AIR WAR COLLEGE

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EMERGING CONCEPTS OF MORTUARY AFFAIRS DOCTRINE FOR THE 21ST CENTURY WAR FIGHTER

By

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A Research Report Submitted to the Faculty

In Partial Fulfillment of the Graduation Requirements

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27 February 2003

Distribution A: Approved for public release; distribution unlimited.

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
27 FEB 2003	**N/A**	**-**

4. TITLE AND SUBTITLE **Emerging Concepts of Mortuary Affairs Doctrine for the 21ST Century War Fighter**	5a. CONTRACT NUMBER 5b. GRANT NUMBER 5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER 5e. TASK NUMBER 5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Air University Press Maxwell AFB, AL 36112-6615**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S) 11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release, distribution unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**	**UU**	**37**	

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18

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Prologue

At this very moment in February 2003, United States military forces are enroute to Southwest Asia beginning the largest military build-up since the Persian Gulf War. As we embark upon a new century of warfare, much is uncertain about how the next war will be fought. As in past wars, we can expect a revolution in military affairs that may bring wide-spread use of creative weaponry. Asymmetrical warfare, bringing biological, chemical, or toxic weapons to bear upon United States' troops, could become a reality. Armed with that knowledge, staffers from the Office of the Secretary of Defense and the Services, as well as outside agencies such as the Centers for Disease Control, have proposed medical and mortuary policy initiatives that will serve to support the war fighter of the 21st century. I believe we will find adoption of these proposals necessary for the safety of our homeland, our uniformed personnel, and American citizens.

Chapter 1

Introduction

"It takes time to persuade men to do even what is for their own good."

—Thomas Jefferson

This is a review of the Department of Defense's (DoD) Mortuary Affairs program. In the following pages it is my intent to determine if existing doctrine and planning is sufficient in the event the United States (US) is required to execute a wartime mortuary operation.

I have spent the last two decades as an Air Force Services officer. Within that specialty falls the Air Force Mortuary Affairs program. For years Mortuary Affairs has corporately wrestled with the notion that friendly troops could be killed by, or contaminated by, weapons of mass effect (WME), presenting the logistical challenge of "what to do next" with human remains. Military doctrine is written and Service specific instructions and policy letters are in the field, but they have not kept pace with the times. Hopefully this study will highlight the inconsistencies and dangerously outdated guidance that field mortuary affairs personnel are charged to follow.

Specifically, I will take a deep look at history, the genesis of today's mortuary affairs program, and track its evolution since the American Civil War. This "look back" will help us understand the critical role mortuary affairs has played historically, and afford a glimpse of how our present and future doctrine should read. Next I will look at the relevance of today's

published doctrine by examining guidance for current operations in a joint environment. Then, I will discuss the American national expectation, how history has shaped that expectation, and transition into DoD initiatives underway to align mortuary policy with 21st century warfare. Finally, I will offer recommendations and conclusions that, drawn from my research, offer advice on repatriation of remains, the re-vamping of mortuary doctrine, and addressing the expectations of US citizens.

With so many countries--some potential adversaries--possessing WME with nuclear, biological, chemical and toxic capability, the US continues to research and develop responses to the dangers posed by WME attack on our forces. In fact, one of three of President Bush's pillars of his December 2002 *National Strategy to Combat Weapons of Mass Destruction* is "Defense and Mitigation," stating an overarching goal of "[the US having] the ability rapidly and effectively to mitigate the effects of a WMD attack against our deployed forces."[1] But, the document freely admits our shortfalls to date, by stating:

> "Our approach to defend against biological threats has long been based on our approach to chemical threats, despite fundamental differences between these weapons. The United States is developing a new approach to provide us and allies with an effective defense against biological weapons."[2]

Heretofore, DoD's mortuary plan addressed a Cold War threat, using Cold War technology and values. An old, once distant threat of WME warfare is once again on the horizon. This research is my assessment regarding the effectiveness of US mortuary response plans to mitigate the further dangers and effects of biological, chemical, or toxic weapons of deployed troops, intermediate handlers, and ultimately the American homeland.

This paper is not meant to be a medical journal. However, the issue of disposition of WME contaminated remains is of major medical concern as it relates to the protection of friendly personnel tasked with handling and transporting those remains after death. As this paper will

also point out, simply writing and providing guidance to the war fighter regarding the disposition of human remains is not enough. As we write doctrine to be followed by deployed men and women, we must consider the importance of public reaction at home to the gut-wrenching ordeal of losing a loved one in combat. As DoD corporately grapples with this extremely important aspect of war, policy-makers must acknowledge that they have hold of a "tiger" by the tail. That tiger may not even be the enemy, but the American public, to include uniformed members, who have very specific feelings and expectations when it comes to body bags and the handling and disposition of American war dead.

