

MILITARY VETERANS AND HEPATITIS C

Terry Baker

Introduction

America's military veterans have been plagued with many health issues since the founding of this country. *Hepatitis* has long been associated with U.S. military service. Military training and combat present many opportunities for transmission of viral hepatitis through blood-to-blood contact. Field bleeding, surgery, transfusions, and exposure to blood by military medics and surgeons all constitute high risks.

Since the identification of the *hepatitis C virus (HCV)* in 1989, physicians and Veterans Administration (VA) officials have seen large numbers of infection among veterans. Veterans appear to have unusually high rates of hepatitis C. While the prevalence of hepatitis C in the general population is approximately 1.6%, various studies in VA facilities have shown hepatitis C prevalence rates between 5% to 22% among veterans.¹⁻⁴ Veterans of foreign combat appear to be at the highest risk for infectious hepatitis. All major engagements of the last 70 years - World War II, the Korean War, and the Vietnam War - were associated with high rates of infectious hepatitis. Viral hepatitis was viewed as a single disease in the early years, and most treatment and documentation of it were for the acute forms of the disease. Table 1 shows a timeline of major developments in the history of the U.S. military and the current hepatitis C epidemic.

Table 1. Military Veterans and the Hepatitis C Timeline

1941-1953	Many World War II and Korean War veterans were diagnosed with non-A, non-B hepatitis.
1967-1969	Field hospitals performed 364,900 blood transfusions on American personnel in Vietnam. Soldiers, medics, and nurses were exposed to blood while caring for the wounded. ⁵
1989	Researchers identified the hepatitis C virus, 48 years after the start of World War II.
1992	Researchers developed an accurate blood test for hepatitis C. ⁶
1998	The number of hepatitis C cases at U.S. Department of Veterans Affairs facilities rose to 22,000 in 1998, up from 6,600 in 1991. ^{1,7}
1999	The VA established two HCV research and education centers and issued HCV treatment guidelines. VA leaders argued that investing in early treatment would save public dollars by reducing future hospital stays and liver transplants. Legislation was introduced to ensure wider coverage for hepatitis C treatment through VA facilities. Veterans Aimed Toward Awareness (VATA) launched a nationwide campaign to alert U.S. veterans they may be at risk for hepatitis C. A national survey about hepatitis C was conducted with 504 veterans.
2000	The National Hepatitis C Program was created.
2001	Four Hepatitis C Resource Centers (HCRC) were established and funded.
2003	113,927 veterans in the VA's care diagnosed with HCV, up from 22,000 in 1998. ⁸
2008	250,000 veterans in the VA's care diagnosed with HCV. ⁹

Military Veterans' Hepatitis C Survey

Bruskin-Goldring Research conducted a national survey commissioned by Veterans Aimed Toward Awareness (VATA) of 504 veterans in 1999. Veterans age 40 to 60 years were surveyed. Some findings from that survey include:

- 74.8% were “not very” or “not at all” concerned about their risk for HCV.
 - 67.5% were “not very” or “not at all” familiar with the disease.
- 60.1% had not been tested for HCV.
 - 58.3% were “not very” or “not at all” likely to be tested for HCV.
- 63.3% recognized flu-like symptoms, and 57.7% recognized yellow skin as possible symptoms of liver disease.
 - 1.6% knew that hepatitis C often has no symptoms.
- 9% initially acknowledged they might be at risk for hepatitis C.
 - 45% acknowledged they might be at risk after being informed of risk factors.
 - 65.1% stated their greatest fear about HCV is the possibility of infecting a loved one.
 - 62.9% stated their next greatest fear was the possibility of having a serious illness or dying from a serious illness.

There is clearly a need for HCV education. Veterans must be informed of their risk for hepatitis C, and about the seriousness of the disease.

