



# Prosthetics in the VA: Past, Present, and Future

The Department of Veterans Affairs has provided prosthetic devices  
to America's combat wounded since World War II—and it still is.

**By Frederick Downs Jr.**

The war on terrorism has gone on for nearly seven years, with 4,000 deaths and 27,000 wounded, of which 15,000 have returned to duty after 72 hours. The seriously wounded recuperating in military hospitals have received a great deal of press and public attention. They also paint a vivid picture of the cost of war on America's military men and women. Where needed, prosthetic devices will be provided

to these people for the rest of their lives by the Department of Veterans Affairs (VA).

Among the seriously wounded, 737 have lost limbs, 116 have suffered spinal cord injuries, 53 have suffered total blindness, 83 have been seriously burned, and 3,145 have been reported by the Department of Defense (DOD) as having traumatic brain injuries. Much of the press attention has focused on the high-tech limbs that have been provided to the amputees at Walter Reed and Brooke Army hospitals. These prosthetic limbs, with their computer chips and myoelectric function, provide a dramatic visual picture of the technology being applied to the soldiers who have lost limbs in Afghanistan and Iraq.

But what of the technology provided to the other seriously wounded veterans?

They also receive high-tech prosthetic devices to help them cope with their particular disabilities. Hand-held palm computers can read text. GPS systems connected to them can use software to tell a blind person or traumatic brain injury victim where they are and how to navigate to wherever they want to go. Reading machines and computers assist the blind and those with impaired vision and spinal cord injuries. These are a few of the

prosthetic devices used to assist the seriously wounded in regaining their independence and mobility.

America's veterans receive the best prosthetic care in the world. There is no other government agency, insurance company, or civilian organization that can match the VA when it comes to providing prosthetics. The history of how this came about is important to understanding why the VA is the best and what that means to the veterans coming back from this and future wars.

### Prosthetics History

Although the VA has been a Cabinet-level agency only since 1989, the process it uses to provide prosthetics to veterans has its roots in World War II. The VA provided



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**LEAP IN TECHNOLOGY** The Chief of Walter Reed Army Hospital's Orthopedic Unit, Sergeant David P. Keith (right), adjusts Private Luther Walker's artificial leg on 19 June 1943. Inset: The revolutionary new I-Hand is the only myoelectric hand to provide today's amputee with all six forms of prehension.

limbs to amputees from the lowest bidder. No standards of quality or accountability were in place, limbs were poorly fabricated, and waiting times were long. This was not only true for amputees but for all the wounded who languished in the VA system. Wounded veterans and the American public were outraged and demanded that Congress do something for the thousands of wounded and amputees who had given so much for their country.

Congress and the administration responded. On 15 August 1945, President Harry S. Truman appointed Army General Omar Bradley to head the Veterans Administration. According to the Army's Center of Military History, Bradley unwillingly accepted the job, but he began to modernize and restructure that antiquated organization to meet the challenges it would soon face.

Before the end of World War II, the VA was responsible for some 5 million veterans, with a few pensions still going to cases arising from the War of 1812. By 1946 almost 17 million veterans were on its rolls. Bradley completely rebuilt the organization on a regional basis and insisted on basing his decisions on the veterans, rather than on political considerations, which had been the case so often in the past.

With the help of Major General Paul R. Hawley, General Dwight D. Eisenhower's theater surgeon, Bradley overhauled a medical care system that Hawley had described as medieval. In the assessment of the leaders at that time, he transformed the Veterans Administration from "a national scandal to a model establishment."

Bradley's sweeping changes came about based on the needs of the veterans. He was known as a "Soldier's Soldier" because of his concern for the men who served under him during the war. Among the many changes in the re-

organization was the development of a new office that would be responsible for the provision of prosthetics—the Prosthetic and Sensory Aids Service.

Each VA medical center included a prosthetic service. Chiefs of the service were mandated to be disabled veterans who required a prosthetic device, because they were believed to have the most empathy for the plight of their fellow disabled veterans. Most of the chiefs hired were amputees. This was because there were thousands more of them than the other categories of seriously disabled requiring prosthetic devices.

The overall survival rate for the general population of wounded was 60 percent, compared to 70 percent in the Vietnam War and 95 percent in the wars in Iraq and Afghanistan. The survival rate for any soldier seriously wounded in the body or head in World War II was extremely low, so there were relatively few spinal cord injured or blind soldiers compared to the number of amputees.

