chief of the residency program (1946-1949). (Source: LTC Thomas J. Casey, BAMC Pathology Dept.)

Executive Officer of the 106th Evacuation Hospital. He became commanding officer of the 58th Field Hospital before returning to the United States.[12] Unassigned, he talked to Wiley Forbus about a resident position in the Duke program. Forbus did offer him a position with a stipend of $250 per month. Forbus noted that Holmes was already a lieutenant colonel and thus earning more, and told Holmes he would be better off in the newly developing program at Brooke Army Hospital.. So Holmes went to Texas.[13]

Next came a group of colonels to be pathology residents. All served during the War, but not as pathologists—Milward W. Bayliss with the 25th Evacuation Hospital in Espiritu Santo in the New Hebrides in the Southwest Pacific, George J. Matt as Division Surgeon of the 44th Infantry Division in France and Germany, Albert M. Richmond as Commander of the 242nd General Hospital at Sissonne in France, and Howard A. Van Auken as Chief Surgeon of the China-Burma-India Theater.[14]

At first, Dr Severance visited twice per week as a consultant to work with the staff officer handling surgical specimens. Holmes overheard them, however, and came with his microscope to look at the slides also. Later, Hurteau joined them, and thus, the Tuesday and Friday teaching sessions evolved. Dr Severance's own residents at Baptist Hospital joined the Tuesday session in 1952.[15]

DeCoursey suggested joint meetings of civilian and military pathologists in 1941. Civilian pathologist Dr B. F. Stout and COL Thomas started bimonthly Monday evening slide conferences, alternating locations of the meeting between Medical & Surgical Memorial Hospital (later Baptist Memorial Hospital) and Fort Sam Houston. Regular attendees were Dr John M. Moore, Dr Herbert J. Schattenberg, Dr Severance, Dr Beecher F. Stout, COL Thomas, and Dr David A. Todd. This led to the monthly meetings of the San Antonio Society of Pathologists in the post-war period, held in the conference room of the Brooke Pathology Department. Pathologists from all the city hospitals brought interesting cases to share with others, cutting enough slides so that each attendee (including the residents) could have one for his personal teaching set.

The annual Tumor Seminar of the San Antonio Society of Pathologists, first held in 1944 with Arthur Purdy Stout as moderator, continued after the War and became a highlight of the academic year.[16] When the Seminar took place at Fort Sam Houston in the fall, the visiting expert worked with the residents on Friday before the Saturday seminar (Figure 3).

Residents also attended the annual Penrose Cancer Seminar at the Broadmoor Hotel in Colorado Springs, under the direction of Dr Morgan Berthrong for many years. The invited speaker would conduct an all-day conference.[17] Although occasionally an Air Force C-47 was available to take attendees from San Antonio, the traditional way was the automobile caravan, led by Dr Severance, which departed after work on Friday and, by driving all night, arrived on Saturday morning in time for the

Figure 3. 1951 San Antonio Society of Pathologists Seminar with Dr. Matthew Stewart. Attendees gathered at Brooke General Hospital include: (first row) Frank Townsend (5th from left), Stewart Wallace (((7th from left), B.F. Stout (8th from left), Dr Stewart (9th from left), Mrs. Stewart (next to husband), Robert Hausman (4th from right), BG Arthur R. Gaines (far right); (Second row) Vernie Stembridge (3rd from left), Elbert DeCoursey (behnd Stewart's left shoulder), Charles Farinacci (next to DeCoursey), A.O. Severance (5th from right), Robert Kellenberger (far right); third row) Carl Lind (4th from right); (Back row) Robert Redner (far right). (Source: Hugh Hoeffler). Identification assistance from Merle Delmer and Paul LeGolvan.

conference. (Figure 4)

The Loyal Order of the Boar, formed at Carlisle Barracks in 1928, was a fraternal group of Medical Department officers interested in the promotion of good fellowship among officers. Its logo was two hogs pointing in opposite directions with their tails entwined. The annual banquet culminated with initiation of shoats into the Order by the presiding Boar.[18]

Second Group – Medical School Deferments

Military deferment for academic training in World War II included medical students. Having acquired a service requirement because of the deferment, new physicians entered the Army and sought residency positions. In pathology, these individuals succeeded the senior officers who filled the early positions. (Figure 5)

Hugh Hoeffler, a 1944 graduate of the State University of New York at Buffalo School of Medicine, began medical school in 1941 and had a deferred military obligation. He participated in the Army Special Training Program (ASTP)

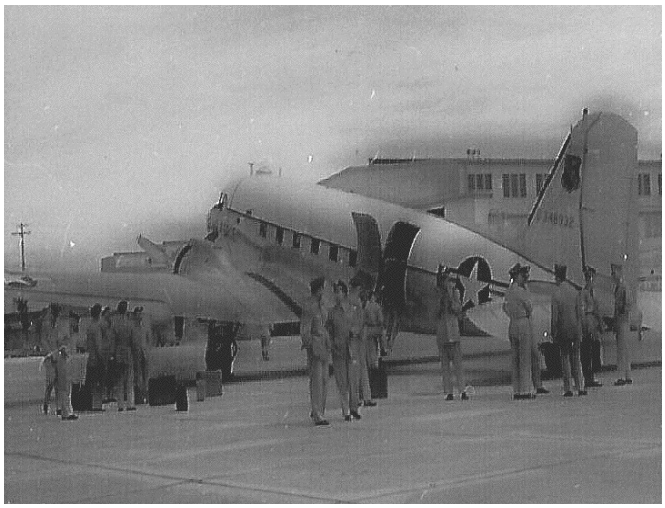

Figure 4. USAF C-47 at Peterson Field, Colorado Springs, bringing group of military pathologist to Penrose Cancer Seminar, 1956. (Source: Frank W. Kiel)

and became an Army Private at Camp Dix in 1943 during his junior year, receiving $50 per month. Before morning classes was the daily 7 AM military formation at the school. The medical school course was accelerated so students could finish in 3 years; during one 3-week vacation, the students went for Army basic training at Fort Niagara. Hoeffler entered active duty after a 9-month civilian internship in Buffalo, being first assigned to Camp Edwards on Cape Cod as a general medical officer, then to Indiantown Gap, and then to Fort Eustis. He went to Europe in 1946 on the *Gustavus Adolphus*. Because of earlier experience as a Medical Technologist (ASCP), Hoeffler received assignments in laboratories: first at the Fourth Medical Laboratory in Darmstadt, next at Munich where Carl Lind was Chief of Laboratory Service, and then at Heidelberg when Carl Lind was Commander of the relocated

