



Members of the 3rd Special Forces Group transport a simulated casualty to a medical evacuation zone at Camp Shelby Joint Forces Training Center in Mississippi during training exercise Southern Strike 17 on 27 October 2016. U.S. AIR FORCE PHOTO BY SENIOR AIRMAN CLAYTON CUPIT.

Colonel Warner “Rocky” Farr has made an important contribution to the body of SOF knowledge with this well-researched monograph. He advances the understanding of the many challenges and accomplishments related to guerrilla warfare medicine—care provided by predominantly indigenous medical personnel under austere conditions with limited evacuation capability—by providing a survey of the historical record in UW literature. Colonel Farr relates many historical experiences in the field, assesses their effectiveness, and lays a foundation for further in-depth study of the subject. The Joint Special Operations University is pleased to offer this monograph as a means of providing those scholars and operators, as well as policymakers and military leaders, a greater understanding of the complex and complicated field of guerrilla warfare medicine.

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7701 Tampa Point Boulevard  
MacDill AFB, FL 33621

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ISBN 978-1-941715-28-4

JOINT SPECIAL OPERATIONS UNIVERSITY



## ***The Death of the Golden Hour and the Return of the Future Guerrilla Hospital***

Warner D. “Rocky” Farr

JSOU Report 17-10

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The Death of the Golden Hour and the Return of the Future Guerrilla Hospital

Farr





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*The Death of the Golden Hour  
and the Return of the Future  
Guerrilla Hospital*

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**JSOU Report 17-10**

*The JSOU Press*

*MacDill Air Force Base, Florida*

2017



Comments about this publication are invited and should be forwarded to the Director of the Center for Strategic Studies, Joint Special Operations University, 7701 Tampa Point Blvd., MacDill AFB, FL 33621.

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This work was cleared for public release; distribution is unlimited.

Printed in November 2017.

ISBN 978-1-941715-28-4

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**On the cover.** Army Special Operations Resuscitation Team member, 528th Sustainment Brigade, examine a patient on Crestview Airfield, Florida, on 23 April 2015. Emerald Warrior is the Department of Defense's only irregular warfare exercise, allowing joint and combined partners to train together and prepare for real world contingency operations. U.S. AIR FORCE PHOTO BY SENIOR AIRMAN CORY D. PAYNE/RELEASED.

**Back cover.** Members of the 3rd Special Forces Group transport a simulated casualty to a medical evacuation zone at Camp Shelby Joint Forces Training Center in Mississippi during training exercise Southern Strike 17 on 27 October 2016. U.S. AIR FORCE PHOTO BY SENIOR AIRMAN CLAYTON CUPIT.

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## From the Director

The Joint Special Operations University presents its first-ever monograph on this topic—an important one. Dr. Farr provides more than a succinct, chronicled snapshot of medical support in the realm where special operations forces operate. His discussion has application to today and tomorrow—not just for the special operations medical community but for those military planners and staff in geographic combatant commands, their theater special operations commands, and interagency organizations like the Department of State. Insights on modern day military casualty care and evacuation procedures likely offer careful consideration by non-governmental organizations as well. We welcome your feedback to this and any other of our publications.

Boyd L. Ballard  
Director, Center for Strategic Studies



# Foreword

Unconventional warfare (UW) and its guerrilla warfare component have long been topics of interest among Special Operations Forces (SOF). There has recently been renewed interest in the study of this SOF core activity, as is evident in the many recent UW-related exercises, courses, academic papers, magazine and journal articles, and books. However, the study of one important aspect of guerrilla warfare—which has been neglected for a long time—is the medical care of guerrilla casualties and the establishment of hospitals to provide that care.

Colonel Warner “Rocky” Farr has made an important contribution to the body of SOF knowledge with this well-researched monograph. He advances the understanding of the many challenges and accomplishments related to guerrilla warfare medicine—care provided by predominantly indigenous medical personnel under austere conditions with limited evacuation capability—by providing a survey of the historical record in UW literature. Colonel Farr relates many historical experiences in the field, assesses their effectiveness, and lays a foundation for further in-depth study of the subject. He also provides the reader with an overview of forward medical care shortcomings identified in recent exercises.

Theater Special Operations Commands (TSOCs), in Colonel Farr’s words, are documenting a valid and critical requirement for “lean medical support by agile forward surgical enablers on missions involving long distances.” Coupled with the need to replace outdated doctrine on the topic, he highlights the demand for increased awareness of the problems presented by this capability requirement and encourages further study by the military and academic communities. Forward surgical care and medical support for extended light footprint SOF operations in remote areas, the author points out, are more difficult than conventional field medical care because of unique challenges such as the availability of adequate facilities and skilled personnel, holding capacity, casualty mobility, and survivability. Limited military medical infrastructure in immature theaters and doubtful local air supremacy are just two of the many factors that combined, make guerrilla warfare worthy of greater attention by scholars and SOF operators, and medical specialists.

The Joint Special Operations University is pleased to offer this monograph as a means of providing those scholars and operators, as well as policymakers and military leaders, a greater understanding of the complex and complicated field of guerrilla warfare medicine.

Will Irwin  
Resident Senior Fellow, Center for Strategic Studies

## About the Author

**D**r. Warner D. “Rocky” Farr, Colonel, (Ret.), M.D., enlisted in the airborne infantry in 1967 and was the distinguished honor graduate of his Special Forces 18D-medic class. He served in the 7th Special Forces Group (Airborne) as an A-Team medic. Volunteering for service in Vietnam, he served as a recon team member with the 5th SFG(A) in the Military Assistance Command Vietnam Studies and Observations Group. After graduating from the Defense Language Institute, he joined Detachment A, Berlin Brigade—an early urban guerrilla warfare special mission unit. While in Europe, he had exchange postings with the German *Fernspähkompanie 100* and the Belgian *1st Paracommandos*.



He served as the special forces instructor at the ROTC Detachment, Northeast Louisiana University, while earning his bachelor's degree in medical technology. He attended the Uniformed Services University of the Health Sciences as a second lieutenant in the Medical Service Corps. He graduated with honors from the Army flight surgeons course and became solo qualified in the TH-55 helicopter. He earned his doctor of medicine degree and completed residencies and board certifications in aerospace medicine, and anatomic and clinical pathology. As part of his United States Air Force residency in aerospace medicine, he flight trained on the T-37 and T-38 aircraft. He served as a member of the question writing committee for the Aerospace Medicine Board Examination for five years and holds lifetime certifications in all his medical specialties, as well as unrestricted medical licenses in Alabama.

Farr served as commander, Company F (Airborne), 3rd Battalion, Academy Brigade, Academy of Health Sciences, and course director of the Special Operations Medical Sergeants course. He earned his master of public health degree from the University of Texas, and holds the Army Skill Identifier 5X Historian title. He served as chief of the Department of Pathology at Blanchfield Army Community Hospital, and flight surgeon of the 50th Medical Company (air ambulance), 101st Airborne Division (air assault), at Fort

Campbell, Kentucky. He was the division surgeon of the 10th Mountain Division at Fort Drum, New York, until becoming deputy commander of the U.S. Army Aeromedical Center in Fort Rucker, Alabama. He attended Air War College and received a master of strategic studies degree before becoming the Deputy Chief of Staff, Surgeon, U.S. Army Special Operations Command; Command Surgeon, U.S. Army Special Forces Command; and Command Surgeon, U.S. Army Civil Affairs and Psychological Operations Command. He became the command surgeon of U.S. Special Operations Command in 2006 and command surgeon, Special Operations Command Central, in 2009.

Farr is a subject matter expert for the Department of Defense Tactical Combat Casualty Care Committee, which sets standards for battlefield combat care. When he retired as a colonel after 46 years of active service, he became an associate clinical professor of internal medicine and associate clinic professor of anatomic and clinical pathology at Lake Erie College of Osteopathic Medicine in Bradenton, Florida. He is also a lecturer at the Joint Special Operations University, MacDill Air Force Base in Florida.

Farr is a fellow at the Aerospace Medicine Association and the College of American Pathology. He holds the Army Surgeon General “A” designator in aerospace medicine and was a consultant for special operations medicine. Farr was the chief editor of *The Special Operations Forces Medical Handbook, 2nd Edition*. He authored *The Third Temple’s Holy of Holies: Israel’s Nuclear Weapons, Counterproliferation Papers #2, Future Warfare Series*, and *Resting Rebels: A Historical and Medical Study of the San Antonio Confederate Cemetery*. He served on the editorial board of the journal *Aviation, Space and Environmental Medicine* from 1994-2000, and was the executive editor of the *Journal of Special Operations Medicine* from 2006-2009. In May 2016, he became a distinguished member of the Special Forces Regiment.

## Introduction

Medicine is a service responsibility. – Unnamed USSOCOM resource manager<sup>1</sup>

Guerrilla warfare (GW) literature concentrates on the conduct of each war and does not often mention the medical aspects of such conflicts. Military medicine began in the early 1800s, with few or no references prior to that. Military trauma evacuation and treatment dates back from the Napoleonic era. In conventional warfare prior to this time, comrades carried wounded soldiers off the battlefield. This caused a significant loss of combat power for each wounded soldier.<sup>2</sup> During early unconventional warfare (UW) campaigns, sympathizers sequestered wounded in civilian homes, an example of early guerrilla auxiliaries and undergrounds. The purpose of this monograph is not so much to teach, but encourage learning about GW medicine by highlighting published resources.

The medics in essentially all UW campaigns are indigenous. They wrote of battles and campaigns. Books on guerrilla logistics and medical care are rare. Books on guerrilla campaigns are more common and include the countries: Yugoslavia, France, Indochina, Malaysia, and Afghanistan, along with less familiar venues such as Northern Ireland, Venezuela, Brazil, Algeria, Korea, Tibet, Quebec, and Uruguay. Urban UW comprises a subset of the literature. The foremost American urban GW outfit was Detachment A, Berlin Brigade—a cold war U.S. Army special forces (SF) stay-behind unit.<sup>3</sup> The SF patch has three lightning bolts representing air, land, and sea. More famously, the Navy SEALs represent sea, air, and land teams. Staying behind is a method that is often overlooked.

This monograph will explore the evolution of required medical care support for isolated SOF operations in austere areas. SOF has had 14 years of direct action (DA) conflicts on a high-intensity battlefield generously supplied with surgical assets and medevac helicopters. As a result, in the Iraq and Afghanistan warzones specifically, the Department of Defense (DOD) mandated that the “golden hour” is, by default, a worldwide standard.<sup>4</sup> This is neither true, nor militarily supportable. The golden hour requires moving the injured from the point of wounding to forward resuscitative surgery

within the first hour. Even though the Joint Special Operations Medical Training Center (JSOMTC) schoolhouse teaches Special Operations Combat Medics (SOCMs) and Special Forces Medical Sergeants (18Ds) the skills to care for, stabilize, and hold a trauma patient for 72-96 hours, few have actually done so. The military Services have structured medical sets, kits, and outfits to support the golden hour methodology—not extended care in the field. In addition, the Army did not design surgical support units to support spartanly small, light SOF team operations.

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*The golden hour requires moving the injured from the point of wounding to forward resuscitative surgery within the first hour.*

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Operational missions with light footprints are increasingly in geographically challenging areas. They have longer distances to travel and are farther from support infrastructure than SOF<sup>7</sup> current missions. Already in Africa, and soon in the Pacific and South America, teams must hold the wounded for a prolonged period of time before evacuation due to challenges with non-standard land and air transportation with limited availability. This provokes significant questions on how to improve evacuation time and outcomes. SOF could use close-by host nation surgical resources of our allies or partner nations, deploy American conventional military, SOF, or contract forward surgical teams. For mission planners, both combat arms and medical, this is a new issue for SOF teams. SOF mission planners have generally viewed evacuation to surgery and onward as a Service requirement, but in the realm of UW operations there will most likely be very limited Service support.

However, is it a new paradigm? The Office of Strategic Services (OSS) and Special Operations Executive (SOE) medics in Yugoslavia and France, and the homegrown guerrilla medics in the Philippines, held casualties for long periods. In Yugoslavia, the Western allies parachuted in two allied (one Canadian Army and one New Zealand Army) forward surgical teams to shorten the time to forward resuscitative surgery for Tito's guerrillas. Empty U.S. Army Air Corps C-47 aircrafts transported many wounded Yugoslav partisans to American field hospitals in Italy where they utilized local physicians and surgeons. This monograph will research and review these lesser-known historical vignettes for their applicability to the 21st century.

From 1980 to 2000, as SOF numbers grew, conventional forces (CF) supplied surgical support to missions. The capabilities and limitations of these teams were evident. The author will review and analyze this development

period and show how it led to today's Special Operations Surgical Teams (SOSTs) developed by U.S. Air Force Special Operations Command (AFSOC). Special Operations Command Central (SOCCENT) used SOSTs, along with conventional Air Force surgical teams called Mobile Forward Surgical Teams (MFSTs) in Middle East operations. The author, a former SOCCENT command surgeon, will explore this recent wartime experience.

Much activity is taking place within SOF concerning this issue. The Theater Special Operations Commands (TSOCs) are voicing their need for and their present lack of lean medical support by agile forward surgical enablers on missions involving long distances. Special forces groups are looking back to UW/GW doctrine, mostly unchanged from WWII. U.S. Army Special Operations Command (USASOC) began an UW/GW exercise series in late July 2015 called Jade Helm, which featured the first guerilla hospital in recent training memory. It featured the 528th support brigade's medical team. USASOC partially conducted Jade Helm 2015 exercise on the author's Texas ranch.<sup>5</sup>

Jade Helm lessons learned show the infrequency of practicing core UW skills by today's special forces. Three broad tenets emerged:

1. Teams were neglectful in the use of guerrilla auxiliaries and under-grounds to help setup and operate a guerrilla hospital and the nets to move casualties.
2. Teams did not bring all portions of 18D medical equipment in early with them. The laboratory set came in later by automatic resupply. This hindered initial hospital setup.
3. The exercise did not run long enough to explore fully extended field care, transport, and evacuation.<sup>6</sup>

Grassroots, social media driven, electronic conversations on prolonged field care are thriving on the Internet among SOF medics and medical officers.<sup>7</sup> These professionals have determined the need and are filling it outside of normal channels by unofficial, Internet-based networking. This issue is a leading topic of discussion at the Special Operations Medical Association scientific meetings and the prolonged field care working group meeting at the 2016 Special Operations Medical Association scientific assembly, which strives to incorporate the latest developments in prolonged care methods.

Numerous articles are included on this topic in every quarterly issue of *The Journal of Special Operations Medicine*.

For SOF to remain relevant in extended light footprint operations and support the joint commander, forward surgical care and forward medical support must revert to the tested WWII roots of SF. SF must “go back to the future” and create the modern guerilla hospital.

# 1. History of Conventional Military Medical Support

The ambulance corps alone will be allowed to remove the wounded, and all will bear in mind that our first duty to our wounded is to win the victory. – Major General J.E.B. Stuart, General Orders, No. 26 Cavalry Tactics<sup>8</sup>

The history of conventional battlefield evacuation of the wounded starts with the observations of military surgeons that comrades frequently helped wounded men off the battlefield. Consequently, when able-bodied soldiers assist the wounded, they lose fighters at the most inopportune time. General Stuart's quote above illustrates that concept; one must take care of the wounded, but it must not interfere with winning the battle. It is also noteworthy that he published the evacuation rules as a "cavalry tactic." Internal medical drills, promulgated by medics, signed by unit surgeons, and not fully supported by commanders, invariably fail. Modern day military casualty evacuation procedures must be "battle drills" published by and fully supported by the commander. The best example of this concept is the 75th Ranger Regiment within SOF.<sup>9</sup>

Baron Larrey, Napoleon's surgeon, devised an ambulance corps of dedicated personnel whose duty was to remove the wounded, thus conserving fighting strength. The phrase "to conserve the fighting strength" is the motto of the U.S. Army Medical Department (AMEDD).<sup>10</sup>

As medicine and war grew more and more complex, medical support, units, and evacuation resources grew larger and more intricate. Clearly, a combat surgical support hospital of several hundred beds may be ideal for a conventional infantry division, but not for SOF. CF have forced SOF, on numerous occasions, to rely on such wrong-sized footprints.<sup>11</sup> Conventional Desert Storm army hospital units had grown too large to compete with combat support units for space on the deployment plan. The AMEDD made a concerted attempt to downsize units for a quicker evacuation. Theater evacuation policy is the number of days that a combat trauma casualty can remain in theater, with the expectation of return to duty, versus quick removal for further care. The AMEDD shortened the theater evacuation

policy meaning that medical planners could reduce the number of beds in theater as wounded would quickly depart theater in most cases. Very few remained to return to duty. Quick evacuation requires massive airlift and air superiority—a luxury SOF will not have most of the time.

