



## VA research on **HEPATITIS C**

*Through the support of VA leadership, Congress, and Veteran advocacy, VA implemented an extensive and aggressive outreach and treatment program for hepatitis C. At the end of 2018, almost 85% of Veterans at risk had been tested, compared with 50% in the general U.S. population.*

### **ABOUT HEPATITIS C**

- Hepatitis C, caused by the hepatitis C virus (HCV), is a condition marked by inflammation of the liver. It is spread through contact with the blood of an infected person, such as through sharing needles when injecting drugs, from mother to child during childbirth, and through sexual contact with an infected partner.
- The symptoms of HCV infection are often very mild. Most people can carry the virus for years and will not notice any symptoms. The most common symptoms are vague abdominal discomfort, fatigue, and joint pains.
- Over time, HCV can cause other health problems, such as cirrhosis and liver cancer. Because the virus stays in the body, an infected person can give hepatitis C to someone else.
- People at risk for hepatitis C should consider getting tested. Blood tests are required to determine if HCV is present in the body.
- Since 2014, VA has treated HCV-infected patients with new, highly effective, less

toxic, all-oral, direct acting antivirals. These new drugs have fewer and less side effects than older treatments and can be given as one pill a day for as short a treatment period as eight weeks.

- VA has cured more than 100,000 Veterans with chronic HCV infection since 2014. Curing HCV can reduce the incidence of advanced liver disease, cutting death rates by up to 50%.

### **VA RESEARCH ON HEPATITIS C: OVERVIEW**

- VA research on hepatitis C includes clinical trials of treatments, epidemiologic studies, investigations of the biological mechanisms of infection, and studies on identifying and removing barriers to treatment.
- Some VA researchers are working on projects to improve screening and testing methods for HCV. Others are working to improve the assessment and treatment of patients traditionally excluded from hepatitis C treatment, including those histories of mental illness, substance abuse, or co-infection with HIV, the virus that causes AIDS.

- Another area of interest to VA researchers is developing and disseminating models of interdisciplinary care to optimize treatment and clinical standards for treating patients at all stages of HCV infection.

### **SELECTED MILESTONES AND MAJOR EVENTS**

- 2011** – Established the VA National Hepatitis C program (now the [National Viral Hepatitis Program](#)) within VA's Office of Public Health
- 2013** – [Determined](#) that patients with both anemia and HCV can benefit from intensive treatment for the virus
- 2015** – [Learned](#) that cure rates from new HCV treatments were much better than previous treatments, but not as good as rates reported in clinical trials
- 2015** – [Developed](#) a new model to help identify which patients chronically identified with HCV have the greatest need for new antiviral drugs
- 2016** – [Found](#) that patients with HCV infections are at increased risk of developing osteoporosis and fractures

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**2017** – Published an [article](#) summarizing VA HCV treatment best practices and offering support to other health care organizations and providers

## RECENT STUDIES: SELECTED HIGHLIGHTS

- **Patients treated with direct-acting antiviral agents for hepatitis C remained at risk for liver cancer after several years**, found a Michael E. DeBakey VA Medical Center study. Hepatitis C increases the risk of liver cancer. Researchers followed more than 18,000 patients at VA medical centers who had achieved sustained virologic response (meaning that no hepatitis C virus was found in blood samples) with antivirals. They found that three years later these patients, while having lower cancer risk than people with active hepatitis C infection, still had risk levels that warrant monitoring. ([Hepatology](#), June 20, 2019)
- **Hepatitis C patients treated with direct-acting antiviral agents had lower risk of diabetes than patients treated with interferon**, in a VA Pittsburgh Healthcare System study. Hepatitis C infection is linked to higher risk of diabetes. Researcher studied data on 240,000 people with chronic hepatitis C. For both untreated patients and patients treated with interferon, about 2% developed diabetes. Only 0.1% of patients treated with direct-acting antiviral agents—a newer

treatment than interferon—developed diabetes after treatment. Patients with more advanced liver fibrosis had even larger reductions in diabetes risk. ([Clinical Infectious Diseases](#), April 12, 2019)

- **Establishing trust is critical to completing HCV treatment programs**, found a study by Edith Nourse Rogers VA Medical Center researchers. The team interviewed 38 Veterans and their health care providers. Many patients were concerned about side effects. Full explanations by providers of the new treatment's side effects helped get patients to begin and continue with their treatment programs. Establishing trust also led patients to believe the new treatment could provide a cure, which increased the likelihood they would begin and stick with treatment. ([BMC Health Services Research](#), Feb. 1, 2019)
- **A team led by VA Puget Sound Health Care System researchers has developed an online calculator that estimates a patient's risk of developing liver cancer once treatment is complete**. Hepatocellular carcinoma, the most common type of liver cancer, is closely linked to hepatitis B or C. The team developed the calculator based on a review of the health records of nearly 46,000 Veterans with HCV. They suggest that this calculator could enhance cancer surveillance efforts in patients, improve

early detection, and decrease harms associated with needless surveillance for the cancer. ([Journal of Hepatology](#), November 2018)

- **Many patients with hepatitis C do not receive alcohol-related care**, according to a study led by VA Puget Sound Health Care System researchers. Alcohol use worsens risk associated with HCV. Out of 20,000 VA patients with HCV and alcohol use disorder, 27% received specialty addiction treatment and 6% received medication treatment for addiction. The findings highlight the under-receipt of recommended alcohol-related care among patients with HCV. ([Drug and Alcohol Dependence](#), July 1, 2018)
  - **Accepting a liver transplant regardless of the hepatitis C status of the donor results in increased life expectancy for the recipient over waiting for a liver free of HCV**. A team including a researcher from the Michael E. DeBakey VA Medical Center conducted a simulated liver transplant trial using a mathematical model. Although infected livers could have adverse outcomes, the team noted the virus can now be treated very effectively after the transplant is completed. ([Hepatology](#), June 2018)
- For more information on VA studies on hepatitis C and other key topics relating to Veterans' health, please visit [www.research.va.gov/topics](http://www.research.va.gov/topics)**

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