The Prevalence of Hepatitis C Among U.S. Military Veterans

Veterans' *advocates* are concerned about the prevalence of hepatitis C among military veterans. Several studies have shown that veterans have a higher prevalence of HCV than the general public.²⁻⁴ Studies at the VA Medical Centers (VAMC) in Washington, D.C. and San Francisco found the prevalence of HCV positive inpatients was 20% and 10%, respectively.¹ One of these studies also found 52% of patients requiring liver transplant were HCV positive.¹

In 1998, a national tracking system analyzed the findings from 95,000 hepatitis C screening tests.⁷ Of those who tested positive:

- 64% were Vietnam veterans
- 18.5% were post-Vietnam veterans
- 4.5% were Korean War veterans
- 4.2% were post-Korean War veterans
- 9.1% were veterans from other periods of service

Of the 8.1 million surviving veterans of the Vietnam War, 3.2 million had active duty in Asia between 1964 and 1973.¹⁰ It is conservatively estimated that 10% of these Asian theater veterans are now infected with HCV.¹

Transmission of HCV in the Asian Theater of the Vietnam War

There are a number of HCV risk factors for veterans who were in Asia during the Vietnam War, many related to the high prevalence of HCV in Southeast Asian countries. It is estimated that 5% to 8% of the Vietnamese population is infected with HCV.¹¹

TRANSFUSIONS

Transfusion of blood or blood products before 1992 is a known risk factor for HCV infection. Prior to 1992, there were no accurate HCV screening tests to ensure the safety of the blood supply with respect to HCV.⁶ Three hundred thousand

Americans were wounded and 153,329 were hospitalized during the Vietnam War. Between March 1967 and June 1969, 364,900 Americans in Vietnam received blood transfusions.⁵ It is estimated that a minimum of 10% of those transfused received HCV-infected blood.¹²

MEDICAL CONTACT

Surgeons, nurses, medics, helicopter crews, and others involved in the evacuation and treatment of the wounded from Vietnam were also placed at risk for HCV infection because of their blood exposure. An estimated 41.1% of all soldiers deployed to Vietnam, approximately 2.1 million veterans, were involved in combat. Many soldiers assisted the more than 300,000 wounded. Medical personnel on hospital ships were also placed at risk via their exposure to wounded soldiers from the Vietnam theater.¹³

TATTOOS

Unclean needles that pierce the skin can transmit HCV. Tattoos have now been recognized as a significant route of transmission for HCV.^{14, 15} An estimated 34% of active-duty military personnel have tattoos (personal communication, Capt. John Mateczun, Principal Director, Clinical Affairs, Office of Health Affairs, Department of Defense). Many of these tattoos were and continue to be acquired in countries where sanitation is often substandard.

SEXUAL CONTACT

Although sexual transmission of HCV occurs, it is believed to be relatively uncommon. Nevertheless, a portion of those infected with HCV during the Vietnam War were probably infected through sexual contact with Vietnamese nationals.

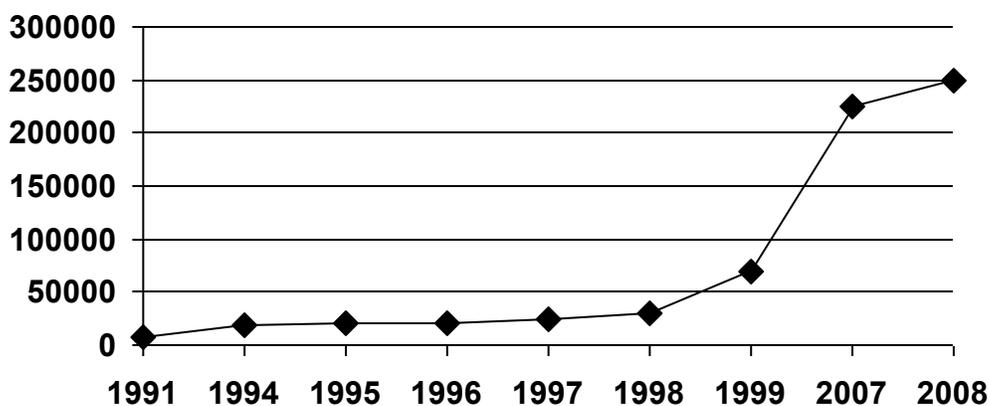
RECREATIONAL DRUG USE

Sharing drug paraphernalia is currently the most common cause of newly acquired HCV infections. This was also a risk factor during the Vietnam War. A study from the Centers for Disease Control and Prevention on the health status of Vietnam veterans found 3% had used "hard drugs," including amphetamines, barbiturates, cocaine, heroin, psychedelics, phencyclidine, and methaqualone.¹⁶