Figure 5. Captain Robert Kellenberger (left) and COL Carl Lind (center) discussing conference plans with Lauren V. Ackerman, guest speaker at Ninth Annual Tumor Seminar of the San Antonio Society of Pathologists on 1 Nov 52. Stacks of lantern slides for the case presentations are at Dr Ackerman's left side. Colonel Lind was second Chief of residency program (1946-1955). (Source: Robert Kellenberger)

Fourth Medical Laboratory. When COL Lind became Chief at Brooke Army Hospital in 1949, he chose Hoeffler as one of his residents. When the Korean conflict began, Hoeffler was among the group of residents sent TDY to the Far East to alleviate the shortage of medical officers; he worked at hospitals in Tokyo and Osaka. After 6 months he returned to the residency program in Texas (Figure 6).[19]

Edward Johnston, a 1948 graduate of the University of Pittsburgh School of Medicine, had his internship and 2 years of pathology residency at Oliver General Hospital in Augusta, Georgia, with Colonel Joe Blumberg. The hospital closed, however, possibly because of Senator Thurmond's Dixiecrat-party bid in the 1948 presidential election. Johnston moved to Brooke to finish his program. Halfway through his last year, he received orders to go to Korea—to the 1st Field Medical Laboratory, which was attached to the 22nd Evacuation Hospital at Yong Dong Po. He received full credit for his last year.[20]

John Lukeman, a 1945 graduate of the Medical College of Virginia, started a 2-year surgical internship, but was called into the Army at the end of the 1st year. He went to the 406th Medical Laboratory in Tokyo for 21 months and returned in 1948 to a pathology residency at Kings County Hospital in New York at a salary of $65 per month. This was not enough for a family to live on, so he joined the Army to continue his

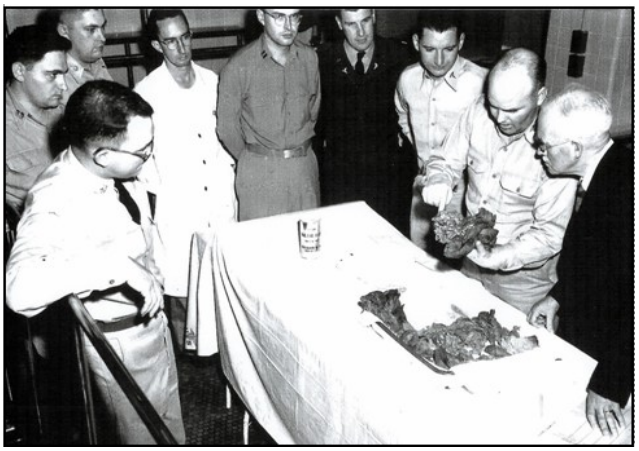

Figure 6. Gross pathology demonstration to Dr Stewart and Army pathology resident group, 1951. (Clockwise) Paul LeGolvan, Assistant Chief, Robert Kellenberger, Harry Sproat, Robert Ranson, Wallace J. Redner, Hugh Hoeffler, Edward Johnston, Robert Bosman and Prof. Stewart. Speciman may be a lung, since coal miner's lung disease was Dr. Stewart's special interest. (Source: Hugh Hoeffler)

pathology education at Fort Sam Houston.[21]

Third Group – Wartime Service

Service in World War II delayed entry into medical school for some future Army pathologists. Although they had prior service credit, they did not enter with advanced officer grades.

Typical of the group were Harvey Graham, Robert Kellenberger, Peter Macomber, James McCarty, Michael Sulak, and Elmer "Joe" Ylitalo. Kellenberger enlisted in 1942 as a junior in college and went to Japan. Macomber was an infantryman with the 91st Division in Italy. McCarty was a Navy pharmacist's mate in the Pacific. Graham was a 2LT. Signal Corps officer in Honolulu. Ylitalo was a Navy fighter pilot in the Pacific.

Michael Sulak, a high school senior in 1941 when Pearl Harbor was attacked. Many classmates volunteered for military service, but Sulak's poor eyesight excluded him. He worked in an Electric Storage Battery Company, which made batteries for jeeps, trucks, and submarines. Drafted in 1943, he trained at Camp Hood in Texas in a tank destroyer battalion. He gained college credits during his service in Texas as his unit was not deployed overseas. Using the G.I. Bill, he entered Tulane University and graduated from the School of Medicine in 1950. He interned at Brooke, 1950-1951, and stayed for the pathology residency.[22] (Figure 7)

Robert Bosman was in the doctoral program in bacteriology at Johns Hopkins University in 1941 when he was commissioned in the Sanitary Corps. Called to active duty in 1942, he was assigned to the 171st Station Hospital, which deployed to Port Moresby in New Guinea. 1LT Bosman was there as the Laboratory Officer 1942–1945, directing the clinical sections. After the war, he attended Duke University School of Medicine, graduating in 1950. Dr Wiley Forbus, head of the pathology department at Duke, helped him in his choice of residency program, saying "What you want in a residency is to do a lot of pathology-as much as you possibly can. The Army will give you that." With this encouragement, he returned to the Army and entered the Brooke program at the second-year level because Col. Blumberg considered his wartime laboratory experience creditable.[23]

Elmer "Joe" Ylitalo joined the Navy after high school graduation in 1942. An Ensign, he became a Grumman Wildcat fighter pilot on the carrier *USS Manila Bay,* which was in the Philippine campaign during the invasions of Mindoro and Luzon. Two kamikaze attacks disabled the flight deck for 3 days, but did not sink the ship. After the war ended, Ylitalo remained in the Navy. During the Korean War, he flew the F-4U Vought Corsair from the carrier *USS Philippine Sea.* Subsequently assigned to a night fighter squadron at Atlantic City, he decided to resign his commission and study medicine. After graduating from the University of Minnesota Medical School in 1959, he took advantage of his prior service and joined the Army. After starting on the Brooke surgery residency program, he developed a surgical soap allergy, and switched to the pathology program. When he finished the residency, he had 18 years active duty. After a short assignment to the Fourth Army Medical Laboratory, he moved to William Beaumont Army Hospital in El Paso, from where he retired.[24]

Fourth Group – Those Brought in During Korean War

Figure 7. LTC Michael Sulak (left), Commander of Fourth Army Area Medical Laboratory, presents award to CPT James McCarty (right), 6 Aug 1962. Both were graduates of Brooke Residency program. (Source: LTC Thomas J. Casey, BAMC Pathology Dept.)