## Bradley's VA

The total number of seriously disabled was unprecedented in American history. The VA under Bradley's reforms broke new ground in developing and establishing methods to treat these vast numbers of disabled. Among them was the Blind Rehabilitation Center at the Hines VA Medical Center west of Chicago. The VA developed innovative methods of treating the spinal cord injured, whose average life expectancy at the time was five years. The progression of VA treatment methodologies extended that life span, allowing the wounded veterans to live longer, productive lives. The Army and the VA spent millions of dollars to research and develop better, more functional artificial limbs.

Another problem was the archaic, cumbersome procurement process, which was not designed to purchase custom-made prosthetics. To eliminate the delays caused by the highly restrictive and time-consuming Federal Procurement Regulations, Congress incorporated into law, through Title 38, Section 8123, that prosthetics could be procured "without regard to any other provision of law." This allowed VA the freedom to purchase the specialized high-quality prosthetic devices in a timely manner.

The background here is germane, because those initiatives and that procurement law have remained active through the decades, allowing the VA prosthetic service to provide state-of-the-art prosthetics as they have become available during the Korean and Vietnam wars and the operations in Afghanistan and Iraq.

In the VA, the definition of a prosthetic is anything inorganic used to replace or supplement a body part or function. This allows the patient to be treated in a holistic manner, prosthetically as well as physically. For example, if a patient receives a prescription but is unable



**A SOLDIER'S SOLDIER** On 15 August 1945, President Harry S. Truman appointed General Omar Bradley to head the Veterans Administration. His reforms were said to have transformed "a national scandal to a model establishment." Here, he testifies before the House Veterans Affairs Committee two months into his term.

to read it because of poor eyesight, the veteran will be prescribed a pair of eyeglasses. Another example is that if a veteran's diabetic condition has caused ulcers on his feet, he can be prescribed a pair of in-depth shoes.

## No Funding Issue

Money had always been a concern and an obstacle to this approach because of the initial cost. But this obstacle disappeared when prosthetics in the VA became centrally funded from the VA Central Office Prosthetic Service. This ensured that funds will never be short for prosthetics. Centralized funding for prosthetics came about in the early 1990s when the Veteran Service Organizations (VSOs)—led by the Disabled Veterans of America, Blinded Veterans Association, Paralyzed Veterans of America, American Legion, Veterans of Foreign Wars, and the Vietnam Veterans of America—lobbied for it. Over years of budget shortfalls, many of the VA hospitals had been forced to hold down costs by cutting spending. This delayed provision of wheelchairs, artificial limbs, and other prosthetic devices, which was unacceptable.

So through VSO pressure and hearings by the House and Senate Veterans Affairs Committees, the Secretary of the VA and the Under Secretary for Health for the Veterans Health Administration (VHA) established a policy that all funds for prosthetics would be controlled from the VA Prosthetic Service in the Central Office and that no prescription for prosthetics would fail to be filled or delayed because of a lack of funds.

This policy change directly contributed to the VA's ability to provide the highest quality prosthetic care of any government or civilian medical system in the world. A proper prescription by a VA clinician can make any prosthetic device in the marketplace available to a veteran. This means the VA Prosthetic Service is required to stay abreast of all new technology, both in the research and development stages and when the product hits the market after it is approved by the Food and Drug Administration for patient use. Because of this attention, the VA is often among the first to prescribe new prosthetic devices that come on the market, especially if they are high-tech and high-cost.

Medicaid, Medicare, and other third-party payers such as insurance companies are slow to accept high-cost, high-tech devices. When they do, if they do, they impose severe restrictions on the prescription criteria and/or demand copays from the patients.

It took many years and many battles, but the VA Prosthetic Service established itself as a solid, high-quality, veteran-responsive organization. The VA was poised to provide the best prosthetics available to wounded veterans returning from the wars generated by the U.S. response to the 9-11 terrorist attacks.

## Prosthetics Today

Imagine our surprise and consternation when the returning Afghanistan and Iraq veterans did not want to go to the VA for prosthetics. Almost from the first days of the war, we were told, and read, that they considered the VA to be an old soldiers' home. They believed the VA was neither able nor wanted to provide the high-tech computer-operated limbs they were receiving at Walter Reed or Brooke Army hospitals. In the Prosthetic Service, we were astonished to hear such negative comments. Worse, we received reports that not only the wounded believed this but also many up the military chain of command and officials in the Pentagon.