Chapter 2

A Historical Perspective

> *"But in a larger sense, we cannot dedicate, we cannot consecrate, we cannot hallow this ground. The brave men living and dead, who struggled here, have consecrated it far above our poor power to add or distract. The world will little note, or long remember what we say here, but it can never forget what they did here."*
>
> —Abraham Lincoln

Field commanders have always, in one form or another, been charged with the care of their dead. For Americans, it was the Civil War that formally initiated the concept of repatriation. The public in the North became outraged over the lack of respect for fallen soldiers, prompting the War Department to issue General Order 33 on 3 April 1862 stating:

> "In order to secure as far as possible, the decent interment of those who have fallen, or may fall in battle, it is made the duty of the Commanding Generals to lay off lots of ground in some suitable spot near every battlefield, so soon as it may be in their power and to cause the remains of those killed to be interred with headboards to the graves bearing numbers and when practicable, the names of persons buried in them. A register of each burial ground will be preserved in which will be noted the marks corresponding with the headboards."[1]

This directive served as the basis for national cemeteries being established at the sites of famous battles such as Vicksburg and Gettysburg. Commanders at battles of lesser consequence would identify, map, and temporarily inter their dead at the site of the battle, to be disinterred and relocated at a later date. In 1864 the first Graves Registration company was established in the Union Army and given the task of repatriating the remains of temporarily interred soldiers to

larger national cemeteries closer to home. During the post-Civil War period of 1864 through 1870, the number of national cemeteries increased from 43 to 73, and three hundred thousand Union soldiers were laid to rest.[2] This began the healing process for American society and cemented the notion that America would return "home" with fallen warriors. That sentiment remains strong today.

Like other practices associated with war, mortuary affairs have also evolved over time, and World Wars I and II saw high fatality counts in distant countries with little or no timely methods of repatriation. At the outset of World War I, Graves Registration units were deployed in-theater to quickly identify the deceased and acquire and maintain semi-permanent and permanent overseas cemeteries. By May 1921, over 46,000 dead were returned to the US, and 31,595 were buried in permanent overseas cemeteries.[3]

World War II brought similar results. Identification procedures continued to improve, and the American public voiced their desire to have remains returned home whenever possible. Due to the large volume of fatalities, however, wartime repatriation was difficult at best, prompting policy that stated:

1. No remains would be returned from overseas until after cessation of hostilities.
2. The general policy would be to return remains or to concentrate them in national cemeteries in allied countries.
3. Next of Kin (NOK) would choose the option desired after the war.
4. If request for return from any area should exceed seventy percent, then all remains from that area would be returned and those without disposition instructions would be interred in national cemeteries.[4]

After the cessation of hostilities, 23,000 personnel were employed in the task of carrying out the wishes of American NOK. The Army Quartermaster Corps took the lead in the operation. From 1945 until 1951, 280,000 remains were processed, with 170,000 returned to the Continental United States (CONUS) for burial.[5]

With the Korean War came the lessons learned from World War II. Initially, a similar temporary burial plan was used, but as North Korean troops pushed into South Korea, the plan was changed from temporary burial in South Korea to the evacuation of deceased Americans to Japan, where they were identified and embalmed. For a short period of time, remains were then temporarily interred in Japan until airlift to the CONUS was available. When retrograde airlift became more plentiful, the US stopped the practice of temporary burial and returned remains directly to West coast port mortuaries, where they were trans-shipped by rail to final destination.

The Vietnam War further refined the process by establishing in-theater mortuaries to embalm and ship remains to CONUS port mortuaries. Even with the significant number of US fatalities during the Vietnam War, the in-theater process of embalming and repatriating suited the needs and capabilities of the Services, and seemed to satisfy the needs of American society. With very few exceptions, soldiers, sailors, marines, and airmen were properly identified, and expeditiously returned to their NOK for final disposition. The mortuary practices of the Vietnam War remained as DoD's mortuary plan until the early 1990s. During the time period between the Vietnam War and the Persian Gulf War, overseas mortuaries were constructed throughout Europe and the Pacific, with the intent of identifying and embalming remains in-theater. These mortuaries were manned on a full time basis, and also provided peacetime mortuary services to US service members stationed overseas.

With the end of the Cold War, and the draw down of US military presence abroad, most overseas mortuaries were closed and the functions consolidated,[6] and the wartime plans changed to bring those killed in action, packed on ice, back to the US via special mission or retrograde airlift. The remains would be flown into remaining East or West coast mortuaries where they would be positively identified, embalmed, and shipped to the NOK. This change in process

made more sense for several reasons. First, it consolidated all wartime preparation in one of two port mortuaries, East or West, and allowed the closure of many mortuaries throughout the world that were built and being maintained in-wait for the next war. Further, it focused on the development and construction of state-of-the-art facilities ensuring the right tools were available for timely, consistent, professional, and accurate identification and processing of remains. As of 2000, the CONUS has only one remaining port mortuary, located at Dover Air Force Base, Delaware. Current policy states that remains from any theater will be evacuated to that site.[7]

Dover AFB operated under this process during the Gulf War with great success. Prior to that, in 1978, the Dover Port Mortuary proved itself a valuable national asset by receiving and processing the remains of over 900 US citizens following the Jonestown "massacre" in Guyana. DoD leaders have recognized the value of this unique capability by establishing a 30 million dollar fiscal year 2002 construction project and equipment upgrade that, when completed in 2003, renovates and enhances the Dover facility.[8]

Death rates in wars since Vietnam have been kind to the US. Perhaps we have been lucky that adversaries have not been capable of, or elected not to deploy WME. Perhaps the fear of retaliation has kept the battlefield "clean." The good luck may not last forever. Even as a rational nation, the US used WME to put an end to World War II, justifying to ourselves the mass destruction of cities and lives to avoid the greater catastrophe associated with the allied invasion of Japan. We must consider less rational actors would consider similar self-justification, and if capable, willfully deploy WME if cornered by US forces.

