Invisible Wounds of War

Psychological and Cognitive Injuries, Their Consequences, and Services to Assist Recovery

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CHAPTER TWO

The Wars in Afghanistan and Iraq—An Overview

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This chapter provides a thumbnail sketch of the conflicts in Afghanistan and Iraq. The first section describes the composition of the U.S. forces by demographic components and organizational affiliations in the Active and Reserve Components. The second section places the conflicts in perspective, comparing them with other wars the United States has fought. The third section shows the history of troop deployments in the war on terrorism and arrays those deployments against significant events that have occurred in Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF). The third section also discusses the casualties for ground forces sustained in Iraq—those killed in action (KIA) and wounded in action (WIA)—that is, the predominantly Active and Reserve forces of the Army and the Marine Corps. It also shows the numbers who have died as a result of improvised explosive devices. The fourth section provides a brief overview of the health care systems that serve the OEF/OIF veterans.

What the Current Fighting Force Looks Like

In 2007, Congress authorized the total U.S. military force at approximately 2.2 million servicemembers (Department of Defense [DoD], 2008). Of that total, approximately 47 percent of the all-volunteer force[1] was authorized for the Army, 25 percent for the Air Force, 19 percent for the Navy, and the remaining 10 percent for the Marine Corps (Department of Defense, 2008). Each military service has personnel in two components: Active and Reserve. The Active Component includes personnel who are full-time, active duty forces. The Reserve Component includes Reserve (Army, Navy, and Marine Corps) and National Guard (Army, Air Force) forces. In this monograph, we use the term Reserve Component to include Guard personnel.

In 2007, the Army had 47 percent of its authorized force in the Active Component; the Air Force had 65 percent; the Navy, 83 percent; and the Marine Corps, 82 percent[2] (DoD, 2008). Table 2.1 shows that the military has more Blacks than does the

[1] Conscription (the draft) ended in 1973; since that time, the U.S. military is an all-volunteer force.

[2] These figures do not include Reserve Component members serving on active duty.

Table 2.1
Percentage of Race/Ethnicity, by Service, 2004

	White	Black	Hispanic	Asian/ Pacific Islander	Indian/ Alaskan Native	Other
Army						
Active Army	60	23	10	3	1	3
Army Reserve	60	24	11	4	1	1
Army National Guard	74	14	7	2	1	2
Navy						
Active Navy	62	19	8	6	3	3
Navy Reserve	64	15	9	4	1	7
Marine Corps						
Active Marine Corps	66	12	14	2	1	5
Marine Corps Reserve	68	9	14	4	1	5
Air Force						
Active Air Force	72	15	6	2	<1	4
Air National Guard	80	9	6	2	1	2
Air Force Reserve	72	16	7	2	<1	4
Total Military	67	17	9	3	1	3
Civilian Work Force	71	11	11	5	<1	1

SOURCE: Government Accountability Office (GAO), *Military Personnel: Reporting Additional Servicemember Demographics Could Enhance Congressional Oversight*. Washington, D.C., 2005, p. 22.

civilian workforce, and fewer Hispanics, Whites, and Asian Americans/Pacific Islanders. Also, military servicemembers tend to be younger than the civilian population: Approximately 47 percent of the active duty enlisted force is between 17 and 24 years old, whereas only about 14 percent of the civilian labor force is in that age group (Office of the Under Secretary of Defense for Personnel and Readiness, 2007).

Additionally, the Reserve Components tend to be older than the Active Component, and in 2004 the GAO reported that the Reserve Components had five times the proportion of servicemembers age 45 and older of the Active Components (GAO, 2005). Further, women accounted for approximately 14 percent of the total military force in 2007 (Office of the Under Secretary of Defense for Personnel and Readiness, 2007), whereas approximately 51 percent of the U.S. population is women (U.S. Census Bureau, 2006).

In 2004, approximately 52 percent of the total force was married (Office of the Under Secretary of Defense for Personnel and Readiness, 2005), and proportionally

more servicemembers had at least a high school diploma (or an equivalent) than the U.S. population 18 years and older (GAO, 2005).