Medical units can be the most complicated portion of a guerrilla force. In the words of the commander of the Canadian Army Forward Surgical Team, which served with guerrillas in Yugoslavia, Major Colin Dafoe stated, “The weakest part of a guerrilla force is its hospital unit.”<sup>12</sup>

Therefore, what are SOF peculiar requirements for medical support and why have they not been met more than 70 years after the OSS in WWII? Those questions begin the story.

## 2. SOF Unique Medical Support Requirements

Two days later I went away eastwards to another hospital. This one had moved, on an average, every four nights, carrying all its wounded with it. – Captain Lindsay Rogers in *Guerrilla Surgeon. A New Zealand Surgeon's Wartime Experiences with the Yugoslav Partisans*

What does special operations need that conventional medical surgical forces do not possess? The correct team size, availability, proximity, malleability, holding capacity, mobility, and survivability, to name just a few.

In the early days of the Global War on Terrorism (GWOT), the United States Army Special Forces Command (Airborne) conducted a series of seminars on UW with the Association of the United States Army. The purpose of these seminars is to return SF to its roots and better prepare them to continue to be the most relevant SF in the world. UW has always been the primary mission of SF. All other tasks conducted by SF are subsets of this overarching, core mission.

UW is, quite possibly, the most misunderstood form of military operations. UW is not simply GW or some variant thereof; it is much more complex. GW, unconventional assisted recovery, information operations, subversion, and sabotage all play a role in UW. The *DOD Dictionary of Military and Associated Terms* defines UW as:

Activities conducted to enable a resistance movement or insurgency to coerce, disrupt, or overthrow a government or occupying power by operating through or with an underground, auxiliary, and guerrilla force in a denied area.

In *ARSOF 2022*, published in 2013, then USASOC commander Lieutenant General (now retired) Charles Cleveland set out a plan “to recover and revitalize our force.” He stated, “the most critical gap in ARSOF special warfare capability exists in the UW mission set, our ability to conduct UW in denied areas for extended periods of time.”<sup>13</sup>

Because UW is a long dwell mission, conducted in the most immature of theaters, and without aerial superiority, medical support to UW is different and difficult. Twenty percent of the enlisted structure on a SF “A” Team are medical for a reason. Medicine is not just important, it is essential to successful UW. The DOD heavily staffed SF groups with medical, dental, and veteri-

*Medicine is not just important, it is essential to successful UW.*

nary officers in excess of their assigned troop strength because SF founders realized that these professionals would make a difference in the GW operational area. Medical capability is a challenge on UW missions. Mentioned in ARSOF 2022 as a requirement for the first time, are medical needs. In the section headed

“soldier systems,” it mentions the need for minimal supply burdens and increased aerial-delivery capabilities links with new and emerging technologies such as freeze-dried plasma and the need to “increase organic medical capability including the establishment of deployable, scalable surgical teams modeled after the Joint Medical Augmentation Unit.”<sup>14</sup> This document marks the emergence of medicine as a full player within SOF structure as opposed to a “service responsibility” provided to SOF from outside.

The now 50 year old mantra of “medicine is a service responsibility” has resulted in SOF requests for medical support being haphazardly filled depending on what branch of Service received the tasking responsibility under the joint staff tasking model. A SOF unit could request a capability-based surgical team or perhaps one surgical capability and would not know until the team arrived if they were receiving a five-person Air Force surgical team or a 25-person Army surgical team. This resulted in forward surgical teams without experience or training on how to be a forward. Many times this left SOF not properly supported, or more commonly, SOF made modifications on the fly to fit an overly large surgical team into a non-doctrinal, small space.<sup>15</sup> As early as the 1980s, the SOF community recognized this as a serious, life-threatening problem but the force design process ignored it. The one place that listened, had sufficient money, and the ability to change things internally, produced the Joint Medical Augmentation Unit.<sup>16</sup>

SF are involved in UW on a daily basis, and SF medics are involved in UW medicine daily. UW is a reality today in many countries around the world. SF, originally designed for UW in the 1950s, was modeled after the WWII Jedburgh teams of the OSS. Medics learned many valuable lessons

from those partisan struggles; follow on chapters in this monograph will explore this.

As the world becomes increasingly unsettled and volatile, SF must continue to prepare to conduct UW. By law, United States Special Operations Command (USSOCOM) is the only force directed to conduct UW. Of all the USSOCOM forces, SF are the most prepared forces to conduct UW in its broadest terms, including but not limited to, GW.

UW is undergoing a revitalization in a number of ways. The U.S. Army John F. Kennedy Special Warfare Center and School (SWCS) has reinforced both the UW training conducted during the SF Qualification Course, and language and cultural training. The table of organization and equipment of the SF groups (based in great part on the missions of the 1980s [DA, Special Reconnaissance (SR), and foreign internal defense (FID)]) must be reevaluated. The USSOCOM surgeon's office is evaluating all medical equipment and sets. Aspects of counterterrorism/combating terrorism, counterproliferation of weapons of mass destruction, and information operations that are inherent in UW are being further evaluated to ensure that SF are fully capable of conducting their limited share of these missions. UW medicine means an emphasis on medicine and nursing, in addition to excellent trauma skills.

SF must evaluate potential contributions of technology to UW and UW medicine while remembering that the key ingredient in the conduct of UW is the SF soldier. It is from the unique capabilities of highly trained warriors that all other capabilities to conduct UW and UW medicine flow. The basis of UW is people, and the diversity of those people makes it a dynamic medical discipline. To extract the maximum advantage from an ability to conduct UW, SOF must stay focused on unique soldiers who achieve that advantage. Solid training in UW will ensure that SF of today will remain the most relevant SF in the world and solid UW medical training will keep them the most relevant medics.

Soldiers required to conduct UW and UW medicine are unique. They must be highly trained, skilled, and mature. They must have excellent problem solving skills and mental agility in the most fluid of situations. Their ability to be flexible and adapt to their environment is unparalleled. Language capability, area and cultural expertise, and excellent interpersonal skills complement these requirements. SF soldiers must understand the current situation of whom they train or encounter, as well as comprehend the social, economic, and political milieu in which they operate. The primary

purpose of multiple overseas deployments of SF in peacetime is to ensure that the required level of expertise is present when the hour of crisis arrives. Many of these skills, needs, and expertise are directly applicable to the medical aspect of the mission. SOF medics need to learn the skills of native health care providers and, in turn, train local nationals in order to provide optimal health care and combat trauma care to indigenous soldiers at their level of medicine.

The cultivation of relationships and identification of key personalities (engagement) is a mission that SF conduct on an on-going basis. Through thorough study and boots-on-the-ground presence, SF engage in prospective UW areas of operations daily. One of the most challenging aspects of UW is that SF units are, in fact, in their UW areas of operations regularly.

This dynamic nature of UW ensures the relevance of SF. However, UW has been in a state of neglect, as has UW medicine. UW doctrine needs modernization, and training in UW is limited. Doctrine needs revision and an update to reflect current requirements and capabilities. As the flexibility and usefulness of UW become apparent, focus will shift to mission guidance and training. Lessons learned are not only in after-action reports from training exercises, but rather in the after-action reports of forces that conduct UW or have been confronted by UW operations around the world. Further, the lessons need to transcend American experiences, and extend to Russian operations in Chechnya, Australian operations in East Timor, and the plethora of other UW activities that have taken place in the last few years. Urban UW experiences need review—an area particularly tough for medical care. Good examples are present in SOF history.

### 3. WWI SOF and Medical Support: Africa and the Middle East

With only a few hundred civilians and professional soldiers, and with the essential aid of black rebels, Lettow sets out to create and lead the first modern guerrilla army.<sup>17</sup> – William Stevenson, *The Ghosts of Africa*

While the Western front of WWI was stagnating into trench warfare, other theaters were much more active. The most well-known special operations mission involved T. E. Laurence and the Arab Middle East. Although we know little about medical care among Laurence's forces, sympathizers likely housed the wounded or they convalesced in Bedouin tents. An interesting side note is that when Laurence ultimately died in a motorcycle crash, his attending neurosurgeon, Sir Hugh William Bell Cairns, started research that led to the increased use of motorcycle helmets for both civilian and military riders.<sup>18</sup>

Lesser known but equally as intriguing, is the German "victory" in southeastern Africa by General Paul von Lettow-Vorbeck.<sup>19</sup> The talented German commander and his native troops known as Askari,<sup>20</sup> bested the British in the German East African colonies, albeit with a drastic toll on native African manpower, estimated by some to exceed half a million.<sup>21</sup> A book on this conflict entitled *Guerrilla* by Edwin P. Hoyt is available in English, and *My Remembrances of East Africa* by von Lettow-Vorbeck is available in both English and German. For those with sufficient German skills, try *Meine Erinnerungen aus Ostafrika*. In reading the general's medical comments, one finds that he uses native women camp followers who accompanied his native troops to provide medical care.<sup>22</sup> This use of auxiliaries and undergrounds are common SOF tactics. He believed that the German uniforms given to his African soldiers provided more protection against malaria than the British uniforms (the British wore shorts) and that his soldiers were less susceptible to disease than the opposition British troops. He highly praised his surgeons saying, "the confidence even of the enemy in the German medical service was fully justified."<sup>23</sup> At the end of the war he learned that, although he had won his campaign, Germany had lost the

war. General Von Lettow-Vorbeck was the consummate guerrilla leader who mastered the art of applying superior unconventional tactics to inflict great damage on his enemy while surviving in the field without adequate supply and managing a multiracial combat force. One of his surgeons wrote a book, still available only in German.<sup>24</sup>

The classic history of GW book, *War in the Shadows*, praises him as a great GW leader, saying that he sought clear-cut missions for his indigenous forces and allowed them to operate within their capabilities.

Although General von Lettow-Vorbeck had multiple physicians accompanying him, he was always short on medical resources. Having had volunteers from the German community in East Africa, he attached a surgeon down to company level.<sup>25</sup> Many German physicians were in Africa studying African sleeping sickness when the war started and provided a ready work force for disease management and treatment. As in virtually all guerrilla forces, disease caused more casualties than trauma. His forces saw malaria including black water fever and numerous larger parasites.<sup>26</sup>

He sought to capture quantities of quinine and had his soldiers manufacture bandages—both time-honored guerrilla medical resupply techniques. Von Lettow-Vorbeck's forces made soap, an anti-tick and flea balm, typhoid medication, and "Lettow-schnapps," a quinine drink.<sup>27</sup> As both medicine and bandages ran short, Askaris located and used native medicinal leaves. The rate of wound infections did not increase with the use of native resources.<sup>28</sup>

In reality, von Lettow-Vorbeck could not deal with the number of casualties and the need to be forcefully mobile. This will be a continuing issue for guerrilla forces: how to have a casualty evacuation system to enhance morale and conserve manpower while continuing to be quickly able to fade away after an engagement. Von Lettow-Vorbeck relates:

Nor was it easy to ensure medical attention. We had too few attendants ... So there was nothing ... but to collect our invalids from time to time, turn them into a complete Field Hospital, under a single medical officer.<sup>29</sup>

One in three of the 276 Europeans who began the 1918 phase of the campaign did not finish. The British found some, but 27 were still missing in action at the close of the war. In October 1918, known as "Black October," the Spanish influenza hit hard and one of eight that had surrendered to the

British were dead.<sup>30</sup> Von Lettow-Vorbeck's total forces never exceeded 10,000 men, while the British used 300,000 men to chase him.<sup>31</sup>

General Von Lettow-Vorbeck received a hero's welcome with a victory parade in Berlin after the war and later became an anti-Nazi. He returned to Africa in the 1960s to see his former troops. Ultimately, the West German government granted his African soldiers German military pensions.

All in all this was the classic mobile raider style of UW—lean, light, no fixed base, shedding anyone or anything not essential, including wounded and physicians—all of which worked in this extremely harsh environment. It successfully pinned down a large number of Allied troops for the entire war, another classic use of guerrillas. However, at the start of the next world war, which would feature large guerrilla operations in Europe and Asia, one could find no doctrinal manuals to instruct these new guerrilla leaders on the techniques of Laurence or von Lettow-Vorbeck. The experiences of both sides in these 'side campaigns' of WWI did not materialize into written lessons learned.



## 4. WWII SOF and Medical Support: From OSS to the Philippines

Care of the wounded in partisan warfare is one of the most difficult problems ... wherein the presence of wounded, as distinct from the regular army, often has a decisive effect on the planning and development of military operations. – Major General Gojko Nikoliš, Yugoslav Partisans<sup>32</sup>

WWII became the doctrinal laboratory on the use of special operations, and in particular, SF guerilla support. The European theater in WWII had vast, differently organized, guerrilla operations, typified by those in France and Yugoslavia. In Yugoslavia, there were two main and competing partisan forces: the communists and the royalists. In *The Creation and Development of the Yugoslav Army*, communist leader Josip Broz Tito writes:

Besides this ... our operations were closely linked with our wounded, who were always numerous, so that it was not possible to avoid encirclements, although the Supreme Headquarters were fully aware of the enemy's intentions.<sup>33</sup>

Several other leaders in the communist guerrilla forces echo these comments. Major General Gojko Nikoliš, M.D. remarks on the difficulties of guerrilla medical care quoted at the beginning of this chapter.

By far the best book on the medical aspects of these guerrilla forces is *Sanitetska Služba U Partizanskim U Slovima Ratovanja* by Colonel Džorđe Dragić, M.D. Published in 1964 and later published in English as *Partisan Hospitals in Yugoslavia 1941-1945: Selected Chapters from the book*. Colonel Dragić writes:

The presence of the sick and wounded notably reduces the mobility and maneuvering ability of the units, these being vital conditions of partisan warfare.... Under the conditions of Guerrilla Warfare, the importance of the human factor is also notably enhanced because ... partisan units are ... replaced on a voluntary basis. The attention to the medical services ... is therefore understandable.<sup>34</sup>

It seems to be a universal truth that confidence in an army's medical soldiers by other soldiers is essential for success, in both the conventional and the unconventional fight. Yugoslav Partisan Chief Surgeon Colonel Dragić noted that an organized medical service “is an important moral-political factor” and is a positive factors among new fighters.<sup>35</sup>

Of all the resistance movements of WWII, the Yugoslavs were able to construct one of the most sophisticated medical support structures. Hospitals in both secure areas and in close proximity to the battle lines were developed. Hospitals close to the battle had the advantage of saving more lives while the others, remote to fighting, were more secure. Tito's medical officers saw the difficulty of balancing combat proximity to distant security—still a common issue facing medical support to UW.

In the first Afghan war, the Mujahedeen sent casualties by mules to Pakistan with predictably bad results. The Yugoslavs compared guerrilla hospitals close to the communication lines to those hidden in safe zones distant from the fighting. The Otaševac Central Hospital, located in a forest on an isolated, secure mountaintop was well equipped and efficient but had 15 percent mortality. In contrast, the Petrovac Hospital Center, located near communication lines, had a “First Surgical Ward” with 4.2 percent mortality rate.<sup>36</sup> As in many other things: location, location, and location. This may be the first example of documentation of the benefit of a golden hour or golden period.

Another large issue was medical supply and logistics. The more sophisticated the guerrilla health care system and the larger it grows in size, the more

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*The more sophisticated the guerrilla health care system and the larger it grows in size, the more resupply becomes an issue.*

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resupply becomes an issue. A lucrative source of medical supplies were those captured from the enemy –either by stripping the dead enemy or actually staging a raid on German military hospitals solely to obtain medical supplies.<sup>37</sup>

Other sources of medical resupply included local civilian resources, actual manufacturing, and a repair in underground guerrilla workshops. As the movement grew, the allies provided some support. Most equipment flown in or parachuted in was lethal aid, but there was some room for medical supplies, such as plasma. In addition, allied aircraft flying in supplies went back empty until all realized they could evacuate wounded to allied military hospitals in Italy.

