

Hepatitis C: Not New but Still Emerging

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Severe acute respiratory syndrome (SARS), West Nile virus, bovine spongiform encephalopathy (mad cow disease), and smallpox have grabbed the headlines recently, but outside the limelight hepatitis C virus (HCV) has emerged as one of the most prevalent causes of infectious disease in the United States over the past 10 years. Through the end of 2003 the Centers for Disease Control and Prevention (CDC) estimates that the number of cases of HCV-caused liver illness in the United States is around four million, 1.8 percent of the population. It also estimates that of those infected with HCV about 75-85 percent will become chronically infected. In addition, the annual number of deaths from chronic liver disease accounts for about 25,000 deaths per year. Studies indicate that HCV may account for about 40 percent, or 10,000, of those deaths.

Now specific and reliable tests can detect the presence of the antibody to HCV in up to 97 percent of infected cases. The antibody test, though, cannot distinguish the difference between acute, chronic, or resolved infection.

The transmission of the C virus is primarily through exposure to infected blood, although sexual transmission has been documented. Before the advent of testing in the early 1990s the risk from blood transfusion and blood products was relatively high (see Fig. 1). Since the implementation of specific screening tests, and refinements to those tests, the risk of exposure to the HCV virus through blood transfusion has all but been eliminated in the United States. But that may not be the case in many parts of the world where blood is not routinely screened. Today the primary risk of exposure to HCV in the United States is through injection drug use. The mode of transmission in these cases is most likely through the sharing of syringes or equipment used when injecting illicit drugs.

Although sexual transmission has been documented in the transmission of HCV, the frequency of sexual exposure and the type of sexual activity have been neither accurately determined nor adequately studied. Other risk factors have also been documented in the transmission of HCV, such as tattooing, occupational exposure to blood as a health care worker, and mother-to-child transmission during birth.

Somewhere from 15-25 percent of those acutely infected by HCV may fully resolve their infection. The remaining 75-85 percent develop chronic disease. Of these, more than half may go on to develop active liver disease, including damage that could result in the need for liver transplantation. But there are some treatment options for those who develop chronic disease. A recently developed synthetically produced protein called alpha-interferon has demonstrated some success by stopping the hepatitis C virus from continuing to damage the liver. Persons who are concerned about being infected with the virus through a blood-borne or other high-risk exposure should be tested for HCV and consult their physician if found positive.

HCV in Washington

The picture of HCV infection in Washington State mirrors the nation as a whole. The Washington State Department of Health estimates

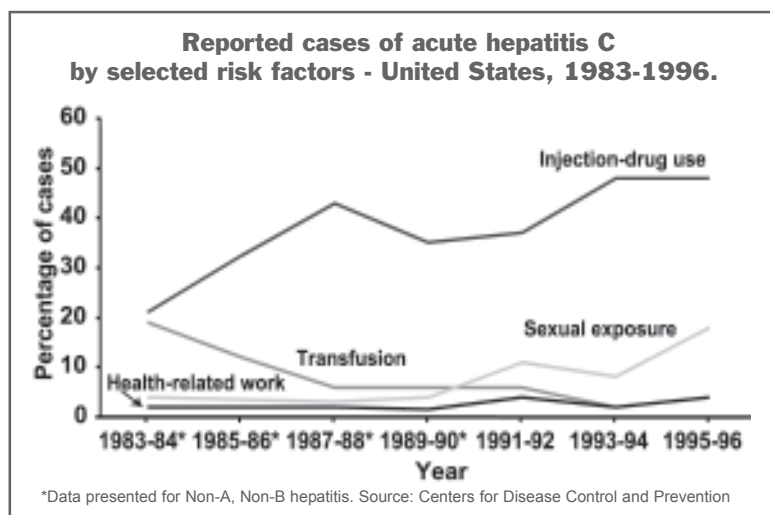


Figure 1. Reported cases of acute hepatitis C. Graph from: Recommendations for prevention and control of hepatitis C virus (HCV). *Morbidity and Mortality Weekly Report*, October 16, 1998. RR-19.

Background

Identified in 1989 as a specific RNA virus in the Flaviviridae family, HCV has at least six different genotypes and more than 90 subtypes. Before that identification, the hepatitis C virus was most often classified as Non-A, Non-B to distinguish it from the hepatitis A and hepatitis B viruses, both of which are now preventable with specific vaccines. Currently at least six viruses are known to cause liver disease: A, B, C, D, E, and G. Prior to the identification of the C virus, no tests detected the presence of the virus.

that 100,000 persons in the state are infected with HCV. Of these, approximately 70,000 will develop chronic infection, approximately 15,000 may develop cirrhosis, and as many as 1,000 may develop liver cancer within 20 years. About 250 deaths occur each year in Washington as a result of hepatitis C infection.

In Washington, chronic HCV infection has been a reportable condition since December 2000. Washington Administrative Code (WAC) 246-101 requires that chronic HCV infection be reported to local health departments on a monthly basis by health care providers and health care facilities. The local departments then send the information to the Washington State Department of Health. Some exceptions to this practice do exist. For example, Pierce County, as a national sentinel hepatitis site, has had laboratory-based reporting of HCV infection to the Tacoma-Pierce County Health Department since 1992.

The state responds

In an effort to address this emerging infection, the Washington State Legislature passed Substitute Senate Bill 5039 during its 2003 session calling for the development of a state plan to document, prevent, and treat HCV. It mandated the Secretary of Health to create a plan for the education, prevention, and management of HCV in Washington State. Through the advice and guidance of a representative committee of experts, stakeholders, providers, and advocates, the health department has completed that plan and has begun to implement its many phases and recommendations (*see box for the plan's focus areas*). Although the State Department of Health is identified as lead for many of the plan's components, it will be calling on various advisors, providers, stakeholders, and advocates to assist in the implementation of that plan.

Prevention activities for HCV are crucial due to the lack of a preventive vaccine. Although, as previously mentioned, vaccines for both hepatitis A and B exist, one for hepatitis C has yet to be developed. Research continues in the development of a vaccine, as well as the ability to find a tissue culture outside the human body in which to study the virus. In the meantime, the prevention of hepatitis C depends on knowing one's status, particularly if there is a history of blood exposure to someone who has either acute or chronic hepatitis C. Additionally, a better understanding needs to be gained of the prevalence of hepatitis C within the state through more consistent reporting of both acute and chronic hepatitis C by providers and laboratories. Finally, more research on the

mechanisms of transmission needs to be conducted.

The incidence of HCV infection has gradually decreased since the early 1990s, but the prevalence of HCV will be a focus for prevention and treatment into the immediate future. The need remains to ensure that blood exposure, whether through drug injection, accidentally in medical or emergency situations, or tattooing or body piercing, is addressed with the knowledge and intention of reducing this emerging disease. 🐼

Goals for Strategic Planning

DOH convened an advisory committee of 34 key stakeholders and community members to assist with the development of a strategic plan to address hepatitis C. The advisory committee was divided into four workgroups to address education, prevention, management, and funding as outlined in the legislation for implementation of the plan. Each workgroup identified one primary goal. Those goals are:

- Education** Provide education and training in HCV for health care professionals, policy makers, high-risk populations, HCV-infected people, and the general public, including those in schools
- Prevention** Significantly decrease the number of people newly infected with HCV, using the most effective prevention strategies
- Management** Identify effective, accessible, and affordable case management and treatment services to prevent or limit the progression and complications of HCV infection, and improve the affected individual's quality of life
- Funding** Develop strategies for providing adequate, sustainable resources for funding the implementation and maintenance of Washington State Hepatitis C Strategic Plan recommendations developed by the advisory committee

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Resources

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