Military leaders study history as one of the many methods of preparation for the next conflict. History documents the use of biological weapons for thousands of years. To infect the enemy with plague and begin an epidemic, attacking fourteenth century Tartar soldiers

catapulted the bodies of their infected soldiers into the city of Kaffa. In more recent times, Native Americans were given smallpox infected blankets in 1763 during the French and Indian War, in efforts to reduce tribes hostile to the British.[9]

During World War I, Germany developed and successfully executed plans to contaminate animal feed and infect livestock with stains of anthrax for export to Allied forces, and pre-World War II Japan conducted biological warfare experiments in Manchuria in 1932, infecting prisoners with anthrax, meningitis, salmonella, cholera, and smallpox viruses. Additionally, Japan attacked a number of Chinese cities with biological warfare agents, contaminating water and food supplies. Their method of delivery consisted of spraying from aircraft, and the release of infected fleas into the population. Reportedly, the Chekiang Campaign in 1942 "led to about 10,000 biological casualties and 1,700 deaths among Japanese troops, most from cholera, dysentery, and plague."[10] All of these events drove the experimentation and production of biological weapons by the World War II allied nations for potential retaliatory use. Great Britain developed anthrax weapons, and tested them on Gruinard Island, near the coast of Scotland in 1941 and 1942. Anthrax spores persisted in the soil of that island until 1986, when the concerted efforts to wash the island with formaldehyde and seawater successfully decontaminated the island for inhabitation. As World War II progressed, prisoners in Nazi concentration camps were infected with biological agents, and then treated with experimental vaccines and drugs. Then tactically, in 1945, Germany polluted a reservoir in Bohemia with sewage.[11] Indeed, the US also developed and tested chemical and biological weapons until 1972, when it became a signatory of the Biological and Toxin Weapons Convention.

In summary, the history of mortuary affairs has transitioned over four or five generations of warriors. The one constant, however, has been the American cultural desire to repatriate

remains whenever practical. But, without preservation (embalming) or refrigeration, temporary burial on faraway battlefields best suited World Wars I and II. Many of those "temporary" graves became permanent[12] as much of American society chose not to disturb buried service members, and instead allowed them to remain interred under the respectful auspices of allied nations. When embalming became the norm, no remains were intentionally left buried in foreign countries.

From this look at history, those who will re-write DoD's mortuary doctrine can understand why "temporary" and permanent overseas burial occurred. It was not done because it was desired by our culture, but mostly because we did not have the technology to do otherwise.

Chapter 3

Guidance for Current Operations

"A man's dying is more the survivors' affair than his own."

—Thomas Mann

The backbone of today's mortuary policy is the time-honored tradition of returning fallen comrades to their next of kin. Even in peacetime, Joint Task Force FULL ACCOUNTING[1] still deploys teams to Southeast Asia whenever credible evidence surfaces that locals have uncovered the remains of a US service member.

Each Service has its own instruction for caring for fallen members, their dependents, and retirees. The Service specific guidance is followed in the event of single or multiple deaths, in peacetime or conflict, and where joint response operations are not required. In the event of joint operations, the current DoD doctrine for caring for deceased members is Joint Publication (JP) 4-06, *Joint Tactics, Techniques, and Procedures for Mortuary Affairs in Joint Operations*. The latest update to this publication was made in August 1996.

Like all joint publications, JP 4-06 provides military guidance for the exercise of authority by combatant commanders and other joint force commanders and prescribes doctrine and selected tactics, techniques, and procedures for joint operations and training. Specifically, it "outlines procedures for the search, recovery, evacuation (to include tracking of remains [in transit]), tentative identification, processing, and/or temporary interment of remains in theater

operations."[2] Further, "it addresses decontamination procedures for handling contaminated remains and provides for the handling of personal effects of deceased and missing personnel."[3] The program is divided into three distinct sub-programs, the current death program, the graves registration program, and the concurrent return program.

"Under the current death program, remains are shipped to a place designated by the person authorized to direct permanent disposition and are provided with professional mortuary services, supplies and related services."[4] The current death program is the normal method of caring for deceased members who die in peacetime, and can be used for wartime fatalities if joint operations have not been established.

The "graves registration program provides for search, recovery, tentative identification, and evacuation or temporary burial of deceased personnel."[5] This program would normally be associated with deaths that occur in a wartime scenario, where remains cannot be evacuated in a reasonable period of time, and other means of preservation are not available (e.g., refrigeration). It is possible however, that the graves registration program could be used in the event of a peacetime mass casualty situation where return of remains was problematic.

The concurrent return program provides for the search, recovery, and evacuation of remains to a mortuary, where remains are identified and prepared as directed by the person authorized to direct disposition of remains, and shipped to a final destination for permanent disposition.[6] This is the "preferred method of handling [remains] during conflict. It should be activated when the current death program capabilities are exceeded, yet conditions do not require temporary interment."[7]

The most significant policy issues that JP 4-06 prescribes are those that assign the US Army as executive agent for joint mortuary affairs, and with that, the responsibility to maintain a

Central Joint Mortuary Affairs Office (CJMAO). Though the Secretary of the Army has the lead, the CJMAO functions as a "coordinating group with representatives from the Army, the Air Force and the Navy, as well as the Joint Staff Logistics Directorate (J-4), and the Armed Forces Medical Examiner" (AFME).[8] Interestingly enough, there is no guidance provided to the Secretary of the Army advising exactly when a CJMAO should be established, but one assumes that it should occur during a crisis situation.