William Meriwether, a 1946 graduate of the University of Tennessee, Memphis College of Medicine, had a deferment as a pre-med student in 1942, being an Army Reserve Second Lieutenant in the Medical Administrative Corps (the forerunner of the Medical Service Corps). In medical school in 1943, he was in the ASTP (Army Specialized Training Program) that assured the armed forces a continuing supply of medical officers. He became a Private on active duty in that program. After a 2-year pathology residency, he complete his residency at Gorgas Hospital in the Canal Zone, taking one of its resident positions. He completed his anatomic pathology program and stayed on as a civilian staff pathologist. When the Korean War began, the Doctor Draft also started. Meriwether did not wait to be drafted, but volunteered and became a Captain in the Medical Corps and continued in the same job. Not long afterwards, however, he received orders to Rodriguez Army Hospital and then to Japan and Korea. He remained in the Army, and on General Blumberg's urging, returned to Brooke to complete his clinical pathology training.[25] (Figure 8)

Figure 8. CPT William A. Meriwether, Commander of First Medical Field Laboratory at Yon Dong Po, Korea, in 1954, with visiting consultant Edith Potter (author of "Pathology of the Fetus and the Infant"), and COL Joe Blumberg (right), Commanding Officer of 406th Medical General Laboratory in Japan, and MAJ David Orrahood (left), pathologist at the 406th. COL Blumberg brought nationally prominent pathologists to show them Army pathology in action. (Source: William Meriwether)

University School of Medicine, participated in this ROTC program for 4 years. He gained Tripler Army Hospital for his internship that included a 2-month elective in pathology, where Colonel George Matt was the Chief. Col. Matt became Chief of Pathology at Brooke Army Hospital the following year. (Figure 10) He selected Kiel as one of his residents.[28] (Figure 11)

Robert Ranson, a 1947 graduate of the University of Oklahoma College of Medicine, had his internship and 1st pathology residency at Wesley Hospital in Oklahoma City. He then switched to Charity Hospital in New Orleans as an Army -sponsored resident, earning $500 per month instead of the $25 that Charity paid to other residents. When the Korean War began, the Army transferred him to the Brooke pathology residency program. He went to Rodriguez General Hospital, Puerto Rico, after he finished the program, and resigned at the end of the year.[26]

Fifth Group – No Prior Wartime Service

With the World War II veterans group diminished, new applicants for pathology residency appeared, lacking prior wartime military service. One recruitment program was the Medical Reserve Officer Training Program. It involved a Saturday morning 1-hour class that was graded for credit. If enrolled for the 3rd year, the student received pay. Between the junior and senior years, there was a 6-week summer camp at Fort Bragg that involved 3 weeks of military training and 3 weeks of hospital clerkship (Figure 9). This incurred no military service obligation, but an edge in the Intern Matching Plan was possible if one chose an Army internship.[27]

Frank Kiel, a 1954 graduate of George Washington University School of Medicine, participated in this ROTC program for 4 years. He gained Tripler Army Hospital for his internship that included a two month elective in pathology, where COL George Matt (Figure 10) was the Chief. COL Matt became Chief of Pathology at Brooke Army Hospital the following year (Figure 11). He selected Kiel as one of his residents (Figure 12).

LeRoy Hieger, a 1957 graduate of the University of Kansas School of Medicine, took a civilian straight pathology internship in Kansas City. He entered the Army expecting to continue in a pathology residency, but instead was assigned to Fort Gordon and then reassigned to Germany. The Germany orders were rescinded, however, when a second year position opened at Brooke, which he filled (Figure 13).[28]

Edward Keller, a 1955 graduate of McGill University, entered the Brooke pathology program in 1957, but resigned in 1958. He is the only resident, other than William Hurteau in 1946, who did not complete the program. LeRoy Hieger took his place.

Leonard "Lonnie" Starr, a 1958 graduate of New York University School of Medicine, interned at Walter Reed Army Hospital before coming to Brooke for his residency. After 17 years in the practice of pathology (military and civilian), he switched to family medicine practice in California (American Board of Family Practice 1978, recertification 1985). He used his background in pathology, e.g., to suspect oat cell carcinoma in certain unusual diagnostic situations.

Conclusion

Figure 9. ROTC Medical-Dental Service Summer Camp Number 2, 1953, Fort Bragg, NC. Cadet Kiel earned $104 for the 6-week school, of which $20 went for income taxes. (Source: Frank W. Kiel)

The first 15 years of the pathology residency at Fort Sam Houston established a viable program, using a combination of career and short-term staff officers, civilian consultants, experts from around the country, and a group of residents with varying degrees of military experience.

Figure 10. Colonel Matt was the third chief of the Residency Program (1955 -1959). (Source: Frank W. Kiel)

Of the thirty-five residents in this study, twenty-five stayed in the Army as career officers until retirement. Of those who resigned, all entered the civilian practice of pathology, although one switched (after 17 years) to family medicine. Two did not complete the residency.

After 60 years of experience, recruitment to the residency is now based largely on excellence of the program, reputation of the staff, possibility for research, and the wide range of clinical material.

Figure 11. Laboratory staff, Brooke Army Hospital, about 1959, gathers with COL George J. Matt, Chief of Pathology, (center in back row); Henry Morasco, head of Medical Illustration section (left in second row); B.J. Heath, head of Histology (center of first row in sweater); Mrs. H.A. Watson, Secretary to the Chief (in front of COL Matt).