Supply distribution, regardless of sourcing, was in the hands of the resistance auxiliary. Members of the auxiliary—many who were young girls—could pass German checkpoints more easily while transporting medical supplies. As the movement continued to grow, manufacturing centers for bandages and other medical supplies were established.<sup>38</sup>

Allied hospitals in Italy found evacuated partisan patients riddled with diseases in addition to their surgical wounds.<sup>39</sup> The allied forces also assisted guerrilla forces in Greece. At least one British and one American surgeon parachuted into Greece to assist the partisans. The Greek guerrilla auxiliary joined most of the native doctors and nurses to form surgical teams with the allies, dropping supplies by parachute.<sup>40</sup>

Post-operative surgical patients cared for in surgical wards convalesced in underground caves with the entrances covered by wooden doors and snow. These structures risked discovery by German foot patrols so they had stringent rules for the patients and the ward nurses who cared for them.

One of the most hotly debated issues still in the doctrine of UW is the use of surgical teams, especially whether or not to infiltrate outside teams to augment the indigenous resources of a native guerrilla movement. Part of the issue is what level of medicine to provide, host country or supporting country. This has become an even bigger issue with the continuing complexity of modern Western medicine. As the Yugoslav movement matured, two allied forces forward surgical teams—one from the Canadian army and one from the New Zealand army—along with other solo medical personnel, infiltrated the country by parachute or boat to supplement local national medical guerrilla forces.

The infiltrated surgical teams tackled the rigors of GW surgery with its continual movement of both guerrilla hospitals and postoperative convalescent patients. The Canadian Army surgeon and team leader, Major Dafoe, had training and combat experience in the British 8th Army in North Africa which he found very useful, but he admitted he had much to learn concerning forward amputations from his German trained Yugoslavian communist partisan peers. Evidently, the British Army never even considered amputations that far forward in the evacuation levels.

Major Dafoe was a controversial character who died in the Canadian wilderness in 1969 amid rumors of CIA ties and a possible assassination. Upon entry to Yugoslavia, he first fashioned an operating room out of the parachutes that brought him into the country, hence the name of his

biography, *The Parachute Ward: A Canadian Surgeon's Wartime Adventures in Yugoslavia*. He introduced to his Yugoslav colleagues, and to the guerrilla medical effort, blood plasma—which was previously unknown to them. The guerrillas considered it a great innovation, as it did not require type and cross matching like whole blood. He also brought sulfa drugs—the primitive start of today's antibiotics.

The American school charged with writing American military UW doctrine is the SWCS, founded in the 1950s. Apparently, the school debriefed Dafoe for three days sometime in 1968. Although mentioned in his biography, no record of that debriefing is in the school's libraries and archives.<sup>41</sup> The accepted role of such forward surgical teams really did not surface in the official doctrinal publications until the 1990s with Army Field Manual FM 8-43, *Medical Support to ARSOF*.

The Yugoslav partisans placed their new forward surgical teams at the equivalent of divisional level but occasionally attached them down to brigade level.<sup>42</sup> The author's personal copy of the book on Yugoslav partisan hospitals by Yugoslav Colonel Dragić *Partisan Hospitals of Yugoslavia* has this handwritten dedication at the beginning: "To Major Colin Dafoe as remembrance on the days spent together in the Staff of 38 division National Liberation Army of Yugoslavia with best wishes and kind regards of Dr. Dragić ... 10.10.1966."<sup>43</sup>

In summary, the Yugoslavs had a large, highly organized, and fully developed guerrilla force with sufficient auxiliary and underground to facilitate everything from medical logistics and manufacturing to successful employment of multiple forward surgical teams and air evacuation to allied Italy.<sup>44</sup> The predominately-rural country had little pre-war medical infrastructure, which forced the guerrilla movements to create their own. The rural nature of the operational area was in the guerrilla's favor against the Germans. This allowed the use of advances to include parachute infiltration of the two allied forward surgical teams and the use of allied fixed wing medical evacuation aircraft, which evacuated over 10,000 critical patients by air to Italy.

France during WWII, in contrast, was a much more highly developed urban country with a sophisticated pre-war medical infrastructure. It was a dedicated Ally with short lines of communication, supply, and importantly, close air support from the United Kingdom. France was also vital to the war's success, with a common invasion border to Germany, a language spoken by many allied operatives, and a strong, if fragmented, government in exile.

While the SOE had the lead in Yugoslavia, both the American OSS and the British SOE were heavily involved in occupied France.

The Army OSS was the SOE equivalent. The OSS based much of the doctrine, operational art, and equipment on the SOE. They had a close working relationship, even if the British looked at the Americans as upstarts. In the now declassified official history of the OSS, the earliest medical comments discussed medical and psychological selection issues.<sup>45</sup>

In an operations order dated 8 August 1944 called “Operational Brief #3,” Captain Fred B. Agee, Medical Corps, U.S. Army, deployed on Operation Antagonist. The American OSS Operational Group under Captain Larson was working with a Maquis unit of 5,000 in Haute Vienne department in occupied France and had sent an urgent call for a doctor. Doctor Agee’s after action report shows he supported the Maquis but returned to England by September 1944 after sustaining a gunshot wound to the thigh from his own pistol with subsequent surgery in a French hospital.<sup>46</sup> One first-hand account of a medical officer’s service with the SOE is *The Black Scalpel*.<sup>47</sup> Dr. Geoffrey Parker, an SOE major, served as a British trauma surgeon, secret agent in Switzerland, and guerrilla leader in occupied France. His autobiography is highly recommended. For an account of a dentist OSS agent, see *Piercing the Reich: The Penetration of Nazi Germany by American Secret Agents during World War II*.<sup>48</sup>

Colonel Aaron Bank, one of the fathers of American SF, served in the WWII OSS. His accounts of his time spent on a Jedburgh team in France mention some medical aspects:

[B]ut better medical assistance was required. There was also a morale factor. The individual guerrilla would perform his battle duties with more ardor and spirit and accept more risks if he knew that there was medical support in case he became a casualty.

Colonel Bank relates realizing that the Maquis initially transported their casualties into nearby urban areas to local clinics and hospitals, and then saw the Gestapo conduct sweeps and capture the wounded partisans. Colonel Bank then attempted to create a medical network of individual safe houses and very small clandestine hospitals that he used for evacuation of Maquis’ wounded and ill. He reported that, “The leaders and couriers reported a definite lift in morale when the word got around.”<sup>49</sup> It is an interesting sidenote that quite a number of Jedburgh teams had medical codenames:

Colonel Bank then attempted to create a medical network of individual safe houses and very small clandestine hospitals that he used for evacuation of Maquis' wounded and ill.

Ammonia, Chloroform, Ephedrine, Novocain, and Quinine.<sup>50</sup>

Members of the OSS' schools and training branch at the end of WWII wrote *Assessment of Men: Selection of Personnel for Clandestine Operations*. The foundation of the book consisted of statistical calculations by dozens of psychologists and psychiatrists. The techniques developed in WWII have stood the test of time and are still relevant for assessing candidates,

both to identify any disqualify defects, and for determining a candidate's unusual talents.<sup>51</sup>

The Allies, mainly SOE, also sent a "chief allied liaison officer" to the Greek resistance movement. He was a commissioned dental corps officer. His major functions included training on new Allied supplied equipment and drugs, medical supply, and medical intelligence. His after action report stated that proper triage for surgery was extremely important, to not waste resources on hopeless cases, and that nighttime surgical illumination was a major challenge. The hunt for a good, lightweight, long-lasting surgical lamp continues today. Resupply was a constant issue. The Greek guerrillas purchased some medical material on the civilian market from German and Italian stores, and received parachuted-in American and British supplies.<sup>52</sup>

Completely on the other side of the world and without the organizational structures of the OSS and the SOE, was the Pacific war. This theater of war had large-scale guerrilla activities, especially the Philippines, but little documentation. In spite of that, of the SF "Trinity" of Colonels Bank, Volkman, and Fertig, two were active in the Philippines while the third (Bank) was first in France and then in Indochina.

Guerrilla operations began haphazardly as Allied forces fled the Japanese advance throughout Asia by going into the bush. There was no command sponsorship or support as General MacArthur, the theater commander, gave an order that the OSS was unwelcome in his Pacific theater. Even personal intervention by OSS Chief General Donovan was without effect. General MacArthur did not allow the OSS command into his theater.<sup>53</sup> In the Philippines, small groups of highly individualistic American military who chose not to surrender decided independently to learn and perform GW through on-the-job training. They had no prior training, experience,

supplies, doctrine, or plan. This resulted in uncoordinated, independently run operations by multiple uncoordinated bands without a unified commander's guidance. These operations mostly began during the disaster and defeat of the American encirclement, surrender, and internment in the Philippine Islands and suffered from a lack of communications and long, sparse, or nonexistent supply lines. General MacArthur ordered a wait-and-watch role for those left behind, not desiring an active combat role for them. There are many Filipino accounts of these operations that historians have ignored. For an account of the use of local Filipino medicine in an American guerrilla band, see *Behind Japanese Lines: An American Guerrilla in the Philippines*.<sup>54</sup> This story of guerrilla war in the Pacific concerns Ray Hunt, one of the few American soldiers on the Bataan Death March to escape. Recently, Theresa Kaminski has written a book on the auxiliary and underground elements of the Philippine guerrillas struggle. The auxiliary and underground, necessary parts of any successful guerrilla movement, were slow to develop because of the amateur nature of the start of fully independent, self-identified, guerrilla bands throughout the Philippines with no coordination. As the guerrilla movement matured, so did their auxiliary and underground. They made efforts to contact interned Americans (after the Bataan death march) and pass medicine to them. See *Angels of the Underground: The American Women Who Resisted the Japanese in the Philippines in World War II* by Theresa Kaminski.<sup>55</sup> Kaminski stayed on in the Philippines through the occupation, working in hospitals, moving supplies, and building underground networks. As one explores the unique history of insurgencies, it becomes evident quickly that guerrilla forces do not succeed alone and are always heavily reliant on auxiliaries and undergrounds, both of which have an overrepresentation of women. Women are however, underrepresented in GW/UW literature.

An example of the self-made Philippine guerrilla is the account by Lieutenant Colonel Edwin P. Ramsey entitled *Lieutenant Ramsey's War: From Horse Soldier to Guerrilla Commander*. During the fall of the Philippines, he managed to lead probably one of the last horse cavalry charges in U.S. military history. He did not surrender, but vanished into the jungle, joined the resistance, and rose to command more than 40,000 guerrillas. Ramsey was wholly self-taught, developed his own rules of war, and generally took no prisoners.<sup>56</sup>

Ramsey spoke in the year 2000 at a SF qualification course graduation at the SWCS. The command retroactively awarded him the SF Tab and a green beret in recognition of his wartime service. He discussed the importance of medical care as a motivating factor in guerrilla recruitment and morale, and the difficulties of caring for the wounded, handling turncoats, including families, and the lack of medical supplies.<sup>57</sup>

Many such impromptu guerrillas were only marginally successful in the occupied Philippines. North Luzon has some of the worst terrain in the Philippines. Several Filipino-American guerrilla bands were organized and tried to gather intelligence to destroy enemy military installations and supplies. By mid-war, most had fallen victim to combat, capture, or disease, highlighting the need for a medical infrastructure, which was mostly absent. With very few local national healthcare providers to recruit and no support from a higher headquarters, disease and injuries steadily took their toll. In addition, because of the meagerness of care, no examples of forward surgery exist.<sup>58</sup>

The official American military medical history of the war discusses the Philippines:

A hospital might mean an abandoned house or a grove of trees; treatment, the surreptitious aid of a local doctor or nurse. Some physicians made horseback visits after dark to the mountain strongholds of guerrilla units.<sup>59</sup>

Because of the disparate guerrilla bands and the lack of central coordination or control, many schemes, rivalries, much mistrust, and outright betrayals existed between partisan groups. Some concerned the production, buying, and selling of counterfeit anti-malarial medications.<sup>60</sup> Guerrilla war in the Philippines continued into the 1950s with the communist-led Huk insurgency.

As the Japanese rushed southward through the various island chains, another area with spontaneous anti-Japanese resistance activity was Malaysia—north of quickly conquered Singapore. Known for the railroad that ran to the bridge over the river to Kwai's brutal prisoner camps, some Allied, mainly British, soldiers escaped and began self-taught GW. *The Jungle is Neutral* by Colonel F. Spencer Chapman is a particularly good account of the difficulties of self-education in partisan warfare. He faced many challenges while he acquired his guerrilla skills including his capture several times.<sup>61</sup> Malaysia in the 1950s was the scene of a successful, anti-communist,

counter-guerrilla operation by the British.<sup>62</sup> This anti-guerrilla effort was one various militaries pointed to as one to learn from when the anti-guerrilla effort began in South Vietnam.

Also active in Borneo and the Philippines were stay-behind Australian coast watchers, who as the Japanese moved into their areas, fled and became guerrillas. Australian Captain Robert Kerr (“Jock”) McLaren earned two military crosses and a commendation (mentioned in dispatches) for his guerrilla force efforts in Borneo. Interestingly, he also removed his own appendix. McLaren had been a veterinary technician before the war and recognized his own case. He attempted to enlist a Filipino medical student who demurred, as he was a pre-clinical student and was fearful that he would be both unsuccessful and blamed. Captain McLaren supposedly wrote out his own death certificate and signed it to avert any blame. Between McLaren, the medical student, and a local midwife, he was successful. McLaren was also thankful for his false teeth, which kept him from toothaches—a common ailment among guerrilla forces in Asia.<sup>63</sup>

Therefore, WWII featuring General Donovan’s OSS and various other professional and nonprofessional players, made GW much more relevant than it had been in WWI.



## 5. The Cold War and the Korean Partisan Rangers

Their unorthodox procedures, weapons, and tactics ... led to great successes and tragic mistakes.<sup>64</sup> – Ed Evanhoe, *Dark Moon*

With the end of WWII and the falling out between the Western Allies and the Soviets, the era of the Cold War began. Globally, Soviet Union supported numerous insurgency movements—the so-called wars of national liberation. At the same time, some of the WWII guerrilla movements, which had been usually both anti-German and anti-Soviet depending on the circumstances, continued to exist in Eastern Europe. Soviet forces rushing westward to meet the Western allied forces quickly occupied the area. These movements, which included partisans in Romania, the Ukraine, Hungary, Poland, all of the Baltic States, and some even sharing borders with the Soviet Union, attempted to continue UW, but as their support and equipment dwindled, and no reinforcements appeared, they turned to espionage, subversion, and sabotage by the mid-1950s.

The United States then had two areas of competing interest. One being the emerging wars of national liberation popping up around the world in places like Cuba, Malaysia, Angola, Vietnam, and Central America, to just name a few. At the same time, the newly created CIA, the successor to part of the OSS, looked at the remaining Eastern European anti-Soviet partisan groups as possible allies in the new Cold War. It spent considerable time, effort, and money to keep in contact with these groups. The Soviets and the United States started to build intricate networks of spies and equipment stockpiles. The secret American plan, Operation Rollback, was “an audacious strategy of espionage, subversion, and sabotage to foment insurrection in the Soviet satellite countries”—as the book *Operation Rollback: America’s Secret War Behind the Iron Curtain* highlighted these once secret efforts.<sup>65</sup> This time UW was to be an adjunct to support the NATO allies in a future WWII by activity in the rear of the advancing Soviet forces against NATO. The breakup of the OSS at the end of WWII resulted in a portion of the OSS going to the emerging CIA on the civilian side and the rest going into SF on the military side. Thus, American UW abilities were not only degraded, but

also split between a military and a civilian organization—answering to two different masters. Both organizations were new, eager to establish realms of power, and not particularly cooperative with each other.