The VHA was perplexed because the veterans who used the system—the spinal cord injured, the blind, amputees, and other disabled veterans—knew the VA was the best system in the world. VHA staff had worked hard to make sure they were on top of the technology and that it was available to be prescribed.

In fact, the VHA had provided the Computer Leg, myoelectric hands and arms,

running limbs, dynamic feet, state-of-the-art sockets, and composite materials for years before the war started. Yet the perception was that VA provided old, out-of-date limbs. This was not true. Before the Afghanistan/Iraq wars the VA had been part of a work group that made recommendations to the Army on how it could care for the amputees.

The VHA had an established record as it provided prosthetics to more than a million disabled veterans every year, which it had been doing as part of its mission from the time of its establishment in 1948. Except in a few cases, the military medical system did not provide prosthetics as part of its peacetime mission. However, as war became more likely, the Army put together a work group, including VHA, to develop procedures on how the military medical system would handle light, medium, and heavy casualties.

The group recommended that the military have a first-class prosthetic lab in Walter Reed that could immediately begin to fit amputees with high-tech prosthetic limbs, including the computer knee and myoelectric arms. The work group thought that if the military did not provide the high-tech/ high-cost limbs to the amputee, there was the danger the military would be in danger of criticism for providing out-of-date prosthesis. Although the high-tech limbs would cost more, the benefit to the amputee would be a psychological boost. Besides, when the veteran was discharged from the military, the VA would assume the cost. The VA had an established record of providing high-tech/high-cost prosthetics, and it was in their budget.

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## VA Misperceptions

Everyone was in agreement and ultimately the DOD set up a special fund to purchase limbs and to hire contractors to fabricate them. Walter Reed started from the beginning of the war to provide the high-tech limbs, and it has achieved great success. It was so great the veterans believed that only the military could provide high-quality limbs and the VA could not.

From where did this misperception come, and why did it spread so fast and so wide? In prosthetics the VA had a lot of perceptions to overturn. First was the notion that the VA did not prescribe state-of-the-art limbs. This was not true. But a major problem that contributed to this perception was inconsistency in the provision of prosthetics from VA medical center to medical center.

Another factor that led to confusion and misperception at the beginning of the war were the experiences of veterans home on convalescent leave having their prosthetic limbs repaired. They were turned down at the door. This was because the VA and Military Health Care systems have different missions and are funded by Congress from different appropriations.

The VA was forbidden to spend its dollars to care for active-duty veterans, who did not understand the difference. These were both government health care systems, so when they were turned down by the VA, they were angry. In their eyes the VA did not want them and could not afford to take care of them.

This is putting it simply, but the negative perceptions of the VA quickly spun out of control. As soon as it came to the attention of the Secretary of the VA, he issued orders that all veterans were to be treated, regardless of whether they had been discharged from the military or not. But the damage had been done, and it would prove difficult to change the perception.

## The Difference Between Hospitals

This brings up the question, what is the difference between the military hospitals and the veterans hospitals? Why are there two separate medical systems? Congress funds them separately because the two systems have two separate missions. The purpose of the military medical system is to provide health care to active-duty military personnel, their family, and to a lesser extent, the retired military community. During war its role is expanded to the battlefield to save the lives of the wounded and to rehabilitate and nurse them back to health so they can return to their units. The military

medical system was not designed to provide long-term care. That was the role of the VA.

Traditionally, any service person so seriously injured they could not return to their military occupational specialty (MOS) was medically retired from the military as quickly as possible and transferred to the VA. By law, the VA is prohibited from providing direct health care to a veteran's family but it is responsible for providing certain benefits to spouses and dependents.

This, however, is the big picture. It really makes no difference how the medical systems are programmed to operate if the troops are not getting served. The bottom line is that when these returning wounded run into difficulties acquiring prosthetic limbs or other devices, and they don't receive a rapid solution to their problems, all of it leads to ill feeling against the VA and the military.