Figure 12. LCDR Murdolk Bowman (left), from US Naval Hospital, Corpus Christi, and 1LT Lawrence Chitwood (right), Harlingen Air Force Base, observe 1LT Frank Kiel performing a blood analysis test with a spectrophotometer during the annual clinic at the Fourth Army Area Medical Laboratory, 27 Oct 1955. Note that beginning resident Kiel was still a First Lieutenant. (Source: LTC Thomas J. Casey, BAMC Pathology Dept.)

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Figure 13. Dr. Severance's Weekly Pathology Conference, 1961. Seated (left to right): Leonard Starr, Frank Kimball, Lowell D. Larsen, Charles Conant, Robert Brierty, and George Lundberg; standing (left to right): LeRoy Hieger, William Meriwether, Milward Bayliss, Dr. Severance, James Hansen, Elmer Ylitalo, John Hardman. COL Bayliss was the fourth Chief of the residency program (1959-1963). (Source: Charles Conant)

A gunshot casualty from the 1864 Battle of Las Rucias in the Lower Rio Grande Campaign had primary excision of part of the humerus, and the analysis of the case included comparison with specimens at the Army Medical Museum.

7. Kiel FW. Some Medical Aspects of the History of Fort Sam Houston *Military Medicine* 1964; 129: 1044-1051. Also Handy MO. *History of Fort Sam Houston*. San Antonio: Naylor Co.; 1951 and Cagle E Jr. *Fort Sam: The Story of Fort Sam* Houston, Texas. San Antonio: Maverick Pub. Co.: 2003.

8. Hanigan WC and King SC. Cold Blood and Clinical Research during World War I *Military Medicine* 1996; 161: 392–400.

9. Colonel (Ret.) Harvey R. Livesay (1890–1982), conversation with author, 1959; George B. Livesay (son), conversation with author, 2003.

10. Colonel (Ret.) A.R. Thomas (1888–1970), conversation with author, 1959; Maj. (Ret.) Claude R. Lenn (1917–1985), letter to author, 1964. Lenn was Chief NCO of the hospital laboratory service 1941–1942.

11. Major General Elbert DeCoursey (1902–1994), conversation with author, 1959.

12. Stanley Anderson, Springfield, Missouri, letter to author, 2004. The 58th Field Hospital moved in August 1945 from Munich to Bad Wiessee on the Tegrensee, a resort area near Bad Tölz, occupying several hotels there. There were 170 German employees at the hospital. Anderson was Adjutant at the hospital.

13. Colonel (Ret.) Robert H. Holmes (1914–2001), conversation with author, 1996.

14. Obituary "Bayliss" San Antonio Express-News, 13 March 1997; COL George J. Matt, conversation with author, 1959; *Combat History 44th Infantry Division 1944–1945* Atlanta: Albert Love Enterprises; ca. 1945; 242nd General Hospital, WW II available at http:// members.aol.com/RSRICHMOND/242gh.html Accessed on Oct. 31, 2003; Chief Surgeons of Important U.S. Overseas Commands available at http://history.amedd.army.mil/booksdocs/ wwii/orgadmin/ org_admin_wwii_appndxA.htm Accessed on 31 Oct 2003.

15. Alvin O. Severance (1902–1991), conversation with author, 1959; Domingo H. Useda, conversation with author, 2004; Merle W. Delmer, conversation with author, 2004

16. 1944 – Arthur Purdy Stout (Columbia), 1945 – Arthur Purdy Stout, 1946 – Emil Novak (Johns Hopkins), 1947 – Colonel J. E. Ash (AFIP), 1948 – Shields Warren (New England Deaconess, Boston), 1949 – Rupert A. Willis (Royal Cancer Hospital, London, England), 1950 – Arthur Purdy Stout, 1951 – Mathew J. Stewart (Leeds Univ. Medical School, Leeds, England), 1952 – Lauren V. Ackerman (Washington Univ., St. Louis), 1953 – Frank W. Foote, Jr. (Memorial Hospital, New York), 1954 – Elbert DeCoursey, Webb Haymaker, Lent Johnson, and Fathollah Mostofi (AFIP), 1955 – Arthur Purdy Stout, 1956 – Malcolm B. Dockerty (Mayo Clinic), 1957 – Hugh G. Grady (Seton Hall College of Medicine, Jersey City, N.J.), 1958 – William A. Meissner (New England Deaconess, Boston), 1959 – Edward A. Gall, (College of Medicine, Cincinnati), 1960 – Lauren V. Ackerman, 1961 – Elson B. Helwig (AFIP), 1962 – Rafaelle Lattes (Columbia).

17. 1949 "Miscellaneous Tumors" AP Stout and LV Ackerman, 1950 "Bone Tumors" PJ Hodes and LV Ackerman, 1951 "Thoracic Tumors" AP Stout and PJ Hodes and LH Garland, 1952 "Gastric Tumors" LV Ackerman and LG Rigler, 1953 "Tumors of the Small Intestine" PC Swenson and WA Meissner, 1954 "Tumors of the Large Bowel" R Golden and RC Horn Jr., 1955 "Tumors of the Urinary Tract" FJ Hodges and FK Mostofi, 1956 "Intracranial Tumors" EP Pendergrass and JW Kernohan, 1957 "Cancer in Children" EBD Neuhauser and BH Landing, 1958 "Bone Tumors" PJ Hodes and LV Ackerman, 1959 "Tumors of Soft Tissue" PJ Hodes and AP Stout, 1960 "Thoracic Tumors" B Felson and R Lattes, 1961 "Gastric Tumors" R Schatzki and WA Meissner, 1962 "Intracranial Tumors" JM Taveras and HM Zimmerman.

18. Ginn RVN. *The History of the U.S. Army Medical Service Corps.* Washington: Office of the Surgeon General and Center of Military History; 1997: 109–110. The 1962 Fort Sam Houston local membership list had ten pathologists: Milward Bayliss, James Hansen, Elbert DeCoursey, Charles Farinacci, George Lundberg, William Meriwether, Albert Richmond, Harry Sproat, Michael Sulak, and Alfred Thomas. The author (stationed in Washington in 1962) had joined in 1958. Others stationed elsewhere were members, but a comprehensive membership list is not identifiable.