Troops Deployed to OEF/OIF

As of October 31, 2007, 1,638,817 servicemembers have been deployed to the theaters of operation for Afghanistan (OEF) or Iraq (OIF) since the hostilities began.[3] Of these, approximately, 1.2 million were active component, with 455,009 from the reserve forces (Office of the Under Secretary of Defense, 2007). Reserve participation in both operations has been historically high, particularly for the Army and the Marine Corps as seen in Table 2.2.

To provide some perspective on the scope of current military operations, we give statistics on the Vietnam War: Approximately 3.4 million servicemembers, about one-third of them drafted, were deployed to Southeast Asia in support of that war (Department of Veterans Affairs, Public Affairs). Eighty-eight percent was White, 11 percent was Black, and 1 percent belonged to other races. Demographically, the troops were younger than the current force (average age of 19), less likely to be married, and almost all male (only 7,494 women served in Vietnam) (Summers, 1985).

The Conflicts in Perspective

The conflicts in Afghanistan and Iraq can be seen as extensions of a larger struggle against global terrorism. While they have absorbed the national attention, it is useful to place them in a larger historical perspective. They are not the longest, the largest, or the bloodiest of the conflicts that the United States has fought. To date, Vietnam is the longest conflict, lasting 13 years if the fall of the U.S. Embassy in Saigon in April 1975 is seen as the end point, or 11 years if departure of the last combat troops is used as the termination. Of the 3.4 million U.S. servicemembers involved in the conflict, 47,424 were killed in battle and 153,303 were wounded (Department of Veterans Affairs, Public Affairs). Although it lasted less than four years, World War II was the largest conflict, involving over 16.1 million U.S. military personnel. Some 405,000 military personnel died in the conflict, and 671,846 were wounded (Department of Veterans Affairs, Public Affairs). The bloodiest war the United States ever fought was the Civil War, in which 324,511 soldiers of about 2.2 million serving in the Union forces died (DoD, 2007). By contrast, 4,357 U.S. military personnel have died in Afghanistan and Iraq (both hostile and nonhostile deaths) and 30,613 have been wounded to date (DoD, 2007).

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[3] References to servicemembers serving in Iraq and Afghanistan include all U.S. forces serving in those theaters of operation.

Table 2.2
Deployed Force Composition as of October 31, 2007

	Members Ever Deployed in Support of OIF/OEF
Army	
Active Duty	494,465
National Guard	196,052
Reserve	110,164
Total	800,681
Navy	
Active Duty	276,926
Reserve	27,456
Total	304,382
Air Force	
Active Duty	234,084
National Guard	58,094
Reserve	32,845
Total	325,023
Marine Corps	
Active Duty	178,333
Reserve	30,398
Total	208,731
DoD	
Active Duty Total	1,183,808
National Guard Total	254,146
Reserve Total	200,863
DoD Total	1,638,817

SOURCE: Department of Defense Public Affairs Office. Number of members deployed by service component and month/year (based on the Contingency Tracking System), 2007.

What Makes the Conflicts in Afghanistan and Iraq Different?

Each conflict has its own distinguishing characteristics beyond size and location. Probably the signal difference of the conflicts in Afghanistan and Iraq is that they mark the first time that the United States has attempted to fight an extended conflict with a post–Cold War all-volunteer force. Operation Desert Storm also drew on volunteer forces, but that operation lasted only a matter of months. But today, the Services have no easily accessible personnel pool to draw on to expand their ranks, as was the case during the Vietnam War, when hundreds of thousands of draftees were called up to serve. Active duty forces in fiscal year 2007, which for the Army numbered about 482,000 and for the Marine Corps, about 180,000 (DoD, 2008), are the most

available source of troops, followed by the Reserve Component forces, which totaled about 550,000 for the Army National Guard and the Army Reserve combined in 2007 (Office of the Assistant Secretary of the Army, 2007), and 39,600 for the Marine Corps (Department of the Navy, 2007). The thought underpinning the creation of the all-volunteer force was that it would be smaller but highly professional and capable of deploying worldwide and winning conflicts in a relatively short time. Operation Desert Storm seemed to bear out that thinking, when U.S. and coalition forces crushed Iraqi forces in a matter of a few months.