As both organizations looked at the task list for behind the lines clandestine actions required to support NATO operations in the event of a Soviet Western advance, the U.S. Army decided to station the 10th Special Forces Group (Airborne), and the 1st Special Forces, in southern Germany. The group's first commander was Colonel Aaron Bank who served in France and Indochina with the OSS in WWII. The location, chosen partially because the American zone of German occupation, made stationing it there easy, but more importantly, it was reasonably close to SF' planned GW operational area consisting of Eastern Europe and the Soviet Union. The Green Berets started preparing themselves for an operation codenamed "Falling Rain."<sup>66</sup> It required that upon the outbreak of NATO-Warsaw Pact hostilities, resulting in rapidly westerly moving Soviet forces, 12-man SF Operational Detachment Alphas would parachute into Soviet Army occupied rear areas to link up with the partisan groups identified to them by the CIA, and then initiate GW behind the Soviet front lines. Falling Rain was a plan for all of the Warsaw Pact countries.

Supplementing the Falling Rain operational plan was a separate plan for Berlin—the divided capital of defeated Germany—100 miles behind the front lines already deep inside communist East Germany. NATO secretly placed an entire SF unit in the American sector of Allied occupied West Berlin. The unit, Detachment A, Berlin Brigade, with six Operational Detachment Alphas, was to execute a stay-behind role as the Soviet Army rolled westward over Berlin, and other Warsaw Pact units moved westward from occupied East Germany.

The Green Berets of "Det. A," as it was usually referred to, became the master practitioners of urban GW both because it was their wartime mission and because they were located in the perfect city to train for it.<sup>67</sup> The term "Det. A" was an unclassified cover name, which changed later to "Physical Security Support Element-Berlin (PSSE-B)" while the then-classified name, 39th Special Forces Detachment, became the 410th Special Forces Detachment. Detachment "A" remains the least known, most closely held, secret SF unit and operation. It is only rarely in literature. After the initial setup in 1956 in Berlin, missions increased to include hostage rescue, aircraft take-down, and participation in the Iran embassy hostage rescue mission in 1980.

The first book came out on “Det. A” in 2017, *Special Forces Berlin: Clandestine Cold War Operations of the U.S. Army’s Elite* by James Stejskal.<sup>68</sup>

The 39th SF Detachment with its six operational “A” detachments makes a mark on the wall as the first “Special Mission Unit.” There is evidence that the other Western Allied powers may have had similar units in West Berlin. There is one unclassified reference to a British equivalent unit.<sup>69</sup> Recently a report has surfaced of British SAS in Berlin and East Germany, living as deaf residents to avoid the foreign language problem. Members of “Det. A” all spoke German.<sup>70</sup> It is unknown if there were any planned actions in coordination with or because of the Hungarian revolution of 1956. It was in October of 1956 and the unit in Berlin stood up in July 1956. After the Hungarian Revolution, the Lodge Act, which allowed anti-communist refugees to join the army, helped fill “Det. A” and other European-based American SF units. SF commanders quickly latched on to the Lodge Act to find soldiers who spoke European languages, had WWII experience, even if much of it was on the other side.<sup>71</sup>

Did NATO have concerns about how to provide medical support or evacuation in the rear of an advancing Soviet Front? The answer seems to be “not much.” Even though these plans seem sketchy by today’s planning standards, in a post-WWII Cold War world, there were still sizable clandestine forces opposed to the Soviets in Eastern Europe. Planners assumed they could count on their auxiliaries and undergrounds for medical support. The Ukrainian WWII resistance movement, the Ukrainian Insurgent Army (UPA), fought on into the 1950s when many survivors finally immigrated to Canada. They documented their movement very well in a series of books and later online. At the close of WWII, they had sufficient combat power to take on large Soviet and Polish security forces into the late 1940s.<sup>72</sup> Detailed resources are available on their website. In particular, they documented their medical services quite well.<sup>73</sup> Volume 23 of their first series of books is UPA Medical Services. The UPA developed medical services in early WWII, and the UPA medical staff resembled the Yugoslav in that it was well established and self-sustaining—which would have been attractive to Falling Rain teams. It had a highly developed underground that managed depots and hospitals, ambulances, medical training schools, medicinal herb collections, and even textbook publication centers. Tactics, techniques, and procedures of interest included transporting all wounded partisans blindfolded so that if later captured they could not give away hospital locations—removing tracks and

snow prints after passing with wounded, and taking as a very important duty the notification of the next of kin.

Another interesting stay-behind operation was by the guerillas in the Baltic States. These three countries had achieved independence from Russia at the end of WWI only to be recaptured at the end of WWII. They maintained clandestine movement in some form until achieving their independence again in 1990. One of the longer UW engagements on record involved the three Baltic States of Lithuania, Latvia, and Estonia. It began against the Soviets in 1940, then fought the Nazis, and then shifted back to fighting the Soviets in 1944. They continued an armed resistance against Soviet occupation until well into the 1950s. After receiving no expected help from NATO, the groups, the “Forest Brothers,” running out of ammunition and supplies, transitioned into an underground concentrated on sabotage, subversion, and then economic and cultural resistance. The long view actually paid off with the eventual emergence of a free Lithuania in 1990.

One book on the Lithuanian guerrillas shows that the Lithuanian Freedom Army obtained most of its arms from abandoned stocks left by the retreating Nazis and from Soviet forces—obtained by stripping dead enemies and staging raids on Soviet arms depots. In the 1950s, the scarcity of ammunition led to shifting passive resistance. Women conducted ‘liaison work’ such as rapidly moving resistance plans and orders, distributing underground press materials to the public, and transporting munitions

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*Women conducted ‘liaison work’ such as rapidly moving resistance plans and orders, distributing underground press materials to the public, and transporting munitions from unit to unit.*

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from unit to unit. One book states, “It was noted that the female liaisons were not only “devoted, determined, and able” but also “inconspicuous in the eyes of the NKVD [the Soviet secret police organization].” Most were teenagers, some of which the Soviets captured and sent to Siberia, while others were grandmothers and experts at navigating checkpoints with contraband. On the medical side, female auxiliaries provided

fake stories for hospitalized guerillas so that Lithuanian hospitals would not think they were wounded guerrillas. As in every guerrilla movement, the LFA needed and developed a robust auxiliary and underground capability. Through peaceful cultural, religious, and economic resistance, they lasted 40 years and saw a free Lithuania.<sup>74</sup>

When the advancing Soviet forces occupied Eastern Europe, guerrilla organizations primarily in Albania, Romania, Ukraine, Hungary, Poland, the Baltics, and some even within the Soviet Union, shifted from GW to espionage, subversion, and sabotage. America looked upon these groups as possible natural allies against the Soviets and the CIA spent considerable time, effort, people, and money, to keep in contact with these Eastern European partisan groups. Both sides in the Cold War secretly mobilized forces against each other and built intricate networks of spies and unconventional warriors. GW became a cold war proxy, much preferable to a nuclear exchange. The secret American plan dubbed “Rollback,” consisted of conducting or supporting espionage, subversion, and sabotage within the Soviet satellite countries to encourage insurrection.<sup>75</sup> The CIA appeared ready to aid these homegrown groups of anti-Communists.

Western Allies from WWII documented doctrine on special operations after the war and held various symposia to discuss and dissect the aspects of wartime SOF missions. This included GW medical aspects discussed in various conferences and journal articles. Major Dafoe, one of the Allied Yugoslavia forward surgical team commanders, spoke at an Allied conference on war medicine about his experiences performing up to 15 surgical cases per day.<sup>76</sup>

However, while the newly emerging CIA and SF were planning for WWII in Eastern Europe, multiple places were aflame with communist inspired wars of national liberation. Dr. Che Guevara partially led one of the first to get America’s full attention in the late 1950s.<sup>77</sup> Earlier in the post war era, the Greek government with American aid successfully resisted the first post-war communist inspired insurgency. During WWII, the conflict among the Nationalist Chinese forces, the Maoist guerrillas, and the Japanese raged. With the Japanese out of the way, the communists won the battle. Mao Tse-tung’s book *On Guerrilla Warfare* became required reading for those conducting communist guerrilla movements in the 1950s and 1960s.<sup>78</sup> It became the textbook for waging revolution in the emerging third world. The book promoted the use of deception, mobility, surprise for superior firepower, and retreat as an offensive move. Surprisingly it contains a large amount of medical structures in his charts of military units. A good general reference on the communist revolution is Osanka’s *Modern Guerrilla Warfare: Fighting Communist Guerrilla Movements, 1941-1961*.<sup>79</sup>

It is worth looking at the philosophy of the communist inspired movements. There are three fundamental types of hospital organizations, corresponding to stages of development in the guerrilla fight:

1. The Nomad Phase
2. Semi-Nomad Phase
3. The True Hospital Organization

In the Nomad Phase, the doctor/medic traveled constantly as a circuit rider and full time combatant. He or she treated without the proper means to treat, as it did not always exist in the dispersed immature tactical situation, and a chronic lack of supply was common. Che Guevara stated that the medic “brings the men necessary consolation from his poorly equipped knapsack.”<sup>80</sup> As the guerrilla movement grows into the Semi-Nomad Phase, the doctor/medic serves more centrally in the guerrilla camp or in an auxiliary house caring for stay-behind casualties. His or her knapsack matured into a full set of surgical equipment, used in camp for less hasty operations with recuperation in denied areas. Phase 3 became the true hospital set-up in areas that the enemy did not control.

This detailed system organization with clear echelons of care, public health personnel with teaching functions, laboratories, x-ray services, and supplies captured from the enemy and/or obtained from the Red Cross, is similar to conventional units. Mao’s book contains diagrams of the surgeon’s staff positions, a medical unit organizational structure, and the exact number of medical services’ personnel appropriate for all sizes of guerrilla military units; closely resembling conventional army force structure doctrinal literature.<sup>81</sup>

Canadian surgeon Dr. Norman Bethune served in both the Spanish Civil War in the 1930s and later in the Chinese revolution. In Spain between 1936 and 1937, he ran a blood transfusion unit until the Communist Parties of Canada and the United States sent him to China. In China, Bethune served as a thoracic surgeon and trainer of Chinese barefoot doctors. He contracted blood poisoning while operating on wounded soldiers, and died on 12 November 1939 in China. Bethune is looked upon as a hero in China but generally unknown elsewhere. He wrote several books on both his Spanish and Chinese experiences. His comments on Chinese GW medicine include:

Mud walls, mud floor, mud bed. Smell of blood and chloroform; filthy bandages stuck to the skin with blood-glue. Men with wounds like little dry pools, caked with black-brown earth; wounds with torn edges frilled with black gangrene. Wounds expanding outward like decaying orchids or crushed carnations ... terrible flowers of flesh.<sup>82</sup>

It is remarkable that Major Dafoe, surgeon and author of *The Parachute Ward*, is a hero in Yugoslavia, and another guerrilla surgeon, Dr. Norman Bethune, beloved in his adopted land of China as a key figure in Communist literature, were both Canadians.

As the Cold War developed in a divided Europe, a hotter war started on the Korean Peninsula. Authors have only recently published books on the GW activities in the Korean War. In *Dark Moon: Eighth Army Special Operations in the Korean War*, Ed Evanhoe documents the efforts of the Allied GW effort through the innocuously named 8240th Army Unit. Later its name changed to the United Nations Partisan Infantry Korea with eleven partisan battalions, including a battalion known as the White Tigers. That battalion is the subject of another book, *White Tigers: My Secret War in North Korea*. Neither book contains much on medicine, but one operations order deserves quoting:

2. SUPPLY: Stress to your guerrilla leaders that if they cannot evacuate enemy supplies and if they cannot be given to the local supporters that the supplies are to be destroyed. Medical supplies and signal and ordinance [sic] equipment will probably become scarce during the summer but sufficient supplies will be available to enable you to perform your basic mission. This is a principle of GW to live of the land and to resupply from captured arms and equipment. Complete logistical support is unnecessary.

5. MEDICAL SUPPORT: Medical Support will continue as at present unless the UN forces become heavily engaged in a major offensive with its resultant casualties. Wounded can be evacuated by air to the 121st Hospital at Yongdongp'o where they will receive the same medical treatment as U.S. wounded. Advanced treatment will normally be given at the Italian Red Cross Hospital or the Korean hospital. Local medical support is believed to be adequate for our current

needs. You will continue to exploit the services of Korean doctors. Emergency copter lift is available upon radio request.

In addition, one non-medical item of interest:

11. NORTH KOREAN CURRENCY: Due to the large requirements for North Korean currency and the limited sources available, commanders will encourage bank robberies and other suitable means of procuring this currency.

Signed: J.Y.D. Vanderpool, Lt. Col. Artillery, Officer in Command<sup>83</sup>

The Korean War was an opportunity for those veteran WWII practitioners of the dark arts to try their skills again. Vanderpool had been General MacArthur's liaison to the Philippine guerrillas and knew both Colonels Fertig and Volkman—two prominent Philippine guerrilla leaders.<sup>84</sup> However, while some were practicing GW on the Korean Peninsula, half a world away other successful WWII guerrilla leaders were attempting to write it all down as U.S. Army Cold War doctrine.

## 6. The Emerging SF Doctrine: Post WWII

This chapter will discuss WWII lessons learned as contained in the literature and translated into doctrine. It will focus primarily on Army lessons learned and resultant doctrine, as it is the vast portion, but will highlight Air Force, Navy, and Marine doctrine when available. It will review the first manuals and directives published in the post-WWII, early Cold War period. There are two noteworthy but unreferenced apocryphal quotes on the American Army concerning its grasp and use of doctrine. The first, attributed to the Germans circa 1942 states, “The reason the American Army does so well in wartime is that war is chaos and the American Army practices chaos on a daily basis.” The second, attributed to the Soviets circa 1960 states, “One of the serious problems in planning against American doctrine is that the Americans do not read their manuals nor do they feel any obligations to follow their doctrine.”

There is much truth in these apocryphal quotes. The American military has a reputation for off the cuff, seat-of-the-pants actions in combat which seem to suggest doctrine is either unread or unheeded. Many authors have offered the theory that the American Army’s grasp of doctrine and its collection of doctrinal writings before and during WWII made it much more effective in combined arms warfare than the British Army. The mechanism of field manuals and doctrine worked as the Army’s method to communicate the need for rapid change through its dense bureaucracy to troop leaders. Subsequently, American doctrine writing became even more robust.<sup>85</sup>

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Looking at Army doctrine and world war guerrilla medicine experiences outlined in the previous chapter, two systems of guerrilla medical support emerge. The Yugoslavs were fortunate enough to be able to establish larger, more isolated facilities, discussed by Dragić in *Partisan Hospitals in Yugoslavia 1941-1945* while the French Maquis system favored smaller, more

decentralized facilities, as they were more clandestine for their environment. Urban versus rural dictated medical support structures.

The fully developed medical systems of partisan Europe, both in Yugoslavia and France, glowed in contrast to the medical failures in the Philippines where no sizable medical footprint in the disease-infested jungles was developed. Multiple books document the UW medical failings in that theater—an area in which the OSS did not control special operations. The official history of the Army Medical Department states in the chapter on medical support to guerillas that a Philippine field hospital was “just a quiet place to die, because there’s almost no medicine, and damned few surgical tools.”<sup>86</sup>

The American Army after WWII still viewed what the OSS had done as a “sideshow” and was not eager to promulgate either the unconventional war doctrine or the mission. At best, they looked at it as an adjunct, which supported a conventional war effort. In 1947, support came from an outside source. The Department of State (DOS) sent a proposal to the Joint Chiefs of Staff (JCS) highlighting the fact that America did not have the same capability that the Soviets had in GW expertise. The DOS recommended that the military establish a GW school for UW training, and subsequently have dedicated forces for this new mission. The proposal was from two veteran DOS personnel, Charles Thayer and Franklin Lindsay, both of whom had worked in Yugoslavia with the partisans. In the DOS’s endorsement to the Secretary of Defense (SECDEF), Ambassador George Kennan, the principal DOS architect of American Cold War Soviet policies explained:

I think we have to face the fact that Russian successes have been gained in many areas by irregular and underground methods. I do not think the American people would ever approve of policies which rely fundamentally on similar methods for their effectiveness. I do feel, however, that there are cases where it might be essential to our security to fight fire with fire.

At the newly created DOD, the JCS studied the DOS request and decided ultimately to require the U.S. Army to develop the ability to support local resistance groups, but that in peacetime the CIA should perform this mission. The mission requirement drove the need to have a training base. However, rather than standing up a UW school, the DOD decided to utilize existing Army schools to train the personnel needed to be “on call for introduction into countries to organize, direct and lead native guerrillas.”<sup>87</sup> This phrase

“organize, direct and lead native guerrillas” is very similar to the historical and current day SF mission of “organize, train, and equip indigenous forces.”<sup>88</sup> This decision would ultimately drive the formation of SF groups into Army structure.