19. Colonel (Ret.) Hugh B. Hoeffler, conversation with author, 2003.

20. Colonel (Ret.) Edward H. Johnston, conversation with author 2004.

21. Colonel (Ret.) John M. Lukeman, conversations with author, 2003 and 2004.

22. Laura E. Sulak (daughter), letter to author, 1996.

23. Colonel (Ret.) Robert I. Bosman and daughter Mary Shepherd Hughes, e-mail message to author, 2004

24. Lieutenant Colonel (Ret.) Elmer W. Ylitalo, conversation with author, 2004.

25. Colonel (Ret.) William Meriwether, letter to and conversation with author, 1996, 2003. Another clinical pathology resident was Herbert Kirshman, who had civilian anatomic pathology training at Ohio State University.

26. Robert F. Ranson, letter to author, 2003.

27. Colonel (Ret.) Lowell "Don" Larsen, letter to author, 2004, had 2-year drafted service in 1952-1954; Frank B. Kimball, letter to author, 2004, enrolled in the Army's 4th year medical student program for which there was a service obligation; Robert E. Brierty, letter to author, 2004; Col. (Ret.) John M. Hardman, e-mail message to author, 2003; George D. Lundberg, e-mail message to author, 2003.

28. Colonel (Ret.) LeRoy R. Hieger, conversation with author, 2004.

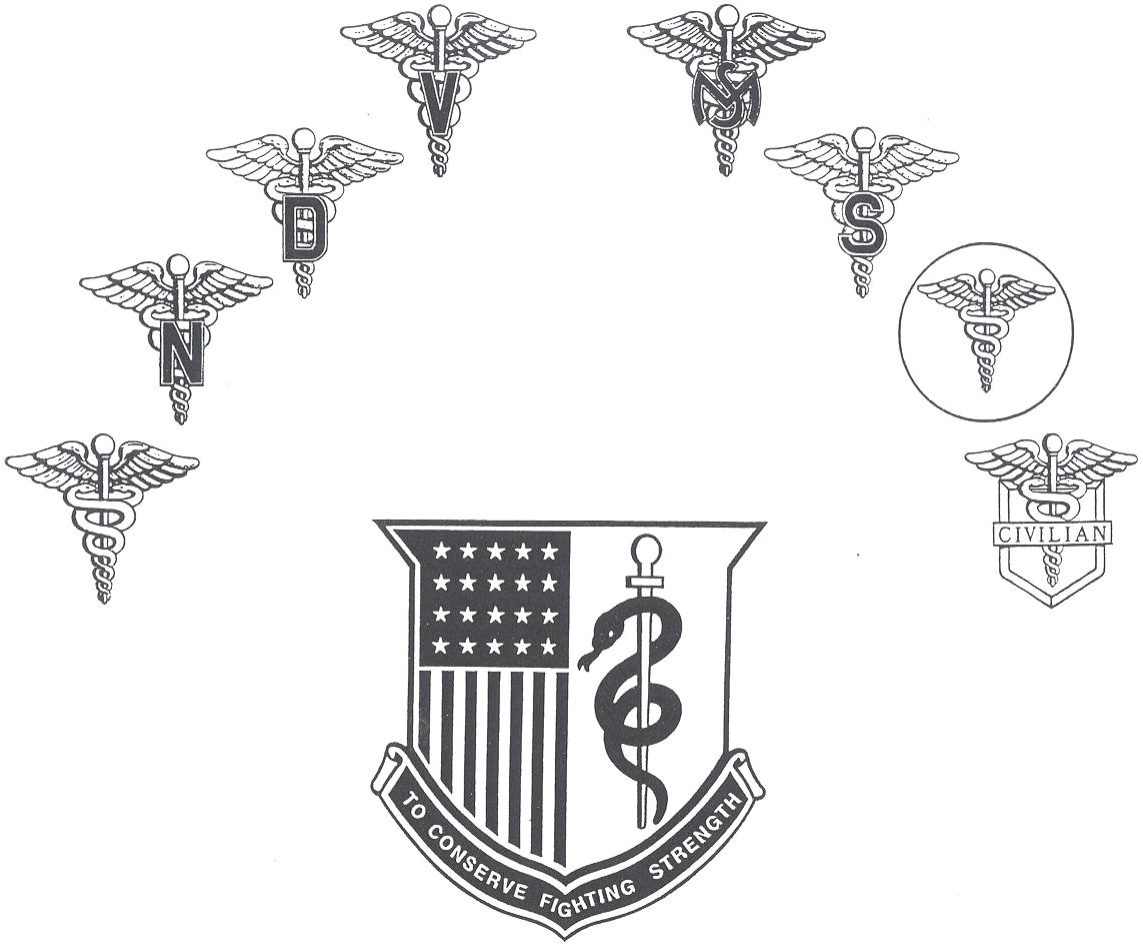
AUTHOR

Colonel (Ret.) Kiel resides in Comfort, TX..