Veterans Affairs Response to Hepatitis C

The Department of Veterans Affairs has noted a decided increase in the number of HCV cases diagnosed over the past several years.^{9, 17, 18}

Veterans Diagnosed with HCV, 1991 to 2008



Testing of veterans outside the VA medical system has confirmed the high HCV prevalence in this population. A 1998 screening program that tested 200 apparently healthy leaders of the Vietnam Veterans of America found 9% of those tested were infected with HCV.¹⁹ A more recent screening at a Vietnam Veterans' Standdown in New Orleans found 36% of those screened tested positive for HCV (unpublished data). These data all support the reality that veterans have consistently and markedly higher rates of HCV infection than the general population.

In June 1998, the VA issued HCV screening guidelines for veterans entering VA facilities. In December 1999, the VA adopted treatment guidelines for HCV infection. The guidelines recommend that eligible veterans be given the very best medical care, including the most recently approved treatment. Of course, only veterans who are income eligible or service connected for HCV can receive treatment through a VA medical center. Despite the treatment guidelines, veterans report problems obtaining care due to constraints put on HCV healthcare at the Veterans Integrated Service Network (VISN) level.

In 2001, the VA established four Hepatitis C Resources Centers (see Table 2).¹⁸ These centers coordinate HCV treatment and research efforts, and develop educational programs for patients and their families. Healthcare providers who specialize in HCV and patient counselors are also located at these centers. The Hepatitis C Resource Centers build on the success of the previous Centers of Excellence in Hepatitis C program, established by VA in 1999. In 2007, the funding for these centers was renewed through September 30, 2011.

Table 2. Veterans Affairs Hepatitis C Resource Centers

<p>Veterans Administration Medical Center, San Francisco, California</p> <p>www.hepatitis.va.gov/vahep?page=prin-con-hcrc-sf</p>
<p>Veterans Affairs Medical Center, Minneapolis, Minnesota</p> <p>www.hepatitis.va.gov/vahep?page=prin-con-hcrc-mn</p>
<p>Veterans Affairs Connecticut Healthcare System, West Haven, Connecticut</p> <p>www.hepatitis.va.gov/vahep?page=prin-con-hcrc-ct</p>
<p>VA Northwest Hepatitis C Resource Center at the VA Puget Sound Healthcare System, Seattle, Washington in collaboration with the VA Portland Medical Center, Portland, Oregon</p> <p>www.hepatitis.va.gov/vahep?page=prin-con-hcrc-nw</p>

Projects of the Hepatitis C Resource Centers include:

- Improved screening and testing methods
- Assessment and treatment of patients traditionally excluded from hepatitis C treatment (including those with mental illness, substance abuse, or concurrent *HIV* infection)
- Development and dissemination of models of interdisciplinary care to optimize treatment outcomes
- Development and dissemination of *clinical* standards for treating patients with all stages of hepatitis C infection.

The National Hepatitis C Program, which includes the Hepatitis C Resource Centers (HCRC), falls under the VA National Clinical Public Health Program. The goals of the National Hepatitis C Program through 2012 are shown below.¹⁸

- Improvements in the management and treatment of the growing patient population with advanced liver disease and its complications
- The evaluation of the implementation and application of the knowledge, products, and clinical practices developed by the HCRC program across the entire VA system
- The preparation of the healthcare system for meeting the demand that will occur when new and better HCV treatment becomes available, which is likely in the next five years;
- A cross-cutting component of the previous three goals is the management of comorbidities in patients with hepatitis C such as mental illness, HIV infection and substance abuse

Each VA Medical Center Director must designate a Hepatitis C Lead Clinician to be the principal point of contact for all clinical hepatitis C program information and reporting between the facility, the Clinical Public Health Program office, and other facility program offices.

The Need For a Service Connection to HCV to Receive Treatment Through a VA Facility

As a result of the reorganization of the VA Medical Center system, all veterans have been put into one of seven categories according to his or her medical priority. Currently, all veterans, regardless of their category, receive medical treatment when they come to a VA Medical Center. Unless a veteran is 100% service connected, a copayment is required for all services and medicines.