Spurred by the JCS decision, the American Army began to publish articles and ultimately manuals on GW, auxiliaries, counterinsurgency, and to a very limited degree, medical support of these operations.<sup>89</sup> The manuals have been refined, changed, and updated repeatedly to the present day, both in unclassified and classified forms. The manuals have grown to include all SOF missions, therefore the amount of GW material fluctuates depending on the real world dangers the Army is facing. Its practitioners look at UW as their core mission that they use to derive all other missions. The conventional Army points out the rarity of UW and questions both the need for training and lengthy doctrine on a seldom-used capability. Only small portions of the manuals consider mission support issues such as medical. The main medical theme from the published literature on guerrilla movements in WWII, from doctrine and manuals, is that a successful guerrilla movement must have a medical service. Numerous authors including successful senior combat commanders commented on the bond between GW, medical care, and casualty evacuation, as in Marshall Tito’s comment, “Our operations were closely linked with our wounded, who were always numerous, so that it was not possible to avoid encirclement.”<sup>90</sup>

From Colonel Bank, founder of SF, once a Jedburgh Team OSS officer, “the individual guerrilla would perform his battle duties with more ardor and spirit and accept more risks if he knew that there was medical support in case he became a casualty.”<sup>91</sup>

The United States Army’s first attempt at SF doctrine was an early 1950’s Special Regulation 350-5-1. This first attempt clearly saw DOD using GW as an adjunct used by the Western allies against the Soviets with indigenous forces—the beginnings of the mantra “through, with, and by.”<sup>92</sup> By 1951, Army FM 31-21, Organization and Conduct of Guerrilla Warfare, brought Colonel Volkmann’s efforts to completion.<sup>93</sup> Colonel Volkmann was a former Philippine guerrilla leader and had returned to the conventional Army as a paratroop general officer in the 82nd Airborne Division. The manual defined GW as:

[O]perations carried out by small independent forces, generally in the rear of the enemy, with the objective of harassing, delaying and disrupting military operations of the enemy. The term is sometimes limited to the military operations and tactics of small forces whose objective is to inflict casualties and damage upon the enemy rather than to seize or defend terrain; these operations are characterized by the extensive use of surprise and the emphasis on avoidance of casualties. The term ... includes current capstone field manual as “to advise, train, and assist indigenous military and paramilitary forces.”<sup>94</sup>

Several notable figures from American UW campaigns of WWII worked on this effort, but Colonel Bank, Colonel Edward Lansdale (an Air Force officer previously with the OSS), and especially Volkmann, played the largest part in writing these first post-WWII manuals. They related their wartime experiences into this early doctrine as the Army attempted to reinvent this ancient type of warfare, war that, in the words of U.S. President John F. Kennedy: “is another type of war, new in its intensity, ancient in its origins.”<sup>95</sup>

The Army published its first effort, Special Regulation 350-5-1, soon after U.S. President Harry Truman disbanded the OSS and created the CIA. At that time, the Army did not have dedicated units to perform UW. The DOD would not establish SF groups until 1952. The President made the decision that the CIA would be the peacetime supplier of guerrilla war, when required, and the Army would concentrate on wartime operations. Therefore, President Truman handed the mission to the CIA—an organization headed by General Eisenhower’s former chief of staff, General Walter Bedell Smith, who made no secret of not liking the OSS and considered it of “little military value.”<sup>96</sup> This regulation, a manual of Army terms, defined partisan warfare as: “Activity carried on against an enemy by people who are devoted adherents to a cause, but who are not members of organized and recognized military forces. It includes guerrilla action, passive resistance by underground groups, espionage, sabotage, and propaganda.”<sup>97</sup>

This verbiage infers that GW was a type of warfare that enemies did to U.S. forces, not something that the DOD expected U.S. forces to do as an American mission or a standing American Army capability. The Army’s view was that, “Guerrilla warfare is ordinarily carried out by irregular or partisan

forces; however, regular forces which have been cut off behind enemy lines or which have infiltrated into the enemy rear areas may use guerrilla tactics.”<sup>98</sup>

Next, in 1951 came the first field manual, FM 31-21. The manual number 31-21, now assigned to this FM had been used before in 1941 for the Jungle Operations field manual—a manual largely based on America’s turn of the century Philippine rebellion experience.<sup>99</sup> The DOD labeled it classified confidential when issued and it would remain so for 38 years. Its doctrine firmly states that GW could be the mission of regular Army forces, as opposed to irregular forces, forecasting the development of SF groups the following year.

The first section of this seminal publication gives a concise and thorough history of both the European and the Pacific theaters of war in WWII, the extent of UW activities in each, and the role they played in the winning war effort. It discussed emerging threats from guerrilla groups, primarily communist, since the end of the war, citing multiple examples. It mentions the communists in France and Italy who kept the faithful engaged not in an actual struggle but by stockpiling arms and using “ex-partisan” associations.

Another example cited was in the Philippines where communist-inspired Huks were operating against the American-friendly government. In Greece, a successful campaign to overthrow a communist guerrilla enemy was just over. Indonesia had used guerrilla tactics to oust the Dutch colonial power. Malaya was in an ongoing struggle with the British. In Indochina, the Viet Minh were fighting the French, and in Burma, various hill tribes that fought against the Japanese during the war (with OSS help) were effectively resisting efforts of the Burmese government to bring them under control.<sup>100</sup>

Under a Medical Service section, this first FM 31-21 states:

The guerilla area commander is responsible for the medical service within his command. The plan for medical treatment, evacuation, and hospitalization is prepared by the chief surgeon in close coordination with the operations section of the area command staff. It further explains that prompt casualty evacuation is important, losses greatly affect a guerrilla unit, and that medical plans must be decentralized to the lowest level possible.<sup>101</sup>

Guerrilla forces, being small, need to attend promptly to wounded. Rehabilitation of trained fighters is a major source of “new” guerrilla fighters. Unretrieved wounded fighters are also an intelligence

risk. This initial doctrinal guidance in the very first SF manual draws strongly from World War II experiences of the authors. The World War II robust guerrilla medical services, which had enhanced morale, conducted treatment and evacuations, received supplies from theater sources, and had established clandestine hospitals, should all become the doctrinal guidance for the future. Several stories from the war highlighted worries concerning casualties as intelligence leaks and the ability of the enemy to follow casualties to treatment locations. (6) Existence of evacuation means.”<sup>102</sup>

The term “theater special forces” in the FM refers to a proposed higher headquarters organization developed in the manual. It showed in two figures, a SF theater command at an equal level with theater level Army, Navy, and Air Force components. It further stated that, “the theater commander may organize a theater SF command on the same level as the theater army, navy, and air.”<sup>103</sup>

This need for a ‘seat at the theater table,’ first recognized in 1951, started in 1986 with the creation of the TSOCs in the geographic combatant commands, and now reflects as such in today’s joint publications. This debate on whether or not SF really need to be co-equal with other theater service components continues to this day. Current doctrine calls for SOF to be a

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*This debate on whether or not SF really need to be co-equal with other theater service components continues to this day.*

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separate theater command, but geographic combatant commanders do not universally follow at present. This continuing disconnect has a large effect on medical operations as the senior SF or SOF command surgeon may or may not get a seat at the ‘theater medical table’ depending on whether his commander gets a seat at the theater commanders’ table. This theater level access for the SOF command surgeon is a critical key to making

the theater evacuation system flexible enough to meet the unique needs of the theater’s far-flung SOF.<sup>104</sup>

In the FM, use of civilian hospitals and other such medical facilities, which Colonel Bank had deemed a problem in France, was discouraged and used only when “the loyalty of the civilians within the area, particularly those of the medical installation, must be unquestionable.”<sup>105</sup>

This came straight from Colonel Bank's experiences with Allied OSS/ SOE teams in occupied France who saw Gestapo sweeps of local hospitals searching for their resistance fighters. In lieu of using local hospitals close to the battle space, the doctrinal guidance was to replicate the clandestine systems used in the European theater of war to include establishing covert hospital stations, smuggling supplies, and recruiting from the local population. The field manual also strongly encouraged the use of auxiliaries as an important part of resistance movements.<sup>106</sup>

This decentralized care for casualties, with the circuit riding medical officer, was most evident in occupied France with the Maquis and the Jedburgh Teams. It requires an organized auxiliary, which takes time. Medical supplies were and continue to be a huge issue in all guerrilla movements. In WWII, guerrillas, especially with the Russian and Yugoslav partisans, staged specific medical raids to obtain pharmaceuticals and medical supplies.<sup>107</sup>

Several of the more mature, better-organized WWII guerrilla movements had large manufacturing centers for medical supplies, according to Yugoslav and the Ukrainian writings.<sup>108</sup> An important early glimpse into the ever-growing mission of training indigenous medics and the development of a medical system by SF medical sergeants (18Ds) is the guidance which provided for prototype organizations and functions of a guerilla medical unit:

- a. When a guerilla force becomes large enough it organizes its own medical support. Plans for each guerilla operation should provide for one or more men whose duty is to carry medical supplies and provide first aid. One aid man is provided for every 50 men ... With a force of 150 men or more, which requires 3 or 4 aid men, at least one aid man should be an experienced technician.
- b. Two or more forces require a medical aid station under the control of competent medical personnel. Such an aid station is capable of fulfilling ... three or four 200-man units operating in a given area. It consists of a doctor and several trained assistants who may be augmented by special personnel when the situation demands. It is similar to a standard aid station for a regular infantry battalion. There are, however, these differences:

1. There may be no need for a litter bearer section. Guerilla actions are usually short, and the guerillas are usually able to transport their own casualties after first aid has been given.
2. The aid station must be prepared to conceal and transport casualties from the scene of action, and to continue treatment at some covert location until the situation permits evacuation to a more distant point.
3. In guerilla warfare there is no army rear area in which casualties may be promptly evacuated. It is important, therefore, that surgical aid be given on the spot, probably at the aid station.

The receiving, care, sorting, and evacuation of casualties is a unit responsibility much the same as it is in a standard infantry regiment. If secure guerrilla hospital units exist, hospitalized patients should be moved from aid and collecting stations as soon as possible so the stations will be clear to receive new casualties. It is necessary, however, that this evacuation be made by personnel under the control of the guerrilla area staff, with adequate coordination and secrecy. Evacuation must be secure and rigidly controlled.<sup>109</sup>

The previous comments about secure evacuation stem from the immense difficulties the Yugoslavs had with their casualties, as Dragic discussed.<sup>110</sup> Note the term “aid man.” What is now a SF medical sergeant began as a SF medical aid man. The mention of surgical capability “on the spot” may relate to the experiences of the Allied forward surgical teams inserted into Yugoslavia to support Tito, Canada<sup>111</sup> and New Zealand.<sup>112</sup>

Other comments in the field manual concerning guerrilla surgery:

In guerilla warfare, much of the emergency surgery, ordinarily performed at regular hospitals, is done in the field at aid stations and collecting stations.”<sup>113</sup>

The section on evacuation infers the need for ‘secure guerrilla hospitals.’ Discussed in the section on hospitals:

It is not expected that hospitals will be elaborate equipped or manned entirely by highly skilled personnel. Items like X-ray apparatus, pressure sterilizes, and refrigerators for blood banks are immobile

and difficult to obtain. Therefore, hospitals should have a small nucleus of highly trained personnel and a large overhead of ordinary personnel for handling the average convalescent patient. Equipment will consist chiefly of dressing material, essential drugs, and those housekeeping items necessary to keep a patient comfortable until he can be transferred to a convalescent camp.<sup>114</sup>

The plan of a system of sophisticated underground (sometimes literally) hospitals in the resistance organizations of WWII influenced the senior officers writing these doctrinal points. They considered an organized medical service to be a morale booster, force multiplier, and a requirement of a successful guerrilla movement, however labor intensive. They recommended a large work force expense for this vital service. Clearly, the need for a large auxiliary and underground force of willing civilians is essential to perform these services. This doctrine of a large medical footprint is the most controversial and the most changed from manual to manual as doctrine progresses through the decades. The requirement for success to recruit an auxiliary to support medical services means that the shorter the war, the smaller the auxiliary and the smaller the medical support. The medical support was small to nil for the organized guerrilla force fighting in Afghanistan's recent, very short, American sponsored Northern Alliance guerrilla war in 2001.<sup>115</sup>

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There is a continued orientation in these early pre-SF group days of doctrine supporting GW as only a part of a larger, conventional war, or as something done by completely indigenous forces with only supply and other physical assistance provided by outside forces. No organic army unit had GW as an assigned mission at that time. Field Manual 31-20, 1951, Operations Against Guerilla Forces, a counterinsurgency manual, described a guerrilla medical service as often nonexistent since the requirements are not the same as for a regular force.

Therefore, in summary, this first fledgling Army doctrine, before the founding of the SF groups, dictated an American Army not equipped to perform a GW mission, having no dedicated forces for that mission. The Army was ready to supply and assist an indigenous force as part of a larger war.

Lessons learned from the WWII guerrilla operations by the Allied powers and put in the new FM included:

- Guerrilla organizations should exert the necessary work to produce a sophisticated medical service to motivate irregular fighters.
- Successful guerrilla medical organizations require the support of an auxiliary and underground force.
- Far forward surgical care is required.
- Guerrillas should avoid treatment at civilian hospitals.
- Partisan hospital organization and size depends on the tactical situation.
- Medical supplies are always in short supply and may be seized from the enemy or manufactured in the guerrilla warfare operational area.
- Casualties may be an intelligence risk if captured.
- SOF and the SOF medical authority must have a presence at the theater level decision-making bodies to succeed.
- Theater level control and support of guerrilla forces is required, especially for medical supply and perhaps for surgical and evacuation support.

These early post-war doctrinal manuals clearly delineated WWII experiences and set the stage for the arrival of the first of the SF groups (Airborne) and the writing of a capabilities document for the employment of the Army's new SF units. It shows the involvement of WWII guerrilla ground commanders on doctrine development. In the author's opinion, these manuals are the most extensive ever produced on guerrilla war because as time progressed the portions of SF and SOF manuals that dealt on GW became shorter and shorter and were crowded out with the doctrine of other SOF missions. Even today, SF continues to rely on these earlier manuals.

## 7. Vietnam, Special Action Forces, and the Green Berets

People also say that as a result of our support, Ho [Chi Minh] came to power. I don't believe that for a minute. I'm sure Ho tried to use the fact that the Americans gave him some equipment. He led many Vietnamese to believe that we were allies. But there were lots of reasons why Ho came to power, and it wasn't because we gave a few arms for 100 men or less." – Major Allison Thomas, Commander, OSS Team Deer

Vietnam has become synonymous with the Green Berets. President Kennedy recognized the surreptitiously worn Green Beret. "*The Ballad of the Greens Berets*" was written by a SF medic staff sergeant, the actor John Wayne starred in the movie *The Green Berets*, and the Green Berets themselves flourished and then suffered with the Vietnam War, the publicity, the post-war anti-SF backlash, and the military draw down at the end of that war.<sup>116</sup>

However, before that, the OSS was in Indochina. Toward the end of WWII, the OSS began to work in Burma and Indochina, now the countries of Laos, Vietnam, and Cambodia. OSS cooperation with native irregulars in Indochina, some communist, was similar to the OSS cooperation with French and Yugoslav freedom fighters. Various indigenous resistance groups fought the Japanese.

OSS medics had important roles in most WWII OSS missions. Oftentimes, in primitive locations, they were the only providers caring for OSS team members and the indigenous personnel that the teams contacted and lead. In 1945, the OSS inserted a team into what was then Indochina to work with native forces opposing the Japanese in the closing days of the war.<sup>117</sup>

The OSS had previous contacts with resistance forces in the area, primarily to facilitate rescuing downed Allied Air Force pilots. In May, OSS team number 13, codenamed 'Deer,' infiltrated Japanese lines of communication, worked with guerrillas, and performed target identification for the Army Air Corps. Team medic Private First Class Paul Hoagland, a nurse before

the war, trained indigenous Vietnamese medics to take care of the guerrilla forces that the OSS-Viet Minh collaboratively raised and trained.