Each Service is required to maintain a mortuary affairs structure capable of providing adequate support to its units, with special requirements levied upon the Air Force to maintain port mortuaries and provide transportation (airlift) of deceased personnel to ports of entry, and on the Navy to provide backup surface transportation of remains out of a theater of operations in the event airlift is not available or is interrupted. In all cases, the Army is assigned to provide additional personnel and equipment in the event in-theater collection points are required.

The Army takes this added responsibility seriously, and develops experts to lead collection point efforts. With executive agency comes ownership of the process of collecting and preparing remains for transportation to the CONUS. The basic building blocks for Army support to the DoD mortuary affairs program are the Mortuary Affairs Collection Point(s) (MACP) and the Mortuary Affairs Decontamination Collection Point(s) (MADCP). "Normal" field mortuary operations are carried out by the MACP. Their primary mission is to receive, refrigerate, process, and evacuate remains that are *not* contaminated, along with their accompanying personal effects. In a secondary role, MACP personnel are trained to conduct post-combat search and recovery operations so that fielded fighting units can continue to move forward with confidence that their dead will be accounted for. The MACP is the unit that is

responsible for in-theater temporary interment if so ordered by the geographic combatant commander. All Services will use the MACP in a joint operation.

The second type of collection point is the MADCP. This unit is essentially a MACP with a decontamination capability. JP 4-06 defines contaminated remains as "Remains of personnel which have absorbed or upon which have been deposited radioactive material, or biological, or chemical agents."[9] The mission to evacuate and repatriate remains under Nuclear, Biological, or Chemical (NBC) conditions becomes far more complicated. Fortunately, the US has not had cause to decontaminate and repatriate remains to the CONUS under NBC conditions. Because of that good fortune however, we have no real practical experience doing it.

Even with technological advances to our war fighting capabilities, today's mortuary doctrine for decontamination remains much the same as it has for the last 20 years, and depends upon simple "cleaners" such as a sodium hypochlorite 5 percent solution[10] and water in sufficient amounts to wash away and/or dilute the presence of chemicals or nuclear fallout, along with labor and time intensive efforts by collection point personnel. These decontamination efforts will be carried out in full individual protective equipment (IPE), most likely worn at the highest mission-oriented protective posture (MOPP) levels. Decontamination of remains is done using nearly the same methods we use in decontaminating equipment. Therefore, it is important to understand that our decontamination process is one that "cleans" the *exterior* surface. Men and women killed by biological or chemical weapons will have most likely ingested or absorbed the agents in some way, making their remains contaminated on the *inside*. The outside and inside levels of contamination will vary.

According to policy, all remains are initially checked for chemical or nuclear agent contamination while still in the field, where determination is made to which collection point

remains should be taken.[11] Though JP 4-06 lists five different chemical agent monitor and detection kits, there is currently no field test for biological agents--medical and mortuary personnel rely upon human intelligence and systematic changes in the health of personnel to determine the presence of biological agents. For decontaminating biologically contaminated remains, JP 4-06 advises, "the same procedures which are effective for the decontamination of chemical agents are effective for the removal and surface decontamination of biological agent contamination." It goes on to say however, "…additional precautions are necessary because active biological agents may persist internally in the remains."[12] The publication remains silent on what those "additional precautions" might be.

Mortuary Affairs is not a logistical tenet of the fight that we dwell upon as we go about our peacetime preparations for war. We have doctrine and supporting plans to execute the program, but fewer and fewer leaders remain who remember the significant body counts of the Vietnam War--perhaps another reason we tend to consider mortuary planning as an afterthought. Further, horrific as the Vietnam death toll was, it was not accompanied by the threat of NBC warfare. Though not pleasant, the mortuary task was rarely considered dangerous, and was accomplished predominately by contract or civil service civilians.

In summary, the current concept of operations provides outdated guidance to the war fighter of the 21st century. It does not provide a "trigger" mechanism for the Secretary of the Army to stand up the CJMAO, and is unclear about whether or not it is advisable to keep a CJMAO running in peacetime. Perhaps if a CJMAO was activated on a more permanent basis, the doctrine would not be so far out of date. The instructions for decontamination of remains relate to procedures that could be effectively used on nuclear or some chemically contaminated remains, but falls short when discussing biological contamination. Further, the process of units

removing remains to rear collection points may be outdated as well. With a fast moving land army, commanders may be reluctant to provide the manpower to remove remains to the rear, opting instead to move forward with their dead. This could be devastating if those remains are unknowingly contaminated inside as well as outside.

Chapter 4

National Expectation

"The bittersweet tears shed over graves are for words left unsaid and deeds left undone."

—Harriet Beecher Stowe

As executive agent for the DoD Mortuary Affairs program, the US Army advises soldiers via Field Manual 10-1, paragraph 18, that "…the US Army cares for its dead soldiers with a level of support and respect unmatched by any other nation's military force. Americans expect, as a tenet of faith, that the Army will take proper care of the remains of service members." The Air Force and Navy follow suit. But, what is meant by "proper care?" If we look at history, "proper care," as it applied to fallen warriors, translated to returning remains to family members in the US. Though difficult to prove unequivocally, there may be several reasons why Americans think this way.