However, the extended nature of the conflicts in Afghanistan and Iraq has subjected the U.S. military to demands that, arguably, it was not sized, resourced, or configured to meet at the time. The ground forces, composed predominantly of personnel from both the Army and the Marine Corps, have borne the brunt of the conflict in casualties and wounded in action. To meet the demands of both conflicts, DoD has devised rotational policies that cycle forces and equipment through both conflicts. In a memorandum from January 2007, the Secretary of Defense announced benchmarks of one year of deployment to a combat theater for every two years outside of combat (i.e., training and re-equipping) for the Active Components of all Services, and one year of deployment to a theater of war to five years nondeployed for the Reserve Components (Office of the Under Secretary of Defense, 2007).

Although the Army policy is clear on both the length of deployment and the amount of time back in the States before another deployment, the demands of the conflicts in Afghanistan and Iraq have made implementation of this new policy difficult (GAO, 2007). The Congressional Budget Office (2005) offers evidence, in fact, that some combat units are spending much less time back in the United States between deployments; even when they are in the United States, the units are preparing for their next deployment by training away from their home stations. Further, the demands of the Iraq conflict have prompted the Army to extend the deployments of some units from 12 to 15 months.

Operation Enduring Freedom

At its inception in October 2001, Operation Enduring Freedom was unique in that it struck against the Taliban, which harbored al Qaeda, with the goal of denying continuance of that relationship, while providing humanitarian relief to the people of Afghanistan, (Johnson, 2007). Much of the initial fighting in Afghanistan was done by indigenous forces supported by Special Operations Forces from all three U.S. military Services and several coalition partners, including Great Britain, France, and Australia. These forces accompanied indigenous forces, most from the Northern Alliance, which had been fighting the Taliban for more than five years. The goal of the Bush administration was to keep the ground-force presence relatively small inside Afghanistan. The U.S. Navy provided initial air support, flying from carriers in the Indian Ocean, from Diego Garcia, or from bases outside Afghanistan. Eventually, the Navy,

along with the Air Force, flew from bases adjacent to or inside Afghanistan—most notably, Baghram Air Base.

The combination of air strikes guided by controlling ground forces proved overwhelming to the Taliban forces. The use of technology to target air strikes was not new, but the use of a small number of Special Operations Forces on the ground maximized the delivery of airpower for the first time. The Taliban essentially had no air defenses, allowing the coalition forces nearly unchallenged control of the battlespace. In addition to the powerful control of the battle, the simultaneous humanitarian relief is attributed with producing an Afghan perception that the United States' power was being used to liberate rather than invade (Lambeth, 2005). The war against the Taliban lasted approximately two and a half months, ending in mid-December 2001 (Lambeth, 2005). U.S. ground forces played no direct combat role in Afghanistan until March 2002, when the U.S. strategy turned toward rooting out remaining Taliban and al Qaeda fighters (Johnson, 2007).

With the installation of a new Afghan government, U.S. efforts turned to stability operations, which have continued to this day (Lambeth, 2005). Since the end of major combat operations and the initiation of stability operations, the United States has maintained approximately 15,000 to 20,000 personnel in the Afghan theater, most of whom are ground forces (Congressional Budget Office, 2005).

Operation Iraqi Freedom

Troop deployments that began in late 2002 reflect the run-up to Operation Iraqi Freedom, which began in March 2003. Major combat operations were anticipated to be short and turned out to be even shorter than anticipated, beginning on March 21, 2003, ending with the fall of Baghdad on April 9. Coalition forces occupied Tikrit, Saddam Hussein's hometown, on April 15, effectively ending organized Iraqi resistance. Prewar estimates were for major combat to last between 90 and 125 days. Iraqi resistance collapsed in just over three weeks. As with Operation Desert Storm (147 battle deaths), casualties were light, with 139 killed and 429 wounded.[4] In May 2003, on the deck of the carrier *Abraham Lincoln*, which had just returned from the Persian Gulf, President Bush publicly declared an end to major combat operations. With the end of major combat operations, the United States turned toward the tasks of providing security while building and supporting a new civil government. As the Sunni and Shiite (and other secular) factions fought for power, security deteriorated around the country, requiring ongoing combat operations, albeit against insurgents rather than uniformed forces.