Hoagland was asked to see a sick guerrilla leader—Ho Chi Minh. The team medic relates the house call:

In the darkest corner of the room lay a pile of bones covered with yellow, dry skin. A pair of glassy eyes stared at us. The man was shaking like a leaf and obviously running a high fever. When my eyes had become accustomed to the darkness, I noticed the long scraggly goatee hanging from a pointed chin.... Hoagland took a quick look and said, "This man doesn't have long for this world."

His diagnosis was malaria, dengue fever, dysentery, or perhaps a combination of all. PFC Hoagland administered quinine and sulfa. The Team Deer Executive Officer said the medic had Ho Chi Minh on his feet in about ten days.<sup>118</sup>

Now switching forward to the early 1960s, life was good in America. The beret was out of the closet, President Kennedy was talking about a new kind of warfare, and SF began to grow. DOD developed new missions for SF like "Greenlight Teams," with man portable, parachutable nuclear devices.<sup>119</sup>

As SF planners began to look at the capabilities needed for a regional SOF power projection platform, they began to talk of Special Action Forces (SAF), where for the first time, organic medical support units appeared. SAF were an early combination of SOF units which resembled today's battlefield array of various SOF "tribes" like civil affairs, psychological operations, and aviation, combined with SF. FM 31-22, U.S. Army Counterinsurgency Forces, 1963 defines them as:

a specially trained, area-oriented, partially language-qualified, ready force, available to the commander of a unified command for the support of cold, limited and general war operations. SAF organizations may vary in size and capabilities according to theater requirements. A SAF consists of a SF group and selected detachments, which may include civil affairs, psychological warfare, engineer, medical, intelligence, military police, and Army Security Agency detachments.<sup>120</sup>

The inclusion of medical as one of the possible detachments in a SAF marks a milestone in SF thinking. Rather than looking for medical expertise in a nearby conventional unit, the SAF brought its own to the fight.

They had a regional focus with dedicated assets in a geographical area of the world. The Asia SAF had the 156th Medical Detachment and the Latin America SAF the 255th Medical Detachment.<sup>121</sup> With the drawdown after the Vietnam War, SAF were short-lived but successfully offered a quick view of the not-yet-thought-of TSOcs of the 1990s. The plan encountered significant resistance from the conventional army as they were adamantly against assigning conventional army units to SF on a continuing basis. The DOD ignored the SF argument that an alignment was necessary to assimilate such units into the SF culture. This argument will reappear in the 1990s with the TSOcs.

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*The inclusion of medical as one of the possible detachments in a SAF marks a milestone in SF thinking.*

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As the Vietnam War increased in size and scope, many such plans like the SAF, fell apart and the SF groups' regional focus and training suffered, as they became replacement depots for SF soldiers rotating to Vietnam.<sup>122</sup> Vietnam was a counterinsurgency war, not an insurgency war, but SF used many of the same techniques. Medicine quickly came to the forefront as SF medics often led the way in local engagements. Villages were accepting of healthcare, which appeared not threatening. The local militias formed by SF teams, the Civilian Irregular Defense Groups (CIDG) received the care one would expect as a recruit soldier, including immunizations, public health, dependent care, and first aid training.

Two arguments emerged for developing the CIDG program. The first was that the State Department thought that a paramilitary force, developed from ethnic minorities, would "strengthen and broaden" the Vietnam counterinsurgency effort. The second was that these minorities were prime targets of the communists due to the South Vietnamese government ignoring such minority groups.<sup>123</sup>

The need for casualty care began as CIDG soldiers trained and initiated combat operations. SF medics at the 'A-camp' could provide some care, including limited surgical care due to their extensive training at Fort Bragg, but there was a limit to their capabilities and resources. Medics also routinely performed sick calls on CIDG dependents, as well as in some cases, the entire village of CIDG families. The choices facing SF commanders were to: 1) keep the combat wounded at the camp, 2) put them into the Vietnamese Army evacuation and care system, 3) attempt to convince the American Army to evacuate and care for them, or 4) develop their own casualty care system.<sup>124</sup>

These dilemmas led to the creation of the CIDG Hospital concept. Above the A-Teams at camps were the B and C teams. The C-team was a battalion headquarters and blessed with a battalion surgeon and a medical section with senior SF medics. Soon the B and C teams expanded their capabilities and resources and started taking more severe CIDG soldier casualties including those in need of extensive rehabilitation. Note that the term 'surgeon' as in 'battalion surgeon' actually means doctor, and most probably at that time, was a general medical officer (GMO) with no specialty training. SF medics under the supervision of GMOs accomplished care, including surgery, in these CIDG hospitals. SF medics have always had a strong block of surgical training in their medical course at Fort Bragg so it was a natural fit. Some hospitals established relationships with local medical capabilities varying from American surgical units to missionary non-governmental organization hospitals for various levels of support. Evacuation was dependent largely on SF opportunity air for the A-Camp to CIDG Hospital flight.

A good example of this concept is U.S. Army Captain Eugene Edynak, M.D. He graduated from medical school in 1964, completed a surgical residency in 1964-1965, and from 1966 to 1968 deployed as director and chief surgeon, III corps, U.S. SF CIDG Hospital, Republic of Vietnam. His web biography notes: "designed, supervised construction, equipped, trained the staff and managed an eighty-bed surgical Hospital (sic) for Civilian Irregular Defence Group of the III Corps area, Republic of Vietnam."<sup>125</sup> Many other young doctors' training was interrupted by the war and the doctor's draft had similar experiences. Dr. Edynak then finished his surgical training and became board certified in general surgery in 1975." This capability improved medical care and reduced dependence on U.S. or Vietnamese medical facilities.

As the CIDG program matured, it became the focus of the 5th SF group's quarterly reports. The August 1967 report states some lessons learned. A portion of the report concerned problems with using the Vietnamese Air Force for evacuation flights and a request for authorization to task American aircraft first. Higher headquarters denied it, stating that it was a Vietnamese mission but U.S. aircraft could participate upon saturation of the Republic of Vietnam Armed Forces capability. The other issue was the hospitalization of CIDG wounded. It was determined that, "Although CIDG hospitals do exist, they cannot fully support all CIDG forces. Care of CIDG personnel

through Vietnamese channels is inadequate. Insufficient medical support is detrimental to the mission of Special Forces in Vietnam.”<sup>126</sup>

Therefore, the CIDG hospitals, with their medical staff of young doctors, coupled with enlisted SF aide men doing definitive war wound surgery, became the first Green Beret health care system. This content remains today in the medical courses at Fort Bragg. The schoolhouse teaches definitive war wound surgical procedures in the second half of the medical course to the remaining SF medics (18Ds) after the Ranger, Special Operations Aviation Regiment, and support medics (SOCM) complete their emergency first responder trauma training in the first half of the course and have departed.

As Vietnam wound down, the Army reduced SF in both size and capability, partially as a general downsizing but also as a now unprotected small unit of non-mainstream soldiers. The latter part of the 1970s was hard, many SF soldiers left the Army, or rejoined “big Army” as careers in SF looked dismal. Areas in the 1970s showing staying power were the counterterrorism and DA missions.

SF had a special mission unit in Berlin since the 1950s. Six A-teams were stationed there, wearing civilian clothes and speaking German, ready to carry-out a stay-behind GW mission when the Russians and East Germans headed west in WWII. In the 1970s Berlin, another threat emerged—German domestic terrorists, the Red Army Faction, known in its early stages as the Baader-Meinhof Gang. The Red Army Faction staged bombings, assassinations, kidnappings, bank robberies, and shootouts with German police over three decades and were responsible for 34 deaths, many secondary targets such as chauffeurs and bodyguards, with violence peaking in late 1977.

Berlin was in a unique situation as it still occupied territory from the WWII and not fully under the government of West Germany. The western part of the city had German police but also British, French, and American soldiers to protect it. In addition to the Red Army Faction, concern was mounting about threats to Tempelhof Airport, which was both a Berlin civilian terminal and an Allied military base. As Berlin was not technically part of West Berlin, the allies were responsible. The United States European Command devolved plans to use an A-team from Detachment A, Berlin Brigade to respond to hostage or hijacking situations at Tempelhof. Teams received special counterterrorism training both in Berlin and the United States on rapidly moving casualties to American or German hospitals—a far cry from the definitive care in CIDG hospitals in Vietnam.<sup>127</sup>

Thus, Detachment A became SF's first counterterrorism unit. The unit soon evolved as members participated in the American rescue effort in Iran.<sup>128</sup> At the same time in Fort Bragg, several counterterrorism mission units such as 'Blue Light' began to evolve and faced the same medical challenges at the end of the 1970s.<sup>129</sup>

## 8. The Rise of SOF and the Small Wars of the 1980s and 1990s

The beginnings of SOF revolves around the actions of the failed Operation Eagle Claw in Iran in April 1980. SF barely survived the 1970s by concentrating on counterterrorism, hostage rescue, and other DA missions rather than the historical core mission of GW. Medicine was to follow this lead. Medicine, which had been concerned with definitive treatment of guerrilla forces, was now to switch to quick casualty stabilization and transport from short duration missions.

The postmortem of the Iran mission, the Holloway Report, recommended the establishment of a standing joint task force to strengthen command and control.<sup>130</sup> This ultimately led to the larger reforms of the Goldwater–Nichols Department of Defense Reorganization Act of 1986 Public Law 99-433 and the resulting formation of USSOCOM and the resultant growth in special operations in all military services.<sup>131</sup>

During this resurgence of special operations in the 1980s, the conventional Army focused on the threat of Soviet invasion of Western Europe. Therefore, SF continued its large role in DA and SR. These missions assumed the need for mainly short-term trauma care. With the demise of the Soviet Union and the evaporation of the threat of a WWII “Fulda Gap” scenario, DA and SR decreased in importance as the Army increasingly conducted other missions. SF then assumed a larger number of FID missions to advance the National Military Strategy by shaping the strategic environment. Medical needs for those missions are vastly different—much more medicine and longer-term care, less trauma. FID calls for more sick call and native, indigenous care, and less penetrating trauma and evacuation. Practitioners define FID as ‘doing GW in peacetime.’ In both situations, SF are working with local, indigenous forces.

As the military refocused in the 1980s, military medicine began to look at civilian certifications and training opportunities rather than continuing to rely on internal training and certification, the earliest being Advanced Cardiac Life Support. One of the other early programs was Advanced Trauma Life Support (ATLS). ATLS grew out of an aircraft accident in a rural area and attempted to fix the issues of trauma response in small, rural hospitals.

ATLS for physicians soon spread throughout the military and civilian world, followed shortly by Pre-Hospital Trauma Life Support (PHTLS) for medics and other pre-hospital responders.<sup>132</sup> By the late 1980s, SF medics took ATLS alongside surgeons and other physicians. This decision essentially took a course intended for doctors in rural emergency rooms and placed it in the hands of pre-hospital providers—the special operations medics. Although a great course, it was intended to be fixed-facility based and highlighted such things as two large bore intravenous lines, earliest cervical spine stabilization, oxygen, the need for imaging, and other requirements. None of these easily translated to conventional battlefield medicine, nor the special operations environment.<sup>133</sup>

The Cold War conventional Army of the 1980s fought the small, overnight wars like Grenada and Panama with ATLS and short evacuation times, and

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*After Operation Desert Storm, where beds vastly outnumbered patients, the need for smaller deployable medical and surgical units reliant on quicker theater evacuation times became dire.*

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entered the 1990s with still a large medical footprint consisting of huge combat support hospitals and forward surgical teams with strengths in excess of twenty. The need to shrink the medical footprint, on what was becoming an expeditionary army, was acute. After Operation Desert Storm, where beds vastly outnumbered patients, the need for smaller deployable medical and surgical units reliant on quicker theater evacuation times became dire.

SOF were experiencing a growth spurt but whenever they needed medical support it came from the Services in the form of whatever unit they chose to send. Many times this resulted in serious capability mismatches.

The United States was not the only country grappling with how to support small combat forces medically in smaller power projection wars, other countries were also looking at far forward surgery. The Norwegian Afghanistan Committee, a volunteer organization, began in 1985 to cooperate with various Afghan guerrilla movements and supply small surgical teams to the battlefield of the first Afghan war. These international teams consisted of a specialist in general surgery, an anesthetist, and a scrub nurse—all deployed for a three-month period. The Norwegian government funded civilians with deployment experience to comprise teams disguised as Afghans and traveled from village to village with three guards, all mounted on six bicycles. They were loaded with equipment and a litter used as a surgical operating table.

The bicycle mounted equipment was supplemented from a central storehouse every second day. Also part of the team was an equipment-laden donkey, which carried the X-ray machine, film, and developing fluid. They sterilized equipment by boiling them in a kettle for twenty minutes.

Surgery took place in villagers' homes at night. One of the more interesting requirements was that homes had to have a wooden roof, as thatched roofs dripped debris in the operative field. They wore gloves but no gowns, and headlamps for illumination. Part of the daytime activities, in addition to strategic movement was to train local paramedics. These paramedics became responsible for post-operative care and interface with the families. Anesthesia for adults was predominately either regional or local, and for children they used ketamine.

In a discussion of their experiences, they noted several interesting points. First, this mission was in an area with enemy complete air superiority and the guerrillas had a very long evacuation route to Pakistan. The authors mentioned the "advantages of advanced surgery as close as possible to the fighting zone." They also unanimously agreed on operating on the litter on the floor; kneeling was suboptimal. They felt they had proved that with careful planning, advanced surgery was possible in primitive conditions, but noted that mobile teams were expensive and several teams were needed to provide sufficient coverage, but the fighters' morale and spirit were improved.<sup>134</sup> Many lessons were learned from OSS WWII.

In addition to the Norwegian Afghanistan Committee, the International Medical Corps set up surgical theatres in resistance held, rural Afghanistan in the mid-1980s and published their results. Their list of problems included sterilization, anesthesia, and transport. Major issues revolved around the lack of power generation, flammable gas anesthesia, and the fluidity of the battle lines with no safe rear areas for evacuation and further care.<sup>135</sup>

The culmination point of SOF versus CF medical mismatch took place in Mogadishu. SOF parent command, USSOCOM, has service-like responsibilities, which include research funding. The USSOCOM command surgeon started developing a medical research program looking at new equipment, new solutions, and training issues. A post-Mogadishu panel evaluated the principles of trauma care set forth by ATLS to determine whether they were applicable to the SOF combat environment. As an example, ATLS stressed that cervical spine stabilization should be with a collar that the medics needed to perform, but how common is this on the battlefield? Should the

ATLS mantra of “A, B, C, airway, breathing, and circulation” be changed to “shoot back, drag to cover, stop the bleeding?”<sup>136</sup>

The culmination of the SOF participants resulted in a seminal paper published in 1996. It featured “customized” guidelines for battlefield use and highlighted that one must not only treat the casualty but also avoid more casualties and finish the mission.<sup>137</sup> These ‘combat friendly’ new guidelines were just a jumping off point for a relook at equipment such as tourniquets, new hemostatic dressings, new fluids, and new doctrine. Tactical Combat Casualty Care (TCCC), and its committee (the CoTCCC), remain at the forefront of innovative combat medical research. TCCC has remained a portion of PHTLS with the publishing of a military edition of the PHTLS manual.