First, culturally, Americans need the solace that results from knowing that a deceased loved one is respectfully and peacefully settled. Burial is one prevalent method of meeting that need, and in early wars, Americans buried their dead without question. This cultural need was disrupted in allied theaters of operations in Europe during World War II when enemy forces overran the final resting places of World War I American veterans buried on European soil. Similar problems were experienced in the Korean War when North Korean soldiers drove south to Pusan, over-running the temporary graves of US soldiers. In both cases, the land was retaken

by allied forces, but public sentiment, beginning in World War II, reflected the desire to bring remains home. In fact, "a survey of letters of inquiry from [WWII] next of kin showed that of 4000 letters [surveyed], all but one expressed the desire to have the bodies returned."[1]

Second, although some Americans may have *accepted* burying their war dead in Europe in World Wars I and II due to necessity and likenesses in culture and heritage, Americans today do not tend to possess the same ties to, for example, Southeast or Southwest Asia, to make that a practicable option should war occur there.

Both reasons lead one to believe that Americans at home will not support the notion of burying Americans killed in wars in places like North Korea or Iraq, or in neighboring allied countries such as South Korea or Kuwait, for fear that those graves will never be safe from future enemy occupation.

Last, and perhaps most important, is the emotional factor, the concept of closure. Notification of the death of a loved one, in a faraway land, leaves the living to question the identification process. The NOK in denial, who never gets to see a body, may always wonder if the identification was done properly, or if instead a status of "missing in action" or "prisoner of war" should be assigned. Even if repatriated remains are not considered "viewable" by competent authority, parts of the body are still available for private, independent scientific identification if the NOK desire.

On the heels of weapons inspections in Iraq, all speculation points to the likelihood of Saddam Hussein's possession of chemical and biological weapons. It is not my intent to prove or disprove that issue, but instead to set the stage for what Americans can potentially expect by way of the most likely threat to US forces if indeed biological weapons become the weapon of

choice in the next conflict. Knowing the dangers inherent in given strains of WME will best prepare us to develop joint plans that establish appropriate response mechanisms.

Upon the close of the Gulf War in 1991, Iraq "agreed to 'destroy, or render harmless,' all its weapons of mass destruction."[2] Prior to that war, Bagdad had produced 8,400 liters of anthrax and 19,000 liters of botulinum.[3] A single gram of anthrax contains enough toxins for 100 million fatal doses[4] if delivered effectively. Iraq is believed to be working on warheads fitted with an aerosol diffuser that would spread biological agents over a wide area before the bomb explodes. Indeed, according to interviews conducted with Iraqi scientist Dr Rihab Taha, Iraq has tested the capability to deliver anthrax and botulinum via aerosol mist,[5] effectively contaminating the battlefield. Both agents are considered deadly and capable of causing widespread damage to under-protected fielded forces. Make no mistake, America expects her leadership to protect Americans, both uniformed and not, and mitigate damages inflicted through effective pre-planning and adequate training. Without mortuary affairs doctrine that specifically addresses the current threat, DoD cannot effectively meet American expectations.

It is every commander's first concern to provide care for those casualties who are living. Unfortunately, DoD has no coordinated plan to provide inter-theater airlift for contaminated casualties, living or dead. To address this issue the United States Transportation Command (USTRANSCOM) is currently staffing draft procedures that will, for the first time, provide policy approving the movement of contaminated casualties to CONUS for follow-on medical care.[6]

The draft proposal paints a sometimes-grim picture of creating medical sites in the theater of operations to treat patients who have contracted certain diseases that are considered too virulent to transport into CONUS. But, short of the introduction of a very few specific agents,

and with USTRANSCOM and theater Combatant Commander approval, the proposal paves the way for the Air Mobility Command (AMC) to configure certain aircraft for the transportation of biologically contaminated casualties. USTRANSCOM, in coordination with the Centers for Disease Control (CDC) and the AMC medical community, has identified seven diseases as those with "bioterrorism" potential: Anthrax, Botulism, Plague, Tularemia, Ebola/Marburg Virus, Congo-Crimean Hemorrhagic Fever and Smallpox.[7] Their proposed policy pays particular attention to the viral hemorrhagic fever agents because of the special challenges they pose for hospital infection control, and stresses that movement should be limited to that which is "essential to patient care."[8] Treatment "in-place" should be weighed against risk of degrading in-theater medical assets, or in some cases, from secondary spread of certain bioterrorism or critical list agents. In the event it is necessary to air transport casualties within or outside of a given area of responsibility (AOR), post flight aircrew precautionary measures will have significant impact on flying operations. For example, the proposal requires a crew who might fly victims contaminated with smallpox be placed in "duties not involving flying" (DNIF) status for a 17-day incubation period following the flight.[9] If we face the prospect of moving casualties by air, it becomes important to consider the impact on normal operations that taking those crews out of the rotation will bear. That limiting factor alone may well make impossible the wartime repatriation of contaminated remains. Simply put, if contaminated medical patients will only be moved if essential for survival, then moving contaminated remains will certainly not fit into the flight plan.

I include this medical portion of the biological warfare plan for several reasons. First, this transportation policy now being coordinated signals that we are corporately admitting our vulnerability to WME as viable battlefield threats, and we are seeking measures to deal with

those consequences. Second, and related directly to the mortuary affairs issue, is that this new medical transportation policy, if resolved, will serve to open discussions for further doctrine evolution that can seek solutions to the challenge of repatriating our battlefield dead. Having the medical baseline should assist mortuary doctrine writers in developing and coordinating a safe plan..

Chapter 5

Initiatives Underway

"I am always willing to accept change, just as long as it isn't change for the sake of change. If that change will result in a better way of doing things, then I'm all for it."