In June 2004, the coalition authorities handed the sovereignty of Iraq to an interim government, and in December 2005, the Iraqis went to the polls for the first

[4] Figures for wounded are for those who did not return to duty and are from the Department of Defense Personnel & Procurement Statistics Web site.

free election in 50 years. The elections appeared to be a success, with a turnout of about 70 percent and markedly little violence. Results generally went along religious and sectarian lines. Violence continued between factions seeking power; attacks on reconstruction projects were aimed at discrediting the coalition and the Iraqi government.

In February 2006, insurgents dressed as Iraqi police officers seized the al Askariya mosque, also known as the Golden Dome and one of the holiest sites in Shia Islam, and detonated two bombs inside, causing catastrophic damage to the 1,000-year-old structure. Immediate and violent reprisals ensued. Ordinary Shiites attacked Sunnis at random. The violence was especially severe in Baghdad. Every morning, authorities would discover tortured and executed bodies from one group or another. Even by the most optimistic assessments, the country was teetering on the brink of all-out civil war.

In December 2006, the Iraq Study Group released its report, noting a grave and deteriorating situation in Iraq. The report argued for increased involvement of other nations in the Persian Gulf region, to include Iran and Syria, and recommended substantial increases in the support provided to the Iraqi security forces.

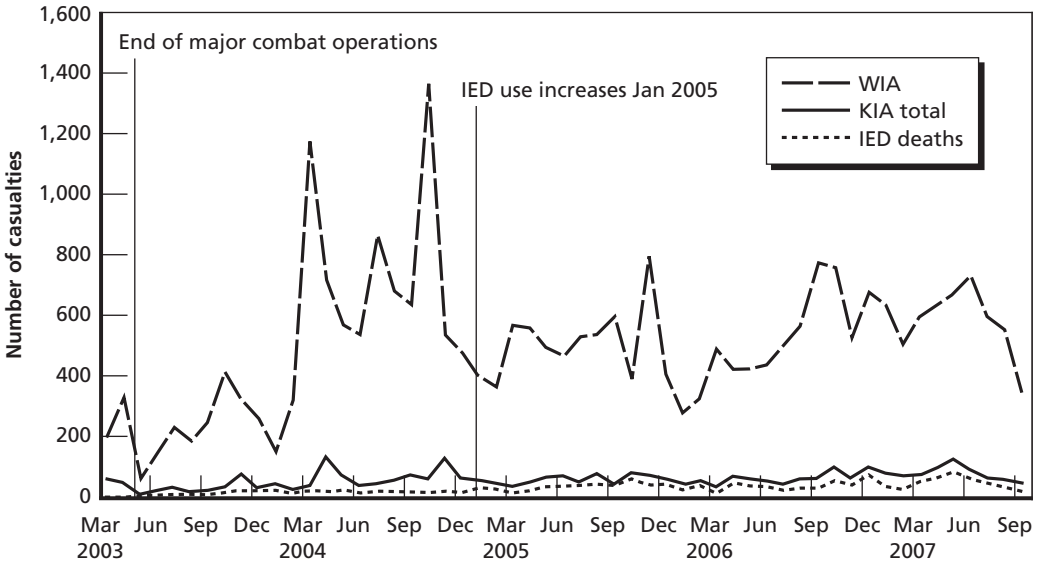
In January 2007, President Bush announced plans to increase the number of U.S. forces in Iraq. The increase was to be temporary and done with the goal of stabilizing the situation, particularly in Baghdad, until the Iraqi government could establish better control. The surge was accompanied by a change of military command, with General David Petraeus taking over from General George Casey. In contrast to the conflict in Afghanistan, the conflict in Iraq has required a commitment of approximately 160,000 to 180,000 military personnel (Congressional Budget Office, 2005).

Casualties and Improvised Explosive Devices

Figure 2.1 charts the casualties in Iraq by those killed in action (KIA; middle curve) and wounded in action (WIA; top curve). The bottom-most curve indicates the numbers that have been killed as a result of what has become the weapon of choice in Iraq for attacking coalition forces: the improvised explosive device, or IED. The data represent wounded and fatalities for Army and Marine Corps forces deployed in Iraq. Three aspects warrant comment. First, the curves show a sharp falloff in casualties following the major combat operations, a period during which the country was chaotic and the insurgency had not yet begun to take hold. After that, casualties, particularly the wounded, spike, only to decline again in 2005, surging again starting in 2006. They remained high until the sharp decline seen at the end of 2007.