As the 1990s ended, SOF had trained its medics well for trauma management and the golden hour because of ATLS, PHTLS, and the emerging CoTCCC. The golden hour is a medical research term referring to the fact that patients receiving quicker definitive care had better outcomes and better survival rates. Maintaining airway oxygen perfusion with fluids and rapid transport were key. However, even in the earliest literature, the golden hour varies from patient to patient and wound to wound.<sup>138</sup>

The conventional Army closed out the 1990s with the conference, Army Medical Support to the Army After Next. The main concerns listed in the report’s conclusions were:

1. Military operations would demand a smaller medical footprint even though combat operations would be high tempo. Casualties could be so high the medical department could not keep up and the only care far forward would be buddy aid.
2. Asymmetric threats and weapons of mass destruction could produce mass casualties.
3. The Army medical department would require technology it does not currently have to keep up and evacuate out of theater quickly.<sup>139</sup>

That same year *Army Medical Strategy: Issues for the Future* stated a problem being the “lack of true early-entry medical units, needed at the outset of operations in new theaters (e.g., command and control, hospital, area support, preventive medicine and logistics units), among others.<sup>140</sup>

## 9. The Global War on Terrorism and its Golden Hour

The GWOT started with a surprise attack on the United States, and the American response harkened back to the Vietnam days of the CIA and SF cooperation in the Military Assistance Command, Vietnam Studies and Observations Group.<sup>141</sup> SF had been training for a guerrilla war for decades, defending its UW training exercise “Robin Sage” in the Special Forces Qualification Course (SFQC) when naysayers demanded elimination, saying global war was never thought to be a viable military option. Early SF teams into Afghanistan quietly said to each other, “Thank God for Robin Sage” as their guerrilla chiefs acted out from a script that sounded just like guerilla chiefs in Robin Sage.<sup>142</sup>

The guerrilla phase of the war was so short, from October 2001 to January 2002, that many of the precepts of UW such as auxiliaries, undergrounds, and clandestine hospitals were either ignored or did not have the proper time to develop.<sup>143</sup> American forces’ casualties during the GW phase were predominantly moved on aircraft diverted from non-medical missions. The joint combined UW task force that brilliantly executed the unconventional campaign soon had a forward surgical team at its headquarters.<sup>144</sup> In the usual guerrilla forces, actual guerrillas are a minority of the total force while the majority of the insurgency is the underground and auxiliary. Historically, the percentage of actual fighters ranged from 40 percent in the French resistance (so more than 50 percent auxiliary and underground) to less than 10 percent in the Greek resistance (so 90 percent auxiliary and underground).<sup>145</sup> Local undergrounds provided not only care for wounded guerrillas but also care for exposed on the street agents who become unexpectedly ill. Host nation or non-governmental hospitals can manage non-wounded, sick members of the guerrilla, underground, or auxiliary forces as they will not be traceable and do not exhibit a distinct war wound.<sup>146</sup>

Before long though, the war turned conventional with large formations of American troops and a robust support organization. This allowed special operations, consisting primarily of SF and the 75th Ranger regiment, to rely on conventional ‘big Army’ combat service support. The emerging Afghanistan battlefield had numerous forward surgical teams, combat

support hospitals, and medevac assets from all three Services. Flight times for medevac response by established doctrine should be two hours or less

*The emerging Afghanistan battlefield had numerous forward surgical teams, combat support hospitals, and medevac assets from all three Services.*

(notification to mission completion) for urgent casualties.<sup>147</sup> The complex terrain and high altitude of Afghanistan immediately had its effect.

The operations in Afghanistan and Iraq became the best-documented conflicts to date. Medical data was no exception. Problems still arose in pre-hospital data—what

the medics call roles 1 and 2. Role 3, however—the combat support hospital and higher—was the best it had ever been. This led to a volume of medical research unprecedented in the history of military medicine. The 75th Ranger Regiment showed no preventable deaths by following TCCC principles and its research penetrated even the dense void of pre-hospital data at evacuation roles 1 and 2, replacing them with elegant studies.<sup>148</sup>

As the war and the casualties continued, differences between Iraq and Afghanistan emerged. Army medevac and flying in general was harder in Afghanistan with longer distances and higher altitude. Thanks to the excellent data coming out of theater trauma systems, medical air evacuation mission completion times approached 60 minutes in Iraq, and 90 minutes in Afghanistan. Medical planners, a group often unappreciated, assessed that with the harsh flying conditions in Afghanistan, with their assigned assets (medevac helicopters and role 2 and 3 surgical units) those times were appropriate. Several other issues heightened the complexity. Some NATO allies had different rules and would not fly at night in low illumination or into unsecured landing zones. The U.S. Army medevac helicopters were the only truly dedicated aeromedical assets. If they were not available, then non-medevac aircraft, which needed permission from their combat commander owner, were an option, but that took more time from the golden hour.

Because of the excellent data coming through the theater trauma registry, this issue ultimately bubbled up to the SECDEF. The immediate response was to direct an effort to move Afghanistan to the golden hour standard. The push back from the joint staff, the Services, and as he termed it “the civilian and military medical bureaucrats,” surprised the SECDEF.<sup>149</sup>

The Chairman of the Joint Chiefs of Staff was not supportive, nor the joint staff surgeon—a physician that understood and argued that the golden

hour timeframe was flexible. Neither the Air Force nor the Navy pressed for change. The Army, however, the ones doing the heavy lifting and taking the heat, supported the change. The SECDEF at that time, Robert Gates, was not happy. He viewed the golden hour as a key component of troop morale and expectations. He directed 10 medevac helicopters and 3 forward surgical hospitals to Afghanistan, and by late spring, he sent 15 more helicopters and 3 more hospitals.<sup>150</sup>

The joint staff eventually saw reason. There is logic in flying 65 minutes to a full up (role 3) combat support hospital by overflying at 55 minutes a small (role 2), forward surgical team. The surgical assets added by the SECDEF improved for SOF also. SOF were usually the farthest away with the longest evacuation times, so more was better.

The majority of SOF in theater came under a complicated, obtuse command and control-wiring diagram, which positioned SOCCENT toward the top. SOCCENT was usually hands-off but helpful upon request to SOF forces in Afghanistan and Iraq. In theater missions, SOCCENT had access to a conventional Air Force surgical team—the MFST. Later in the war, roughly the same time as the Pentagon struggle on medevacs, it acquired an Air Force SOST. These two teams were suited for different missions and SOCCENT's surgeon,<sup>151</sup> through exercises and missions, showed the command different capabilities, equipment, and mindset. SOSTs and MFSTs promised commanders their own transportable golden hour. As conventional medical and surgical forces in theater began to decline, this organic nature would become more and more important to SOF.

Attempts began to divide larger surgical teams into smaller ones better suited for remote bases, smaller airlift footprints, and special operations. One Army 'split FST' showed a 14-month split location operation with 761 treated cases. The study showed an "acceptable DOW [died of wounds] rates when compared with other larger surgical units currently operating in the GWOT."<sup>152</sup>

Confusion arose among SOF on how to meet the golden hour edict. Unit staff officers would ask the SOCCENT command surgeon how to meet the SECDEF rule if they were sending a SF A-Team to Jordan, Kazakhstan, or Lebanon. Explanations by the surgeon's medical planners and/or the command surgeon personally stressed that the golden hour was a SECDEF rule, meaning DOD, and was mandated in the two countries that DOD "owned"

(Afghanistan and Iraq) versus it being a Secretary of State, DOS rule, which would cover the rest of the world.

Nevertheless, is the golden hour the right thing to focus on? Medically, the joint staff surgeon was correct in briefing the SECDEF that there was not a time to get the ‘best’ trauma care result. Fifty-nine minutes was not golden and sixty-one minutes was not specifically going to result in a bad outcome. The same applies to 60 and 90 minutes. Former SECDEF Gates was also correct that an inequitable standard between combat theaters was not politically, ethically, or morally supportable. Underneath all the posturing, what it took to “fix” this dilemma was resources. The plan only allocates a certain number of medical forces to deploy. That phased deployment plan is always a wrestling match among the deploying command’s staff and their higher headquarters. Quite often, the medics lose and get less than they want on the time-phased force and deployment list.<sup>153</sup> Once the SECDEF directed more resources, medevac achieved the new standard quite quickly.

It was proven that the golden hour can be done in combat. But, does the golden hour medically need to be done in combat? The PHTLS textbook, which also is the TCCC textbook, mentions the golden hour three times. The first mention discusses the development of the term and points out that in the civilian world transport time consumes much of the golden hour. The other two mentions both strive to point out that it is not a golden hour but a ‘golden period,’ which varies from patient to patient, based on injuries.<sup>154</sup> Is there data on this?

The medical journal *Academic Emergency Medicine* describes the golden hour as “[a] term [which] yielded little scientific evidence to support it ... [and was] widely accepted but are in fact not scientifically supported.”<sup>155</sup>

After the directive to change the golden period from 90 to 60 minutes, researchers looked at the effectiveness of the change. The study showed that after the mandate, aerial evacuation times fell from 90 minutes to 43 minutes in Afghanistan, and comparing the mortality and morbidity before the change versus after, 16 percent of severely injured troops died versus 9.9

percent after the mandate. Researchers estimated that the change saved 359 lives between early 2009 and March 2014.<sup>156</sup> *Quicker is better on the battlefield.*

One final point in this combat golden period discussion is to highlight what happens after the golden hour. In both Afghanistan and Iraq, robust level-three (role 3) hospitals were able

to deal with these surgical cases and speedily send them on to further care and more surgery in Germany and the United States. In the ‘non-DOD, no golden hour’ countries where SOF classically operate, not only is there no golden hour but also no quick, seamless surgical handoff to a sophisticated intensive care unit (ICU) holding capability nor quick aerial evacuation in a flying ICU.

An old saying in war is that only young surgeon’s profit from it. Another community, which has profited from the GWOT, is special operations medicine. Its medics profited from the capability to quickly hand off American and Allied casualties within the golden hour while learning the latest, innovative U.S. surgical care. The other area was in the care of indigenous casualties, care usually without a golden hour. This experience gained by SF 18D medics and SOCMs is directly relevant to the developing style of warfare seen by SOF in the future. This particular phase of the GWOT, which presently lacks documentation, has produced a large training gap.

The newly made 18D or SOCM leaves the JSOMTC with a meager understanding of GW/UW. Doctrinally, units remediate this deficit through “unit training.” SF battalion and group surgeons, in most cases denied the opportunity to attend the SFQC, are expected to teach with very few resources and little knowledge in the area. This lack of expertise not only interferes with GW/UW medical training for medics, but also leaves the battalion and group surgeons ill-equipped to utilize the staff decision-making process to fight for surgical teams and other assets useful in a GW/UW environment. Key to a successful guerrilla medical structure is proper use of auxiliaries and undergrounds—also not taught and a major failing in Jade Helm UW exercises.

Since before this war and in the future, the special operations combat medic must not only be the initial responder, the golden hour provider and transporter, but also must be the holding, and in some cases the onward evacuation, for patients on the hyper-distributed battlefields.



## 10. The Platinum Ten Minutes

After the trauma literature popularized the golden hour or golden period as the required standard time to surgery, the term “platinum ten minutes” emerged. Used mostly in civilian trauma and emergency response literature, it describes the time spent at the scene by emergency medical service providers before transporting. Typically, during the golden hour spent at the scene, providers center on scene safety and vehicle extrication.<sup>157</sup> Since the JSOMTC trains all SOF medics through the Emergency Medical Technician-Paramedic level of certification, they see this terminology during their training. There is some crossover to military medicine, especially with vehicle extrication issues.

Military medical literature does not mention the platinum ten minutes much. The current PHTLS/TCCC manual mentions it twice. It states, “for critically injured trauma patients, initiate transport to the closest appropriate facility within 10 minutes of arrival on scene.”

There are two main caveats. First, go to the most appropriate facility, not the closest. Second, rule out or quickly manage life-threatening problems.<sup>158</sup> When the SECDEF mandated the Operation Iraqi Freedom/Operation Enduring Freedom golden hour, medevac aircrews sometimes violated the first caveat. Planners directed medevac helicopters to the closest forward surgical teams with lesser capability than a nearby combat support hospital because it was marginally closer.

One of the few military references in medical literature is from the French Army. In *Blesses au combat, dix minutes en platine, une heure en*, translated *Wounded in Action: The Platinum Ten Minutes and the Golden Hour*, the authors state that:

In the battlefield, the majority of casualties die within ten minutes of trauma. Most injuries result from an explosion and hemorrhage plays a central role. To improve survival rates, the French Army Health Service has developed a chain of survival from the battlefield to France based on prehospital combat casualty care, forward medical support during the first hour and damage control surgery.<sup>159</sup>

Noticeably, under the current committee on tactical combat casualty care terminology, the platinum ten minutes could include self-aid, buddy-aid, possibly the care-under-fire phase, and perhaps portions of the tactical field

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*Using the term platinum ten minutes in the military to stress the importance of self- and buddy-aid could be a technique to drive that importance home to line commanders.*

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care, depending on the tactical situation. Using the term platinum ten minutes in the military to stress the importance of self- and buddy-aid could be a technique to drive that importance home to line commanders.

Today's civilian trauma literature opines that pre-hospital interventions beyond simple basic life support during the platinum ten minutes are effective. A PHTLS caveat for rural environments or when transport times are prolonged, requiring more and longer interventions at the scene and

transport may be necessary, would extend the platinum ten minutes.<sup>160</sup>

This stage of the GWOT is defined by shrinking medical resources, a smaller battle space footprint, and the need to perform prolonged field care for missions in evacuation delayed denied areas. The platinum ten minutes becomes just a minor portion of the golden hour, which itself is becoming less and less crucial if further evacuation is delayed. Having and living the golden hour, and for that matter the platinum ten minutes, is a 'righteous act,' but soon it will become impossible due to post-GWOT distance and resource issues.

A new paradigm for the future hyper-distributed battlefield and for denied area casualty management is needed. Look no further than the early days of SF and the WWII OSS to develop a plan for nearby surgery, long duration holding, and/or long distance nonstandard evacuation.

Although this pivot from golden hour care and quick evacuation to prolonged field care will require significantly different equipment and medical expertise, what it most requires is a different mindset. The GWOT has raised a generation of golden hour warrior medics, both SOCM and 18D, who have been doing excellent work. They now need new skills, new equipment, and most importantly a new approach for casualty care on a new and completely different battlefield.

## 11. Back to the Future: Prolonged Field Care

As the wars in Afghanistan and Iraq morph into advising actions with fewer troops, more contractors, less medical capability, bigger medevac circles, the golden hour/period increases or vanishes. Special operations medics who for a decade handed off complicated trauma cases to sophisticated level three surgical facilities for speedy evacuation out of theater, now will need to transition back to their roots.

Trauma cases may still need a speedy trip to the operating room but that operating room may have to be a vetted (or not) third-world facility, a pre-staged, close by, special operations capable mobile surgical team, or a more conventional surgical team that has been selected to support several SOF teams or operations in a hub and spoke pattern. All of these options will most probably call for extended patient holding either before or after the surgical intervention.

The need for a more SOF specific, organic surgical capability has finally surfaced in command documents. In “ARSOF 2022,” a special edition of *Special Warfare* magazine, the USASOC commander states, “Increase organic medical capability including the establishment of deployable, scalable surgical teams modeled after the Joint Medical Augmentation unit.”<sup>161</sup>

This scenario quickly takes us back to the guerrilla forces in WWII with their small, close-by surgical teams with guerrilla hospitals for holding and rehabilitation. After a decade of speedy handoffs, SOCMs and 18Ds will need to start doing what their school trained them to do—hold a trauma case for 72 hours.<sup>162</sup> The two missions, which are good examples of needing these medical skills, are GW and FID. Some operators say that FID is just GW in peacetime. They both involve small teams of SF with little or no support at extreme distances, in denied areas, working with local nationals and practicing medicine, which is largely sick call medicine focusing on disease, veterinary, dental, preventive medicine, until suddenly they have a trauma case.

As the GWOT has run down and traditional missions have multiplied, smart thinkers within SF have begun to approach the problem of extended care in the field. Even though the lessons learned from OSS and other guerrilla movements in WWII stand the test of time, what has changed? Many

historical examples of guerrillas were communist inspired with the resulting ideology. Therefore, ideology is different. Clearly, technology has changed

*Medical personnel on the battlefield are routinely saving soldiers who would have died in previous wars.*

with modern day satellite communications, global positioning, faster transportation, the World Wide Web, and internet self-radicalization. Moreover, medicine has changed. Medical personnel on the battlefield are routinely saving soldiers who would have died in previous wars. This alone intensifies the plea to hold a seriously injured trauma case longer.

Commanders are comfortable discussing options in a relative risk framework and prolonged field care should be termed that way. The further away the supporting surgical team, the longer the casualty must be held before evacuation, putting the mission at greater risk.

Concerns about large deployment distances and lack of close by, or at least reachable, surgical support are nothing new. However, SF groups largely placed these issues on the back burner as they took their turns in Afghanistan and Iraq, where they contended with the golden hour. As SOF troop levels decreased in Iraq and Afghanistan, and the SF groups returned to their regionally focused mission sets, concerns arose on how to approach these problems. Very similar problems existed in the 1990s but at that time, there was not the nagging memory of the golden hour or the need of it. After all ATLS was essentially hospital-based.