It is critically important for veterans with HCV to be granted presumptive service connection to the disease so they can be treated. However, veterans infected with HCV during their military service are generally unable to establish the necessary service connection. A lack of knowledge about hepatitis C and how it is contracted, a historic lack of a reliable screening test, and the prolonged, often *asymptomatic* course of disease progression all conspire to make it extremely difficult to prove that infection was acquired during military service. Without a service connection to HCV, most veterans are unable to meet the standard of proof necessary to show that they contracted HCV during their military service. As the VA's budget continues to shrink, veterans without a service-connected injury, or veterans not enrolled in the VA healthcare system, including veterans with HCV, will be turned away from VAMCs.

Currently, Vietnam veterans are the military group most significantly affected by hepatitis C. Many veterans who contracted HCV in Vietnam 25 to 30 years ago are only now exhibiting symptoms of liver disease. When they were first infected, HCV had not been distinguished from other forms of hepatitis. In 85% of the cases, there would have been no acute symptoms at the time of infection.

Detecting HCV infection at the time of discharge was also impossible. Many of today's HCV-infected veterans were discharged from the military before tests for hepatitis C existed. Even today, when there are reliable tests for hepatitis C, the military does not conduct HCV testing as part of the routine discharge physical.

HCV-infected veterans who were treated for *acute hepatitis* during their military service and who now appear before the Board of Veterans' Appeals (BVA) to establish service connection are most often denied because they cannot prove their current HCV infection is related to their prior acute hepatitis. The Board often rejects a claim for service-connection because the veteran's medical record does not show the presence of HCV at the time of discharge. In fact, in the review of all 1,599 cases of *chronic hepatitis* brought before the BVA between 1994 and 1996, only 37 resulted in approval of a service-related disability rating for hepatitis.²⁰ Making a service connection to HCV enables those veterans who desire treatment to obtain it through the VA system. It also enables veterans who progress to advanced liver disease to get adequate healthcare through the VA.

Establishing a Service Connection to Hepatitis C

To establish a successful claim for military service connected disability from hepatitis C, you must meet the following requirements.

- You must show that you currently have hepatitis C. The VA is obligated to test you for hepatitis C, but it is suggested that you also get a diagnosis from a private doctor.
- You must show that hepatitis C was caused by or aggravated by military service. Because hepatitis C is blood-borne, you must show that while you were in the military you had:
 - a blood transfusion
 - hemodialysis
 - blood-to-blood contact
 - tattoo(s) in service, if your doctor states that this is the risk factor
 - shared a razor, tooth brush, or any other item that could carry infected blood.

Successful claims often include a private physician's (often a *gastroenterologist* or *hepatologist*) letter indicating that, in his or her opinion, your hepatitis C is a direct result of your military service.

You should be aware that activities that show "willful misconduct" could disqualify you from compensation. These activities include body piercing, tattoos, and/or use of injected recreational drugs, snorted cocaine, and other drug use. If you are a veteran diagnosed with hepatitis C, the first thing you should do is to find a qualified Veterans Service Officer to assist you in filing a claim for a service connection to hepatitis C. Most Service Officers work for a county or state veteran's service. To find a Veterans Service Officer in your area, visit the National Association of County Veterans Service Officers Internet site at www.nacvso.org and click on "Find a Service Officer." All VFW's, A.L.'s, and VVA chapters, have service officers.

Summary

Veterans' advocates have made it a priority to see that service men and women are tested for hepatitis C. We are working to ensure that treatment is affordable, and that information will be available for those who need it. It is my heartfelt commitment to work to see these goals accomplished.