BROOKE ARMY HOSPITAL RESIDENTS, 1947 – 1962

NAME	BIRTH	SCHOOL	RESIDENT	DEATH	LOCATION*
Bayliss, Milward W.	1908	Chicago ‘41	47–49	03/08/97	San Antonio, TX
Bosman, Robert I.	1914	Duke ‘50	51–55		Farmville, NC
Brierty, Robert E.	1930	Creighton ‘57	58–62		Warner Robins, GA
Conant, Charles N.	1932	Case West. Res. ‘58	60–64		Houston, TX
Graham, Harvey P.	1917	Duke ‘52	57–61	12/17/98	Suwanee, GA
Hardman, John M.	1933	Colorado ‘58	59–63		Honolulu, HI
Hayes, James C.	1923	Hahnemann ‘46	53–57	08/08/02	Augusta, ME
Hieger, LeRoy R.	1931	Kansas ‘57	59–61		Tyler, TX
Hoeffler, Hugh B.	1912	Buffalo ‘44	49–52		San Antonio, TX
Holmes, Robert H.	1914	Tulane ‘40	45–48	07/21/01	Dunwoody, GA
Hurteau, William W.	1912	Iowa ‘37	47–47	05/20/96	Mesa, AZ
Johnston, Edward H.	1923	Pittsburgh ‘48	50–52		Orlando, FL
Kellenberger, Robert E.	1924	St. Louis ‘50	51–55	09/10/00	Kalispell, MT
Keller, Edward S.	1924	McGill ‘55	57–58	11/26/90	Everett, WA
Kiel, Frank W.	1930	Geo. Washington ‘54	55–60		Comfort, TX
Kimball, Frank B.	1934	Johns Hopkins ‘60	61–65		Spokane, WA
Kirshman, Herbert S.	1932	Montpelier ’59	62–64		White Plains, NY
Lardinois, Clifford C.	1919	Wisconsin ‘51	52–55	10/13/94	Huron, SD
Larsen, Lowell D.	1929	Utah ‘59	60–64		Salt Lake City, UT
Lukeman, John M.	1914	Med. Coll. Va. ‘45	53–55		Houston, TX
Lundberg, George D.	1933	Alabama ‘57	58–62		New York, NY
Matt, George J.	1907	Minnesota ‘36	47–50	03/20/65	San Diego, CA
McCarty, James E.	1924	Vanderbilt ‘52	55–58	01/02/99	Dallas, TX
Macomber, Peter B.	1923	Harvard ‘50	54–58	02/16/91	St. Petersburg, FL
Meriwether, William A.	1923	Tennessee ‘46	60–62		San Antonio, TX
Ranson, Robert F.	1921	Oklahoma ‘47	50–53		Lafayette, LA
Redner, Wallace J. Jr.	1922	Cornell ‘46	49–52	04/28/00	Highland Falls, NY
Richmond, Albert M.	1906	Washington U. ‘32	47–50	06/03/93	San Antonio, TX
Snyder, Dale R.	1927	Pennsylvania ‘54	56–59	10/27/02	McLean, VA
Sproat, Harry F.	1922	New York ‘46	50–53	09/13/94	Collinsville, TX
Stansell, Gilbert B.	1917	Northwestern ‘44	47–48	05/20/79	Rockford, IL
Starr, Leonard B.	1931	NYU ‘58	59–63		Thousand Ranch, CA
Sulak, Michael H.	1924	Tulane ‘50	52–56	05/21/93	San Antonio, TX
Van Auken, Howard A.	1904	Michigan ‘31	48–51	10/18/83	San Antonio, TX
Ylitalo, Elmer W.	1924	Minnesota ‘59	61–65		Paducah, KY

* Location may be practice office or home after retirement.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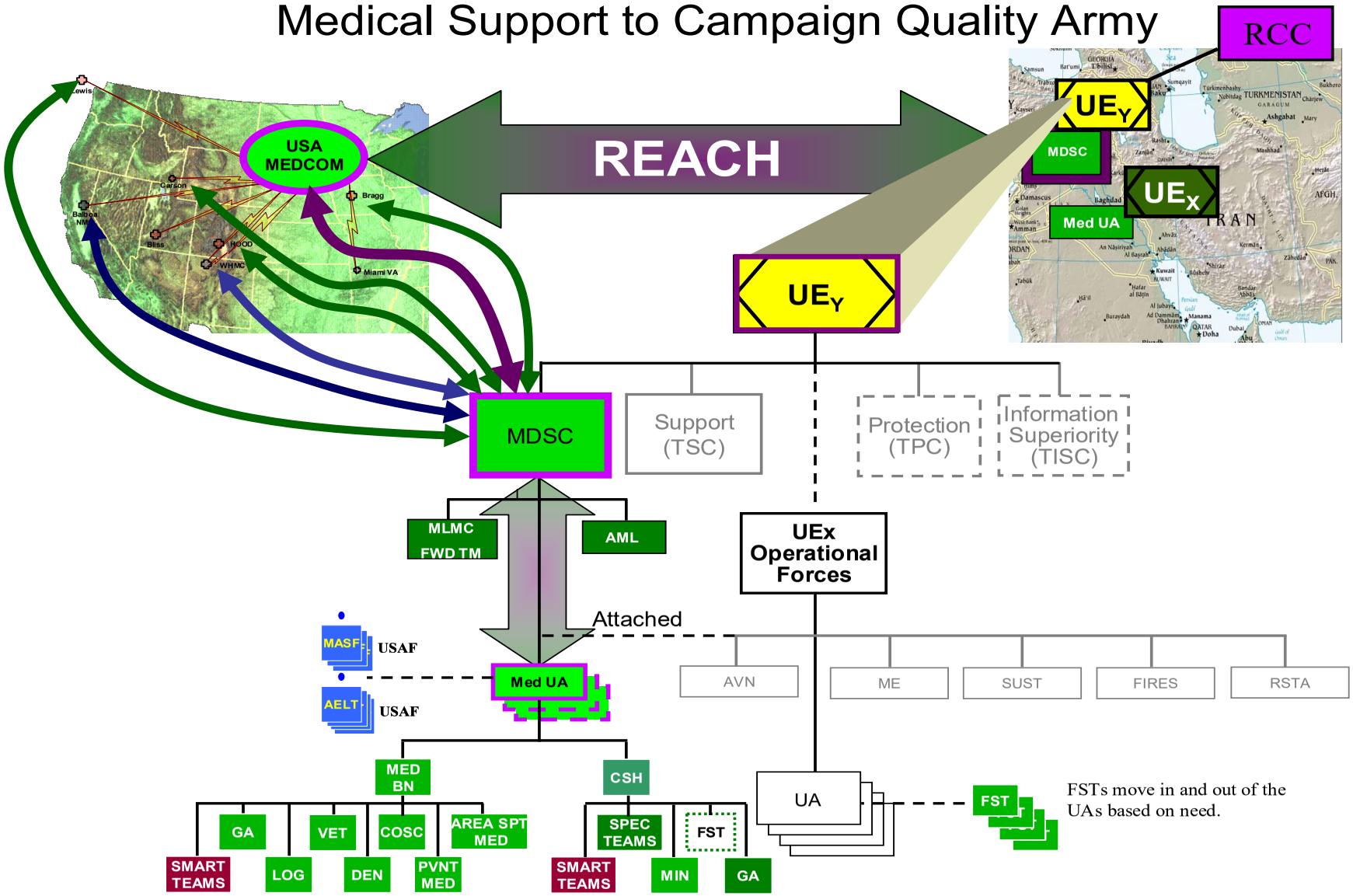
TO CONSERVE FIGHTING STRENGTH