Groups of 18Ds and unit surgeons began a grassroots, bottom-driven discussion on how to proceed in planning and execution for missions over large distances, with little or no support, and inadequate local medical infrastructure. Operators do much of this on an independent website, <https://prolongedfieldcare.org/>. The discussion focused on the intricacies of operational planning and extensive logistical preparation. The 18Ds divided it into four stages:

1. RUCK: the gear carried to the furthest point on a mission, generally carried by medical personnel dismounted.
2. TRUCK: whatever additional equipment will be carried in mission-specific transportation, whether that is trucks, boats, all-terrain vehicles, kayaks, and so forth.

3. HOUSE: gear available to the medic, but which is only feasible to be maintained at a team house, firebase, or other mission support site. It represents the highest level of care the operational element has organic to it.
4. PLANE: planning stage included to allow the medical providers to consider how they will move patients on aircraft, whether medical evacuation (MEDEVAC) aircraft (those designated and equipped to move casualties as a primary mission) or casualty evacuation (CASE-VAC) (preplanned nonmedical support aircraft, opportunity or 'slick') aircraft.<sup>163</sup>

This is a large pivot from the golden hour and the GWOT. SF need new capabilities, or more accurately, SOF should revive old WWII capabilities and apply new technology. The working group identified "The Ten Prolonged Field Care Capabilities:"

1. Monitor the patient
2. Resuscitate the patient
3. Ventilate/Oxygenate the patient
4. Gain definitive control of the patient's airway
5. Use sedation and pain control effectively
6. Use physical exam and diagnostic measures to gain awareness of potential problems
7. Provide nursing/hygiene/comfort measures
8. Perform advanced medic-level surgical interventions
9. Perform teleconsultation
10. Prepare the patient for flight<sup>164</sup>

Beyond the requirement of more extensive medical, operational and logistical preparations, changes will require new skills sets for medical planners and unit surgeons. The medical and nursing skill differences from the standard TCCC golden hour are staggering. One prime example is tourniquets, which have a six-hour max. In classical GWOT TCCC casualty management, medics never removed tourniquets. They deposited patients with tourniquets

at a surgical facility who removed the tourniquet as part of their surgical procedures.<sup>165</sup>

Moreover, tourniquets are just the tip of the iceberg. The long dwell care of the wounded calls for different fluid requirements and types, different analgesia and sedation, longer periods of airway management, and much more expert extended nursing care. Even though 18Ds and SOCMs leave the schoolhouse trained in trauma patient management for 72 hours, very few have done it and most have forgotten it over the duration of the GWOT.

After extended field care comes the task of evacuation. Evacuation is problematic enough in regular missions with total air superiority but it increases in complexity in denied areas. Just as the SOF logisticians will have problems supporting SOF in access denied areas, SOF medical planners and medical logicians will have similar problems in medical evacuation and in pushing Class VIII (medical) supplies forward. Just as AFSOC led the way in the 1990s with the development of light mobile SOF surgical teams, they are again leaning forward with nonstandard aviation and recently stood up the 859th Special Operations Squadron, which “specializes in infiltrating and resupplying special operations forces during clandestine missions around the world.”<sup>166</sup>

Leading the way is the USASOC field exercise *Jade Helm*. The multistate UW exercise included a guerrilla hospital, auxiliary, and undergrounds to facilitate medical and surgical care of injured guerilla fighters. The definitive surgical skills needed to treat guerrilla fighter wounds are different from the trauma skills necessary for the golden hour. Unfortunately, the exercise probably did not run long enough to show the problems in holding and nursing skills. It was a great step forward, or backward, into UW.<sup>167</sup>

The Joint Special Operations University is also affecting change by offering the pilot “Non-Standard Logistics Course” which “introduces best practices in critical/strategic thinking, innovation, problem solving, risk management, negotiations, influence leadership, persuasive communication, and trust ISO [in support of] conducting global logistics service/support.”<sup>168</sup>

As outlined in this monograph, the SF UW doctrine was once robust, but competition for space for other mission doctrine in newer manuals began to squeeze out UW. Clearly, SOF needs reinvigorated doctrine and field manuals. The U.S. Army John F. Kennedy Special Warfare Center and School realized that they cannot rely on current modern day manuals and published in 2009 *A Leaders Handbook to Unconventional Warfare* discussing

conventional capabilities that may be absent “that may include medical evacuation, close air support, and continuous lines of communication.”<sup>169</sup>

This book goes on to discuss the need for commanders to accept risk by decentralization. Medics, medical planners, and medical officers need to vastly improve their ability to explain the relative risk of no golden hour, extended holding, and nonstandard lengthy evacuations so that commanders understand the risk. Commanders can then attempt to mitigate high-risk missions with more extensive medic training in surgical skills, closer forward surgery, extended holding nursing skills, local nation or allied support, dedicated evacuation, and new technology.

Counter to the continued diminution of GW/UW doctrine in SF publications is Training Circular 18-01, published in 2010. Entitled “Special Forces Unconventional Warfare,” it proffers the definition of GW and brings back a section on organization of medical support within the area complex, which outlines medical requirements, aid stations, guerrilla hospital, and convalescent facility. It specifically gives the clandestine medical facilities mission to the guerrilla underground.<sup>170</sup>

With change always comes the need for new equipment, new doctrine, new ways of doing things, and prolonged field care is no different. It will challenge us to develop true SOF medicine on our battlefield. The conventional medical capability

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*With change always comes the need for new equipment, new doctrine, new ways of doing things, and prolonged field care is no different.*

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on the battlefield attempts as much as possible to recapitulate American brick and mortar medicine, something SOF cannot do and should not try to do.

In the words of a currently serving operator 18D, Sergeant First Class Paul Loos:

SOF medics have always had the mission of providing far-forward medical care without surgical support or robust medical supply/support. This skill set has fallen into disuse. Sustainment of robust SOF medical skills has also proven to be problematic.<sup>171</sup> SOF medicine needs to refresh and refocus this skill set after 14 years of acute trauma-centric care in a mature medical environment that assured sub-1 hour evacuation to definitive surgical care. Fortunately, the SOF medics have a rich history of solutions to far-forward care in the absence of surgical support that dates back to World War II.<sup>172</sup>



## 12. Technical Challenges, Improving Sustainment, Reducing Footprints

If SOF are to exist, work, and succeed in the denied areas of twenty-first century extended battlefields, they will need new techniques wedded to the proven guerrilla lessons learned by predecessors in WWII. The golden hour is but one component of TCCC. If future battlefields dictate the demise of the golden hour, those battlefields also demand adherence to the other TCCC lessons learned. These vary from hypotensive resuscitation to advanced pain control, better or oxygen carrying intravenous fluids, tourniquets, hemostatic dressings, and prehospital antibiotics. Those advances in TCCC must be preserved and enhanced. Some may change either from new scientific advances or from the challenges of prolonged holding of trauma patients on the future battlefield of denied areas, limited resources, and extreme distances. The first thing is to continue the great progress gained in the GWOT TCCC casualty management.<sup>173</sup>

In addition, the DOD as an institution from top to bottom must address the following several areas of specific medical focus.

1. Unit commanders need to own TCCC mandated casualty care and make it a unit commander's battle drill, not just something done by "those medics." It must be a military wide standard.
2. TCCC should become the only medical basic training for all officers, soldiers, sailors, airmen, and marines and it should be the same for all Services and done with the same equipment.
3. The Joint Trauma System needs to continue and have access to senior leadership, even in peacetime. It should continue to set standards for battlefield care through its clinical practice guidelines, foster data collection for analysis, and recommend needed military trauma research.
4. Even though the JTS has access to medical data and the electronic medical records are improving, the JTS still needs data on killed in action and should continue to include the Office of the Federal Medical Examiner in such identification and tracking.

5. Establish a Rapid Fielding Initiative for medicine to facilitate quick new medical equipment fielding, and up-to-date pre-deployment TCCC medical training and equipping packages. Include individual first aid kit items for all services in it.
6. To facilitate new devices and medications, the Food and Drug Administration (FDA) and the CoTCCC/JTS should establish a standing, lasting interface at the FDA to streamline the drug and device approval processes for combat use.
7. Medicine is just one of the combat service support arms and is closely linked to nonmedical logistics. The new interest in sustainment of SOF in denied areas, such as the previously mentioned new nonstandard logistics course at JSOU, should be broadened to include medical class VIII A and B of supply be dealt with in such distributed operations support, as well as evacuation issues. The JSOU course “Joint Special Operations Medical Orientation” should be linked to both the logistics course and the operational planning course.<sup>174</sup> The JSOU monograph *Improving the Sustainment of SOF Distributed Operations in Access-Denied Environments* by Robert Haddick is a great start.<sup>175</sup>
8. UW education has remained in SF training in some decades better than others, but always present. One thing that did change was who could go to the SF qualification course. Until the early 1990s, medical officers (physicians) could attend, but from the early 1990s to early 2000s, only officers who were re-branching as an 18A and moving into the SF branch could attend. Luckily, this is changing. The SF community must ensure that SF battalion and group surgeons, physician assistants, veterinarians, dentists and medical operations officers (medical planners) fully understand the differences in battlegrounds.
9. SOF must aggressively look for new technology. Miniature 3-D printers that can “print” surgical instruments are already here.<sup>176</sup> Now needed are 3-D printer-like portable devices, which can produce a varied array of pharmaceuticals on demand at the guerrilla medical treatment facility site. It should not only be able to produce drugs, but also vaccines, biologicals, vitamins, and intravenous fluids, preferably ones that are oxygen carrying.<sup>177</sup>

10. SOF medicine must rethink old accepted ‘normals’ of battlefield trauma care. Just as TCCC deemphasized ATLS cervical spine control, CoTCCC and SOF need to reexamine blood, oxygen, and antibiotic use. A recent study remarks on the “significant opportunity to reduce the need for high-flow oxygen delivery to the battle space.”<sup>178</sup>
11. Last and most importantly, SOF must have an organic surgical capability just like in WWII. New technology should drive the fielding and equipping of the SOF forward surgical capability preferably under the control of the TSOC or the Combined Joint Special Operations Task Force.<sup>179</sup>

Number 11 in the previous list is not a denigration of conventional forward surgical teams from all Services who have soldiered valiantly on the SOF battlefield for many SOF commanders. With the proper guidance and specialized, supplemental equipment, these teams can handle some missions. Their staff, equipment, and size issues cause problems on some missions where organic SOF surgical teams will be necessary. In addition, the DOD allocates conventional teams to conventional units with no extras for SOF use, sustained use, refresher training, or other downtime.

This list should probably be longer and conclude with comments from ARSOF 2022: “The most critical gap in ARSOF special warfare capability exists in the UW mission set, our ability to conduct UW in denied areas for extended periods of time.”

Under the heading “Soldier Systems,” the need for minimal supply burdens and increased aerial-delivery capabilities is linked with new and emerging technologies such as freeze-dried plasma and the need to “increase organic medical capability including the establishment of deployable, scalable surgical teams modeled after the Joint Medical Augmentation Unit.”<sup>180</sup>

ARSOF 2022 marks the reemergence of medicine and surgery as full players within SOF as opposed to just being an afterthought “service responsibility” provided to SOF piecemeal by the respective Services. The scarcity of resources on the future battlefield will require that medicine become more organic and will give medics an opportunity to make their case more effectively for seamless inclusion into SOF planning, manpower, and force structure. Medics must lead the way in articulating this emerging need.



## 13. Conclusion

To be effective in denied areas and hyper-distributed battlefields, special operations, and in particular SF, medicine must blend its WWII OSS guerrilla support medical doctrine with modern day CoTCCC doctrine and technology. Whether denied areas occur simply from the tyranny of deployment distance in a phase zero, peacetime, FID mission, or from operating in a denied area with hostile enemy forces who have air superiority on a wartime UW mission, the effect on medicine is the same.

Some new doctrine for this fight appears in the publication of Joint Publication 3-05, Special Operations, in 2014. It addresses UW medical support and states:

Medical elements supporting the resistance forces engaged in UW must be mobile, responsive, and effective in preventing disease and restoring the sick and wounded to duty. It is unlikely the resistance movement will have a safe rear where it can take casualties for treatment. Medical personnel may operate casualty collection points and provide further evacuation of casualties.<sup>181</sup>

Casualties will be a less frequent occurrence than in the GWOT, but even one trauma casualty will demand the full attention of the SOCM or 18D for an extended period of care. The high-risk nature of such denied area operations and their difficult medical support will demand expert planning, cooperation between unit surgeon and planning staffs, and the realization that the high-risk nature of such missions cannot always be ameliorated.

Commanders are intimately familiar with managing risk and proceeding on mission, if required, in the face of high risk. Medics need to grow their ability to speak the commander's language to convey medical risk adequately. Medical soldiers do not often brief or show mission failure. Since life or death is involved, they manage to rig non-doctrinal success, often at a high cost. This tendency actually works against them when the command looks at money and manpower, as those disciplines that show mission failure are the most likely to receive additional support in the form of funding and additional personnel. The medics, not having failed, are overlooked.

The modern battlefield will have a more complicated medical infrastructure than before. As evidenced in the current Syrian civil war, numerous non-governmental organizations (NGOs) and private volunteer organizations (PVOs), as well as other medical players are now active in such wars. This varied array of medical providers may be able to be used to a guerrilla forces' advantage for treatment and hospitalization of resistance members, however, as in the French experience in WWII government security forces may apprehend the resistance members. The other changing dynamic of warzone hospitals is the frequency of which the enemy now views PVOs/NGOs and other medical personnel as normal targets of war. In the words of Médecins Sans Frontières, "the targeting of hospitals and humanitarian workers is quickly becoming a new normal."<sup>182</sup>

The best foundation for SOF medicine's success on future missions rests with the proper war tested doctrine combined with the very newest techniques in trauma management, extended holding nursing care, perhaps a period of local nation care, and creative evacuation. All will be dramatically different from the GWOT's golden hour. Today's medicine is vastly more complex and equipment-dependent than ever before. All must realize that the UW environment may require less sophisticated medicine. SOF cannot always bring the Mayo Clinic to the battlefield but it can strive to make the guerrilla leader happy.↑

## Appendix: Acronym List

<b>AFSOC</b>	Air Force Special Operations Command
<b>AMEDD</b>	Army Medical Department
<b>ATLS</b>	Advanced Trauma Life Support
<b>BLS</b>	Basic Life Support
<b>CF</b>	conventional forces
<b>CIDG</b>	Civilian Irregular Defense Groups
<b>CoTCCC</b>	Committee on Tactical Combat Casualty Care
<b>DA</b>	direct action
<b>DOD</b>	Department of Defense
<b>DOS</b>	Department of State
<b>FDA</b>	Food and Drug Administration
<b>FID</b>	foreign internal defense
<b>GMO</b>	general medical officer
<b>GW</b>	guerrilla warfare
<b>GWOT</b>	Global War on Terrorism
<b>ICU</b>	Intensive Care Unit
<b>JCS</b>	Joint Chiefs of Staff
<b>JSOMTC</b>	Joint Special Operations Medical Training Center
<b>MFST</b>	Mobile Forward Surgical Team
<b>NATO</b>	North Atlantic Treaty Organization
<b>NGO</b>	non-governmental organization
<b>PVO</b>	private volunteer organization

<b>OSS</b>	Office of Strategic Services
<b>PHTLS</b>	Pre-hospital Trauma Life Support
<b>SECDEF</b>	Secretary of Defense
<b>SAF</b>	Special Action Forces
<b>SF</b>	special forces
<b>SFQC</b>	Special Forces Qualification Course
<b>SOCCENT</b>	Special Operations Command Central
<b>SOCM</b>	Special Operations Combat Medic
<b>SOE</b>	Special Operations Executive
<b>SOF</b>	Special Operation Forces
<b>SOSTs</b>	Special Operations Surgical Teams
<b>SR</b>	Special Reconnaissance
<b>SWCS</b>	U.S. Army John F. Kennedy Special Warfare Center and School
<b>TCCC</b>	Tactical Combat Casualty Care
<b>TSOC</b>	Theater Special Operations Command
<b>USASOC</b>	United States Army Special Operations Command
<b>USSOCOM</b>	United States Special Operations Command
<b>UPA</b>	Ukrainian Insurgent Army
<b>UW</b>	unconventional warfare

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