Second, beginning in 2005, IEDs account for an increasing share of those killed, and the proportion remains high until late in 2007 (last data are for September). Third, the ratio of wounded to fatalities is relatively high. For every nine wounded, there

Figure 2.1
Marine Corps and Army Wounded and Killed in Action, Iraq, March 2003–September 2007



SOURCE: Casualty data are from http://siadapp.dmdc.osd.mil/personnel/CASUALTY/ and www.brookings.edu/iraqindex for IED deaths.

RAND *MG720-2.1*

is only about one fatality.[5] The ratio in World War II for battle deaths to wounded was 1:2.4, and the fatality-to-wounded ratio in Vietnam was 1:3 (Fischer, Klarman, and Oboroceanu, 2007). Although the survivability rate is higher, wounds resulting from IED blasts often cause multiple wounds and usually involve severe injuries to extremities.

IEDs have evolved from relatively crude devices detonated by such simple mechanisms as garage-door openers to larger and increasingly sophisticated weapons triggered by cell phones, infrared signals, or pressure plates. Their use imposes few risks on the insurgents, and they have proven to be devastatingly effective against U.S. forces. By some estimates, they account for about 40 percent of all casualties (Brookings Institution, 2007).

The "IED fight" has been marked by a series of moves and countermoves as each side adapts to the latest innovation by the other. As Figure 2.1 shows, IEDs were not used during the first months following the end of major combat operations. Once they started to be used, U.S. forces initially responded by increasing the amount of armor

[5] The wounded-to-fatality rates for OIF and OEF have become the source of some controversy because of the nature of the counts. Some sources count all wounds, whether they were incurred by hostile action or not, as well as all deaths, which can skew the ratio to approximate 7 wounded to 1 fatality (Goldberg, 2007). Others count only the wounded unable to return to duty compared with the number of deaths due to hostilities, which produces a ratio of approximately 4 to 1 (Goldberg, 2007).

protection afforded the troops, which included adding armor plate and shatter-resistant glass to the High Mobility Multipurpose Wheeled Vehicle and patrolling in Bradley fighting vehicles. Insurgents responded with larger and more-deadly devices—most notably, the explosively forged penetrator, which ejects a high-velocity jet of molten metal that can penetrate the armor of an M-1 Abrams tank, the Army's heaviest combat vehicle. In addition to employing increasingly sophisticated jammers that block the signals used for remote detonation, U.S. forces have focused on disrupting the sequence of material collection, and bomb construction and implanting.

The low KIA rates stem not only from the improved body armor given to all the forces in Afghanistan and Iraq but also from improved delivery of emergency medical care in theater, along with swift evacuation to full-treatment trauma centers outside the conflict zone. Servicemembers experiencing trauma in either Iraq or Afghanistan can be evacuated to a trauma center in Landstuhl, Germany, within 24 hours of their injury, and they can reach facilities in the United States within another 24 hours via the Air Forces' Critical Care Air Transport Teams, which are essentially flying intensive care units (Cullen, 2006; Moore et al., 2007). By contrast, during the Vietnam War, it took approximately 45 days to move servicemembers from the battlefield to a U.S. hospital (Cullen, 2006).

The many improvements in technology and evacuation assets have enabled the military health system to deliver urgent care from the point of injury on the battlefield, as well as both short- and long-term rehabilitative care through U.S.-based facilities. Through the Department of Defense, the military health system offers a broad array of health care services, ranging from preventative services to sophisticated trauma care and rehabilitation (e.g., for severe combat-related injuries). Servicemembers injured during combat flow through this system of care, but their health care does not necessarily end within DoD. Some severely wounded servicemembers will be treated by VA facilities, depending on the nature of their injuries. These systems of care are briefly described in the following section.