Their disabilities were caused by wounds received while fighting for their country. They don't want or need delays. Their lives have changed drastically enough as it is. Their body image, their career goals, their families, friends, the future and all else has been turned upside down. A dis-



**ONE SATISFIED CUSTOMER** Vietnam veteran Richard Rodriguez seems pleased with the performance of his myoelectric hand. These high-tech computerized limbs cost more than traditional prosthetics, but, says the author, the "psychological boost" to the amputees is worth it, and funding is in place.

ability is a difficult thing to adjust to for anyone, and the greater the injury the greater the physiological and psychological obstacles the individual must overcome.

The last thing service people should have to encounter are problems from the government they have served so well. When they do encounter problems, the press and the Internet are quick to spread the news. And this perpetuates the negative perception of the VA and the military. The good news is that both medical systems have been working hard to fix the problems.

## Prosthetics in the Future

Providing care to veterans through the VA is a lifelong commitment by the American public. Once disabled veterans enter the VA system, they become eligible to receive prosthetics for the rest of their lives. The VA still has seven World War I veterans on its rolls who receive care. When I started working for the VA in 1974, dependents from the Civil War and veterans from the Spanish American War were still on the VA rolls.

The VA Prosthetic Service provides a vast array of prosthetics to assist 1.5 million veterans, from throughout the 20th century and into the 21st. The cost—\$1.39 billion for Fiscal Year 2008—will continue to go up as veterans' life spans increase and more come into the system. As the war continues, the VA must be prepared to carry out its other mission as backup to DOD in case of mass casualties that would overwhelm that agency's medical systems.

Does the VA have enough money for all the prosthetics veterans will need? The answer is yes. Because of centralized funding and an accurate data system that shows where every dollar is spent on each veteran, Congress and the Office of Management and Budget do not hesitate to provide all the funds needed for prosthetics. The VA is also able to track patterns of types of prosthetic devices and where funds are needed, and that database provides accountability for all dollars spent.

The scope of prosthetics encompasses nearly every area of health care. As an example, in FY 2007, the VA provided the following:

- 8,058 legs (\$46 million)
- 380 arms (\$2.5 million)
- 86,945 wheelchairs, scooters, and accessories (\$122 million)
- 678,401 orthotics (\$33.5 million)
- 391,531 orthotic shoes (\$27.2 million)
- 769,522 eyeglasses (\$35 million)
- 348,920 hearing aids (\$122 million)
- 241,805 surgical implants (\$354.6 million)
- 2.2 million pieces of medical equipment and supplies (\$149.8 million)

Is the VA communicating well with its patients and staff? The Prosthetics Service did not do a good enough job at the beginning of the war, but we have developed brochures to be distributed at every medical center that provide information about prosthetics and a toll-free number to call with questions. We have held two focus groups with veterans of this war who have criticized the VA Prosthetic Program. And they have provided us with ideas we have implemented to help us improve our communication and outreach to new veterans.

The most important development has been establishment of an Internet site where veterans can go to find information about the Prosthetic Service. The site will contain information about everything they can expect from the VA Prosthetic Service, including names and phone



**ALL ABOUT MOBILITY** Prosthetic specialist Ed Ayyappa fits Vietnam veteran William Wagner with a power knee at the VA's Prosthetics Gait Lab in Long Beach, California. The VA Prosthetics Service currently assists 1.5 million veterans.

numbers of VA hospital prosthetic staff members closest to them. There will be a FAQ section and a place to send questions directly to the VA prosthetic staff.

Word of mouth has also worked very well as more new veterans become aware of all the VA has to offer and they tell their friends. For example, we have seen a big increase in the last couple of years of new veterans coming into the VA prosthetic system, as indicated by the following numbers:

- 1,437 Afghanistan/Iraq vets (FY 2003)
- 3,928 (FY 2004)
- 4,341 (FY 2005)
- 22,910 (FY 2006)
- 37,491 (FY 2007)

These new veterans have learned that the VA does not charge them a co-pay for prosthetic devices, whereas the military Tri-Care plan does make such charges. In addition, they have learned that Tri-Care does not provide some of the high-tech/high-cost prosthetic devices that the VA provides.

The VA Prosthetic Service will continue to provide care throughout the veteran's life. As new technology becomes available to the public, it will also be available to the veteran. This will assist the veteran in maintaining mobility, independence, and dignity. That is the mission of the VA Prosthetic Service. ✨

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