Medical Support to Campaign Quality Army
RCC
REACH
USA MEDCOM
Lewis
Carson
Bragg
Bliss
Hood
WHMC
Miami VA
UEY
MDSC
UEX
Med UA
MDSC
Support (TSC)
Protection (TPC)
Information Superiority (TISC)
MLMC FWD TM
AML
UEx Operational Forces
Attached
MASF
USAF
AELT
USAF
Med UA
AVN
ME
SUST
FIRES
RSTA
MED BN
CSH
UA
FST
GA
VET
COSC
AREA SPT MED
SMART TEAMS
LOG
DEN
PVNT MED
SPEC TEAMS
FST
SMART TEAMS
MIN
GA
FSTs move in and out of the UAs based on need.

Transforming the Army Medical Department at War

TF261st Area Support Medical Battalion Command Group

As the Army transforms Combat, Combat Support, and Combat Service Support into the Unit of Employment x (UEx) and Unit of Employment y (UEy) forces, the Army Medical Department (AMEDD) has designed a Medical Battalion capable of providing scalable, flexible, and modular Health Service Support in support of the UA and UEx/UEy forces.

The Multifunctional Medical Battalion (MMB) provides support to the warfighters by replacing the functionally aligned medical battalions: area support medical logistics, and medical evacuation. The MMB Headquarters is designed to provide the functional areas of command, communications, computer, and intelligence (C^4I) systems to a number of medical units at any given time.

The MMB Headquarters is composed of two modules that facilitate the deployment and integration of units' early entry module and campaign module. The Headquarters conducts operational planning for assigned and attached medical functional companies, detachments, and teams. The MMB will be assigned to a medical support command located in the UEx.

On 27 February 2005, the commanding general of the Army Medical Department Center and School (AMEDDC&S), MG George Weightman, along with the Commanding General, 44th Medical Command, BG Elder Granger, charged Task Force 261 Area Support Medical Battalion (ASMB), 32nd Medical Logistics Battalion, and 36th Medical Evacuation Battalion with forming a Mutlifunctional Medical Battalion Headquarters during Operation Iraqi Freedom 04-06 and testing the "proof of principle" theory. The intent of the concept was to provide solid feedback and recommendations to the AMEDDC&S and the Directorate of Combat and Doctrine Development (DCDD) on the design of the MMB Headquarters.

On 12 April 2005, BG Granger directed the conversion of the TF261 Area Support Medical Battalion into Task Force 261 MMB. On 1 May 2005, the TF261 ASMB Headquarters became the MMB Headquarters and assumed Command and Control and Tactical Control (TACON) of the 16 subordinate units and six medical functional areas deployed in support of Operation Iraqi Freedom 04-06. Those units were positioned from the border of Kuwait to the Turkish border.

Under the TACON command relationship, the gaining command assumed operational control of the unit, but the parent unit retained the responsibility for administrative and logistical support of the TACON unit. The following units are either attached or, are under TACON to the 261st MMB:

- 5 x Area Support Medical Companies - Attached
- 5 x Preventive Medicine Detachments - Attached
- 1 x Medical Company (Dental Services) - TACON
- 1x Medical Company (Veterinary Services) - TACON
- 1 x Logistics Support Company - TACON
- 1 x Ground Ambulance Company - TACON
- 1 x Combat Stress Control Detachment - TACON

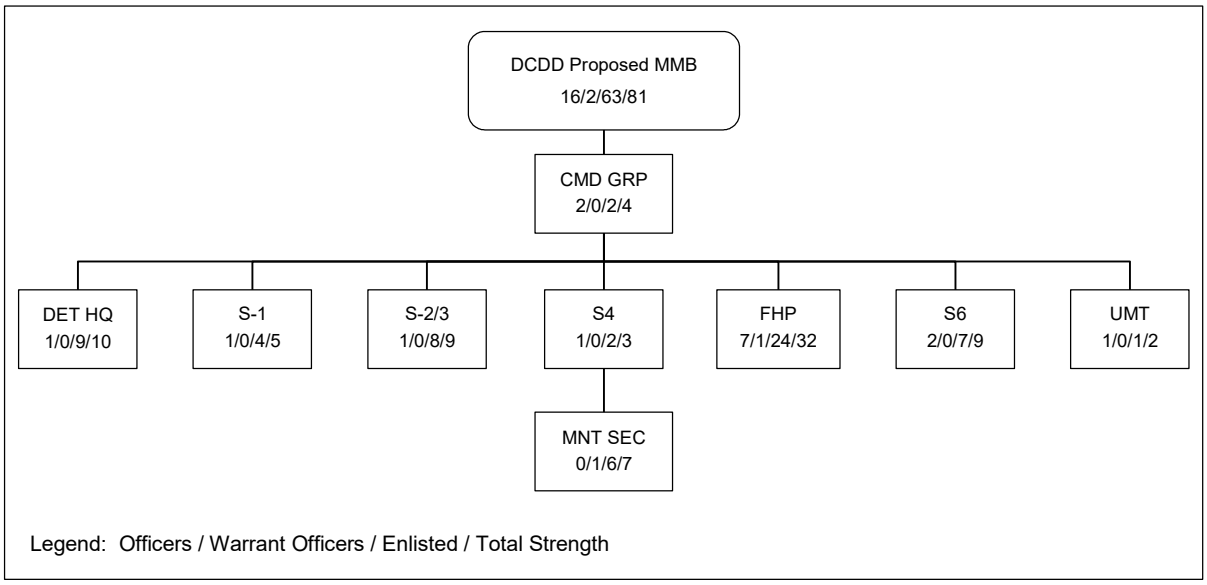
The MMB Headquarters is very similar in organization to the ASMB and the Medical Logistics Battalion Headquarters. It has a detachment headquarters, S1, S2/3, S4, S6, and a maintenance section.

The MMB differs significantly in two areas. A Force Health Protection (FHP) Section and the Unit Ministry Team (UMT) have been added.