—James K. Van Fleet

The 19th of December 2002 was a watershed day for DoD mortuary affairs. It was the day that senior leadership ordered a re-evaluation of existing mortuary policy. Prompted, perhaps, by the fact that troops had already started to deploy into Southwest Asia, an AOR considered to be a high-risk environment for WME use. Specifically, the Deputy Assistant Secretary of Defense for Clinical and Program Policy ordered the Armed Forces Epidemiology Board to "…immediately convene and select a subcommittee to review the issue of potential infectious human remains, specifically remains that may be contaminated from smallpox, anthrax, or other biological agents…"[1] The letter goes on to reiterate existing DoD policy, stating:

- The remains of all members of the Armed Forces will be returned for permanent disposition according to the direction of the person authorized to direct disposition
- Cremation is not considered an option
- When military necessity or other factors prevent evacuation of remains…the remains will be temporarily interred…The geographic combatant commander makes this decision[2]

More specifically, the task at hand for the Armed Forces Epidemiology Board is to respond to the following questions:

- Are there currently measures that would allow the DoD to comply with existing policy? If so, what are they?
- What measures need to be followed for temporary interment?
- Are there any circumstances where cremation is the only option?[3]

Depending upon the findings and recommendations of the Board, DoD could be on the cusp of still another significant mortuary policy reform--reform that should speak to critical gaps in the current plan. The concerns raised by the Deputy Assistant Secretary of Defense for Clinical and Program Policy represent a huge departure from the seemingly hurried, ad-hoc guidance issued prior to the close of the Gulf War (on 25 April 1991) titled, *Joint Procedures for Decontamination and Disposition of Human Remains in Operation DESERT STORM*. Those end of the war "procedures" hurriedly issued in 1991 instructed (as it pertained to biological contamination):

> Biological fatalities should be viewed differently than chemically contaminated remains. The risks of spreading biological microbes or toxins from one person to another or from human remains is low. Removal of clothing and surface decontamination with standard disinfectant solutions further reduces the risk. Biological fatalities can be returned to the U.S. and released for burial.[4]

At the close of the last Gulf War we were prepared to return all remains to CONUS--Professional opinions, and perhaps our knowledge of the dangers involved in repatriating contaminated remains have changed since 1991.

The Deputy Assistant Secretary of Defense's letter still contemplates what measures need to be followed for temporary burial. History and experience can offer advice. History has taught us that many temporary interments in World Wars I and II turned out to be permanent burial. Accepted, perhaps, by Americans because we shared a culture with our European allies. Battlefield burial, for any length of time, in a future conflict will surely meet with strong

resistance from US citizens. Likewise, as we experienced in Bermuda during World War II, some countries may not favor foreign nation cemeteries on their soil for their own religious or cultural reasons.[5] Another obstacle to "temporary" burial is the terrain in a given AOR. A Korean scenario would likely accommodate burial easily,[6] but experience preparing a site for the simplest of projects in Kuwait usually met with extremely time consuming excavation through many feet of bedrock located very near the surface of the desert. Where rock was not the case, the winds move the desert sands so much that it would be difficult keeping a *temporary* cemetery marked and uniform. This is not to say that cemeteries can not be established, indeed they can given the right terrain, right excavation equipment, and necessary time. But these three factors lend themselves more to a permanent burial arrangement than one of a temporary nature. The bottom line is that temporary burial is intended to protect the health and safety of the living if a means of evacuation or refrigeration are not viable or available.[7] While burial solves the immediate problem, it only delays the issues of disinterment, decontamination, and disposition at a later date. Further, until it becomes time to disinter contaminated remains, burial sites should be guarded (against potential looters) and monitored for potential seepage of contaminates into the ground. Though temporary burial must be addressed as a matter of absolute last resort, policy guidance must re-direct thinking to make that burial a matter of battle necessity instead of a means of "storing" remains.

Another option being considered is in-theater or enroute cremation. On the surface, this concept appears viable for two reasons. Intense heat will decontaminate remains, and "cremains" can be returned to a NOK expeditiously for final disposition of choice. There are some challenges associated with this plan, however. Currently, the DoD owns no crematories, and they are large and fragile pieces of equipment. The civilian industry would have to increase

research and development and production significantly to deliver necessary equipment in a potentially short period of time. For the long term, however, one can envision a DoD-wide purchase of crematories for preposition along with strategically located war readiness materiels. Since the crematories were not designed to be transported over rough terrain, a JCS/J-4 staff officer has proposed installing these crematories aboard ship, where they would be firmly installed and less susceptible to damage while underway.[8] Added benefits would be, much like the Military Sealift Command's hospital ships, the US could have, at ready, one or two mobile "mortuary ships" that could deploy to select regions as needed, with the capability to cremate large numbers of remains in international waters if the international community did not allow cremation in or around the crisis location. This sailing mortuary concept could be expanded to include identification, autopsy, embalming, and shipping preparation capabilities that could be deployed or harbored throughout the world to handle conventional or civilian mass fatality events (like Jonestown).

Cremation also has its place in history. It was a solution for the disposal of remains infected with diseases such as cholera and typhus in the United Kingdom in the mid to late 19th century. Couple this need for "disinfection" with the volume of remains and the growing shortage of burial land, and cremation became that society's response to the dilemma. The UK emerged from World War I with a similar response to the "bodies deteriorating in the battlefields of Northern France [and] fueled the popularity of cremation in the name of purity: purification by fire rather than pollution by burial."[9]

Although current attitudes toward cremation differ, "the majority of Protestants and Roman Catholics have come to the conclusion that the Christian faith is neutral to the practice.