The Military and Veterans Health Systems

DoD's health care system is commonly referred to as the military health system (MHS). Over 9 million individuals are eligible to receive care within the MHS, including all Active Component servicemembers and their dependents; Reserve Component members and their dependents when they are on active duty for at least 30 days; and some military retirees and their dependents. The MHS provides this support via 70 hospitals and 400 clinics, known as the direct care system (Office of Health Affairs Web site). The MHS-provided direct care services are supplemented by a network of civilian providers (often referred to as *purchased care*) under an umbrella health plan of TRICARE.

The Department of Veterans Affairs' (VA's) health care system is organized into a system of 21 Veterans Integrated Service Networks (VISNs). The majority of services provided by the VA are delivered in facilities owned and maintained by the VA and staffed by VA employees. The balance, referred to as *purchased services*, is paid for on a fee-for-service basis. Currently, all veterans with at least 24 months of continuous active duty military service and an "other-than-dishonorable" discharge are eligible to receive care from the VA through a priority-based enrollment system. Veterans are prioritized for enrollment according to eight tiers: those with Service-connected disabilities (priority levels 1 through 3); prisoners of war and recipients of the Purple Heart (priority 3); veterans with catastrophic disabilities unrelated to service (priority 4); low-income veterans (priority 5); veterans who meet specific criteria, such as having served in the first Gulf War (priority 6); and higher-income veterans who do not qualify for other priority groups (priorities 7 and 8). Enrollment is currently suspended for priority group 8 to ensure that the VA can meet the needs of its higher-priority enrollees.

For servicemembers serving in Afghanistan or Iraq at the time of injury detection, health care is provided by DoD military facilities in theater. In the event of traumatic injury or illness, evacuation is done by military airlift to a large military hospital in Germany. Depending on the severity of injury or illness and their care needs, servicemembers may be treated and returned to duty or they may be evacuated to the United States to one of a few very large military hospitals. As care and rehabilitation for servicemembers progresses, the injured may move from inpatient to outpatient at the same military hospital, or they may be moved to other facilities, including VA facilities.

If servicemembers separate from active duty (a complex decision process based on medical and disability criteria, personal choice, and other factors), they may be eligible to enroll in the VA health care system. Servicemembers who continue on active duty will continue to receive their health care benefits from the Department of Defense. Reserve Component members who return and are released from active duty may also enroll in TRICARE or return to their civilian health care providers and/or insurance. Within five years of their return from combat, Reserve Component members who are combat veterans are also eligible to access the VA health care system.

Therefore, Active and Reserve Component military members returning from Afghanistan and Iraq have access to a number of health care resources, through DoD, the VA, and beyond. Each health system purchases some care from civilian providers. Within DoD, civilian providers are contracted and reimbursed through the TRICARE system. Care may even extend beyond TRICARE to purely civilian health insurance and health networks for Reserve Component members or for servicemembers leaving the military who do not use their VA health benefits or use their civilian-employment benefits. Many factors drive eligibility and access to these systems for servicemembers and veterans.

These issues, along with a discussion of the specific programs and services for meeting the health care needs of servicemembers and veterans with post-traumatic stress disorder, major depression, or traumatic brain injury, are discussed in Chapter Seven.

Concluding Comments

The United States finds itself nearing its eighth year of continuous combat, and U.S. forces could be engaged at some level in both Afghanistan and Iraq for years. Although the United States has modified its tactics and appears to have made progress in Iraq, a resurgent Taliban is threatening gains made in Afghanistan. The nation is fighting this war with an all-volunteer force, which has, by most accounts, performed exceptionally well.

Even if the United States is able to scale back its commitments in the two countries, gauging the long-term effects on the forces from other perspectives, such as morale, mental stress, and the willingness to face repetitive combat tours, is difficult.

Any war exacts a human toll. The psychological toll of the current conflicts on the force is not a factor to be dismissed—particularly in light of the ongoing demand for battle-ready soldiers, sailors, airmen, and marines. Understanding the nature of the psychological toll is critical to an effective strategy for maintaining or even improving the health of that fighting force.

In the next part of this monograph, we provide an overview of the research literature on the prevalence of mental and cognitive injuries among OEF/OIF veterans (Chapter Three), including findings from our own survey of veterans and servicemembers to provide data on current health status, levels of probable post-traumatic stress injury, major depression, and traumatic brain injury, as well as self-reported use of and barriers to health care (Chapter Four)

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