The FHP Section is responsible for the planning, coordination, and execution of the FHP mission within the Battalion's area of responsibility to include medical logistics, level I and II health service support, preventive medicine, and mental health services. The FHP Section is broken down into five sub-sections: the FHP Operation Section, the Medical Logistics Section, the Medical Operations Section, the Preventive Medicine Section, and the Mental Health Section.

The Unit Ministry Team is responsible for the overall religious support and counseling to all battalion members.

The Task Force 261 MMB and the 32nd Medical Logistics Battalion Headquarters evaluated the proposed Table of Organization and Equipment (TOE) and mission of the MMB Headquarters utilizing the Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel and Facilities (DOTMILPF) process. Weekly In-Progress Reviews (IPRs) were conducted, which allowed each staff section to evaluate its respective staffing, duties, and responsibilities. These IPRs also focused on the development of a draft field manual for the MMB Headquarters to be provided to DCDD at the AMEDDC&S.



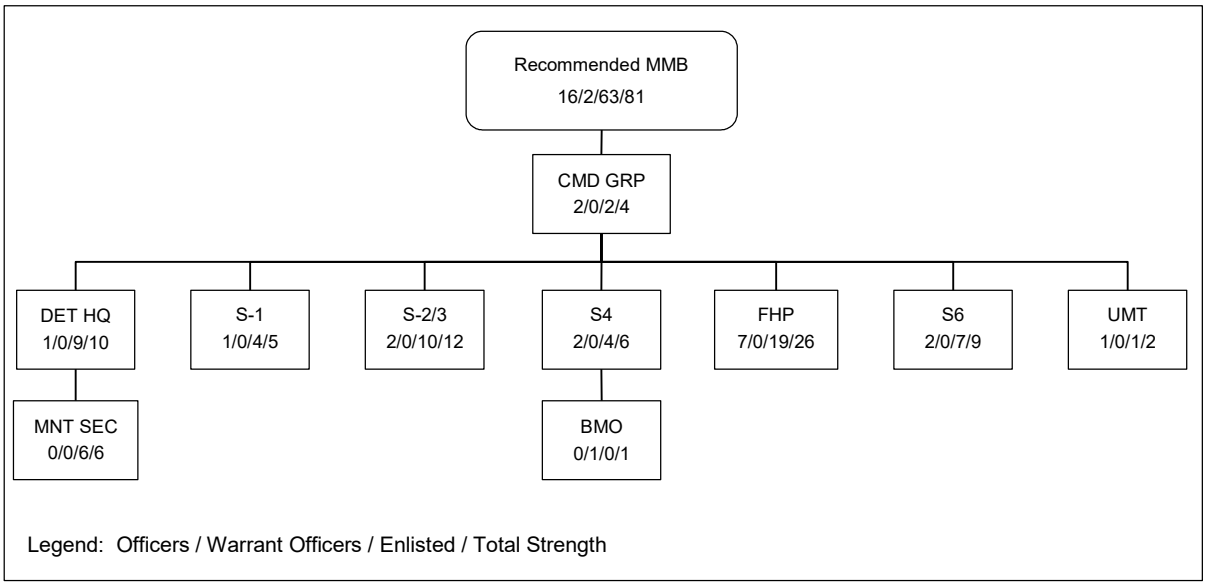
Directorate of Combat & Doctrine Development
Proposed Multifunctional Medical Battalion Headquarters

On 1 August 2005, Colonel Keith Parker, DCDD Director, deployed to Iraq to evaluate the proposed changes to the TOE for the MMB Headquarters by the TF261 MMB and the 32nd Medical Logistics Battalion. Parker also met with each staff section to validate the suggested changes and discuss operational issues in reference to the newly formed headquarters. After lengthy discussions and identifying essential organizational mission shortages, Parker recommended the following key staffing changes to the MMB Headquarters:

First, the lack of clinical staffing in the FHP Section limits the Battalion's ability to provide clinical guidance and oversight to the subordinate Area Support Medical Companies (ASMC) and dental services units. As a result, the TF261 MMB recommended the addition of a field surgeon (62B), medical surgical nurse (66H), and preventive medicine doctor (60C) to the FHP Section.

Second, the TF261 MMB's view is that the battalion maintenance section should not include the Headquarters and Headquarters Detachment (HHD) mechanics. The battalion maintenance section is responsible for the battalion's overall maintenance status and should not control the HHD mechanics. The HHD mechanics should fall under the HHD section.

Third, the FHP Section was heavy on plans and operations



TF261 Multifunctional Medical Battalion Recommended Headquarters Structure

NCOs, even more so than the S2/3 Section. The TF261 MMB recommended that the plans and operations NCOs be moved into the S2/3 section rather than work in the FHP section to ensure that one section, rather than two, has overall responsibility for all matters concerning FHP plans and operations.

It is essential for the AMEDDC&S to integrate some of the key automation and software systems into several course curriculums as a result of key leader training and educational requirements that were identified during the MMB DOTMLPF process.

Automation and software education should be part of the following courses:

- Basic NonCommissioned Officer Course
- Advanced NonCommissioned Officer Course
- Officer Basic Course
- Captain's Career Course

The following subjects should be included at all levels:

- Standard Army Multi-Command Management Information Systems (STAMMIS)
- Medical Communication for Combat Casualty Care (MC4)
- Joint Medical Watchboard System (JMeWS)
- Medical Protection System (MEDPROS).

In addition, a medical support operations course needs to be developed for medical department officers and senior NCOs to teach the technical and tactical aspects of Health Service Support (HSS) operations and the management of medical functional areas.

Overall, the TF261 ASMB successfully tested the MMB Headquarters concept. There is no doubt that the AMEDD has developed an organization capable of providing scalable, flexible, and modular health service support in support of the UA and UEx/UEy forces.

As our nation's Global War on Terrorism continues and the enemy continuously adapts its tactics, techniques, and procedures, the United States Army must also change its ability to react to the threats, whether they are on the home front or on distant soil. The AMEDD has begun its own transformation that will allow warfighters to always have the right care, at the right place, and at the right time while continuing the fine tradition of *conserving the fighting strength.*

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