Jewish clergy, by contrast, are overwhelmingly in opposition to cremation, although it does not appear that the actual practice of Jewish families necessarily parallels this opposition."[10]

Simply put, a plan to cremate the remains of US service members killed in an overseas area where it was unsafe or utterly impractical to repatriate might be received as a satisfactory plan if marketed properly to the American public. Advance public declaration of a DoD intent to cremate remains under "certain circumstances" would allow those whose religious or moral principles are impinged by this policy to seek something akin to conscientious objector status.

A final alternative, the bringing back of old technology, may also be in the offing. There are caskets on the market, used by civilian funeral directors, where remains can be hermetically sealed.[11] The Army is purchasing this "low tech" solution in the event they need to execute a plan "tomorrow."[12] It appears that these metal containers can be sufficiently sealed for shipment into the US. The CDC would be part of the approval chain before remains were actually shipped from a foreign port. With this method of repatriation however, DoD assumes the risk that these containers will ***never*** be opened. To better control that risk, it is proposed that if contaminated remains were to be returned to the CONUS in a sealed container, they would remain under government control and proceed directly to a national cemetery for interment.[13] This proposal would offer an immediate solution and represent a "sort of" compromise between DoD and US citizens opposed to temporary overseas burial or enroute cremation. Unfortunately, opting for the sealed container does not mean that the container will ***never*** be opened. It will always be *possible* to disinter remains under political or legal pressure--made *possible* because the remains are *available*. Consider the 1998 decision to disinter the remains of the Vietnam era "Unknown Soldier," buried in Arlington National Cemetery. At the request of his NOK, and under political pressure, the remains of (now identified) First Lieutenant Michael J. Blassie were exhumed after

being buried for 14 years. Blassie, an Air Force pilot whose A-37 was shot down in 1972 near Saigon, had never been recovered and identified. His family, never given to accept his death until proven, stayed in close contact with DoD agencies to "zero-in" on the circumstances of his death with hopes of one day recovering his remains. As human intelligence and DoD records were pieced together over a nearly 30 year period, the NOK came to believe that Lt Blassie was indeed the [Vietnam War's] "Unknown Solider," and petitioned for disinterment. Subsequent mitochondrial deoxyribonucleic acid (DNA) tests revealed that the remains were those of Lt Blassie.[14] Though this vignette represents a positive result for the Blassie family, similar "forced entries" may be successful in future years, re-opening a potential Pandora's Box of disease.

A great deal of the angst in dealing with this issue manifests itself in two ways. First, there is much we do not know--that frightens us. Consequently, our plan must respond to a worst-case scenario, and include procedures that will protect mortuary workers, and the public in general, from secondary infection. Second, only after we are satisfied that we are protecting the health of survivors, we must then confront the very cultural mindset of Americans. American people are not averse to sending their sons and daughters into harm's way for "righteous" reasons. But they expect leadership to take responsible precautions in regard to their safety, and, lacking any other national plan, they expect "their" remains to be repatriated if they are killed in action. That is what Americans expect because that is what Americans have experienced since World War II. Good, creative proposals, as discussed above, represent a paradigm change for Americans, and must be "marketed" properly to avoid widespread protest of their use. This is where the media is an integral part of the "way ahead." As was learned in Vietnam, the war can be lost "at home." The threat of war, with the use of WME, must be thoroughly advertised in

advance. No matter what course of action DoD takes, not every American will believe it right, but none should feel deceived.

Chapter 6

Recommendations and Conclusions

"All truth passes through three stages. First, it is ridiculed. Second, it is violently opposed. Third, it is accepted as being self evident."

—Arthur Schopenhauer

There is much consternation regarding the decontamination process of human remains, the effectiveness of current practices, or even the requirements thereof. Indeed, some say that there is no danger of handling biologically contaminated remains if simple precautions are taken. This may or may not be true. The dilemma points to that which we do not know, and the challenge is to rebuild our doctrine with common sense and social consciousness, while using available cutting-edge safety and medical technology. DoD has placed renewed emphasis on the question of "what to do," and the US is on the cusp of a transformation of mortuary affairs policy in keeping with the needs of American society and combatant commanders. Increased emphasis alone however will not provide the answers our forces need now. There are a host of initiatives that can be done now, and some that should be pursued for future resolution. Here are my recommendations:

- We must salute the USTRANSCOM and AMC community, in concert with the CDC, for addressing the critical issue of the transportation of contaminated casualties. As executive agent for mortuary affairs, the US Army must continue to expand those talks to achieve final resolution on the dangers of contaminated remains, and develop policy that helps field operators safely achieve their mission.

- We must not simply look forward. History tells us much about what our society expects, and what they will tolerate in times of war. Americans do not tend to be casualty adverse for the right "cause," but they must enter the fight knowing the ground rules. If repatriation is not an option for reasons of contamination, Americans will accept that, but we must change their expectations now.

- Joint Publication 4-06, *Joint Tactics, Techniques, and Procedures for Mortuary Affairs in Joint Operations,* is woefully outdated and must be re-written. It needs to provide more concrete guidance to:

  * Address biological contamination as a separate entity from nuclear and chemical contamination, and add specific response options to care for biologically contaminated remains. This is dangerous and frightening "stuff." We owe it to our people to spell it out for them.