References

1. Kizer KW. Hepatitis C standards for provider evaluation and testing. Under Secretary for Health information letter (IL 10-98-013). Department of Veterans Affairs. Veterans Health Administration. Washington, D.C. 1998.
2. Briggs ME, Baker C, Hall R, et al. Prevalence and risk factors for hepatitis C virus infection at an urban Veterans Administration medical center. *Hepatology*. 2001;34(6):1200-1205.
3. Dominitz JA, Boyko EJ, Koepsell TD, et al. Elevated prevalence of hepatitis C infection in users of United States Veterans Medical Centers. *Hepatology*. 2005;41(1):88-96.
4. Sloan KL, et al. Hepatitis C tested prevalence and comorbidities among veterans in the US Northwest. *J Clin Gastroenterol*. 2004;38:279-284.
5. Neel S. Medical support of the US army in Vietnam 1965-1970. Department of the Army. CMH Pub. No. 90-16. US Government Printing Office. Washington, DC. 1991.
6. Centers for Disease Control and Prevention. Recommendations for prevention and control of hepatitis C virus (HCV) infection and HCV-related chronic disease. *MMWR*. 1998;47(RR19):1-39. [Note: At the time of publication, this document was available at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/00055154.htm>.]
7. Kralovic S, Roselle GA, Simbartl L, et al. Hepatitis C virus antibody (HCAb) positivity in Department of Veterans Affairs (VA) facilities. Presented at the Ninth Annual Scientific Meeting of the Society for Healthcare Epidemiology of America (SHEA). San Francisco, California. 1999.
8. Butt AA, Justice AC, Skanderson M, Rigsby MO, Good CB, Kwok CK. Rate and predictors of treatment prescription for hepatitis C. *Gut*. 2007;56(3):385-389.
9. United States Department of Veterans Affairs. VA Hepatitis C Prevalence Study Results and VA Hepatitis C Program Actions: Summary.

- Available at www.hepatitis.va.gov/vahep?page=prtop01-rs-01. Accessed April 26, 2008.
10. Projected veteran population as of July 1, 1998. Office of the Deputy Assistant Secretary for Policy, Department of Veterans Affairs Document. [Note: The referenced text from this document is also contained in The Maimes Report on Hepatitis C Infection in New Hampshire by Steven Maimes. 2002. This text was available at the time of publication for non-commercial purposes at: http://www.cc-info.net/hepatitis/Hepatitis_C_Report.pdf.]
 11. Song P, Duc DD, Hien B, et al. Markers of hepatitis C and B virus infections among blood donors in Ho Chi Minh City and Hanoi, Vietnam. *Clin Diag Lab Immunol*. 1994;1(4):413-418.
 12. National Institutes of Health, Department of Transfusion Medicine. A controlled prospective study of transfusion-associated hepatitis (TAH). Intramural Research Project Z01 CL-02005-28 DTM. Bethesda, Maryland. 1997.
 13. National Center for Veteran Analysis and Statistics. National Survey of Veterans. US Government Printing Office. Washington, D.C. Pub. No. NSV9503. 1995.
 14. Bini EJ, Dhalia CT, Tenner T, et al. Strong association between tattoos and hepatitis C virus infection: a multicenter study of 3,871 patients. American Association for the Study of Liver Diseases Annual Meeting 2007. Boston, Massachusetts. Abstract 136.
 15. Pavli P, Bayliss J, Dent O, Lunzer M. The prevalence of serological markers for hepatitis B virus infection in Australian naval personnel. *Med J Aust*. 1989;151(2):71-75.
 16. Health status of Vietnam veterans. II. Physical health. The Centers for Disease Control Vietnam Experience Study. *JAMA* 1988;259(18):2708-2714.
 17. Roselle GA, Danko LH, Mendenhall CH. A four-year review of patients with hepatitis C antibody in Department of Veterans Affairs facilities. *Mil Med*. 1997;162(11):711-714.
 18. Department of Veterans Affairs, Veterans Health Administration. VHA Directive 2007-022, National Hepatitis C Program. July 2007. Available at www1.va.gov/vhapublications/ViewPublication.asp?pub_ID=1586. Accessed April 26, 2008
 19. Spolarich AW, Russo B. Hepatitis C and veterans. December 1998/January 1999. The VVA Veteran®.
 20. United States Department of Veterans Affairs, Board of Veterans' Appeals. Board of Veterans' Appeals Decisions 1994-1996. Pub. No. 98-09166 (CD-ROM). US Government Printing Office. Washington, DC. 1998.