  * De-emphasize the notion of temporary burial, except in extreme "last ditch" circumstances. It no longer fits into our concept of war fighting, nor does it fit into America's concept of care for our dead. Further, the purchase of hermetically sealed containers may be a near term solution (because we must have a near term solution), but, it is not a solution that will stand the test of time. If we are concerned enough to seal remains in a casket in the first place, we should not send them home, providing the option to open them at a later date.

- Until we are sure we can, with certainty, determine the dangers associated with repatriating remains, DoD must establish a policy of cremation. This approach but will be confronted by significant hurdles before it can be codified as "policy." Perhaps even a culture change is part of the solution, requiring *all* military members to be cremated under all circumstances, with the concept of cremation evolving as a cultural expectation of all uniformed members.

- What causes our confusion is that which "we don't know." I strongly recommend enhanced training in individual protection for deploying personnel--preferably jointly conducted with mortuary and medical personnel. For too long these two disciplines have worked "shoulder-to-shoulder" without effective coordination because their missions were perceived to be so fundamentally different--the living and the dead. The new threat of biological weapons must get these two career fields working "hand-in-hand" to ensure coordinated safety measures are developed and exercised.

- Further, a concerted effort through DoD public affairs channels to educate the American public is a critical part of a successful program. All Americans deserve the facts, so that they can establish their expectations. DoD must take the offensive in preparing the public, so that in the event of significant casualties, DoD is not placed in a defensive public affairs posture.

- Research and development (R & D) efforts must continue to seek out effective WME detection equipment, but not just for the battlefield, but also for those individuals not in the field. Much like personal chemical detection paper, every operator needs a simple product where they can determine whether or not a casualty or a fatality has been infected with WME agents. Like in so many past conflicts, new weapons are on the horizon, and our capability to respond resides in the success of our R & D efforts.

The emphasis now placed on WME policy, and R & D efforts regarding mitigation of the effects of contaminated remains, is crucial. Mortuary doctrine must now change to match the post-Cold War threats and battle vision into which each Service has transformed. Not only do mortuary plans still reflect a Cold War response, but they also may not fit the mobility requirements that an expeditionary environment requires. Those charged in the past with executing a mortuary affairs program muddled through the Cold War by assuming protective shelters and clothing would protect those who actually survived the "blast," and that "things" that had been subjected to the harmful agents and particles of chemical or nuclear weapons could be "cleaned." US installations with mortuaries were in-place in overseas theaters in sufficient number to prepare our dead for repatriation. CONUS port mortuaries on both coasts were capable of receiving and trans-shipping remains. From a mortuary standpoint, we can be accused of being stuck in the mindset of the Vietnam or Persian Gulf War experiences, resting on the laurels of our success in dealing with the relative "neatness" of conventional war, preparing and shipping our dead from clean, rear areas. We have chosen to ignore, or at least continue to "assume away," the possibility of wide-scale battlefield death as we saw in the World Wars. Certainly, the civilized world was taken by surprise by the destruction experienced in World War I, the "war to end all wars." We should not be surprised again, particularly in a time where we are capable of using technology and pre-planning to prepare society and train service members. Much like the revolution in weaponry experienced in the World Wars, our military is actively transforming into an "out of garrison" expeditionary force where deployed units must

carry their own protection. We owe that force the equally transformed mortuary affairs technology, equipment, and doctrine necessary to operate in an environment that is conducive to providing dignity to a fallen comrade, and absent undue danger to mortuary services providers.

EPILOGUE

Over the past few months a great deal of progress has been made by the Department of Defense and the Services to address shortfalls in Mortuary Affairs policy, and practice. Considerable efforts by staff officers have brought to light the potentially significant shortfalls that exist due to outdated mortuary doctrine. During the time this paper was being written, significant progress was made in the coordination of new policy that addresses the transportation of contaminated casualties, on government aircraft, both inter and intratheater. Hopefully, that policy will spill over to support mortuary efforts. The issue of cremation as a plan for addressing the potentiality of mass fatality by way of weapons of mass effect has been disapproved. Instead, remains that might be contaminated will be returned to their next of kin in sealed caskets.[1] Though I am pleased that we now have an executable plan "on the shelf," I stand by my argument in the preceding pages that cremation is indeed the most efficient and safe method for repatriating human remains.

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[1] Joint Task Force (JTF) FULL ACCOUNTING is a 161 member team whose mission is to achieve the fullest possible accounting of Americans still missing and unaccounted for as a result of the war in Southeast Asia. The Task Force grew out of the previously established Joint Casualty Resolution Center, and was established by "CINCPACOM" in 1992. The JTF is headquartered at Camp Smith, HI. (Joint Task Force FULL ACCOUNTING, Home Page, pg., 1-2, on-line, Internet, 18 Feb 03, available from http://www.pacom.mil/JTFFA/about_JTFFA.htm.

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[4] Ibid, pg. vii.

[5] Ibid, pg. vii.

[6] Ibid, pg. I-3.

[7] Ibid, pg. vii.

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[9] Ibid, pg. GL-4.

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[8] Ibid, para 3c.

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[2] Ibid.

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[4] Joint Procedures for Decontamination of Human Remains in Operation DESERT STORM, 25 April 1991.

[5] Affholder, Maj David J., pg. 15.

[6] At the 8th Fighter Wing, Kunsan AB, South Korea, the CONOPS for temporary interment included open, easy to chart spaces, like the base golf course.

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