

LIVESAY EXPEDITIONS & ADVENTURES

Hepatitis C

Scott Holmberg

Infectious Agent

Hepatitis C is caused by the hepatitis C virus (HCV), a spherical, enveloped, positive-strand RNA virus, approximately 50 nm in diameter.

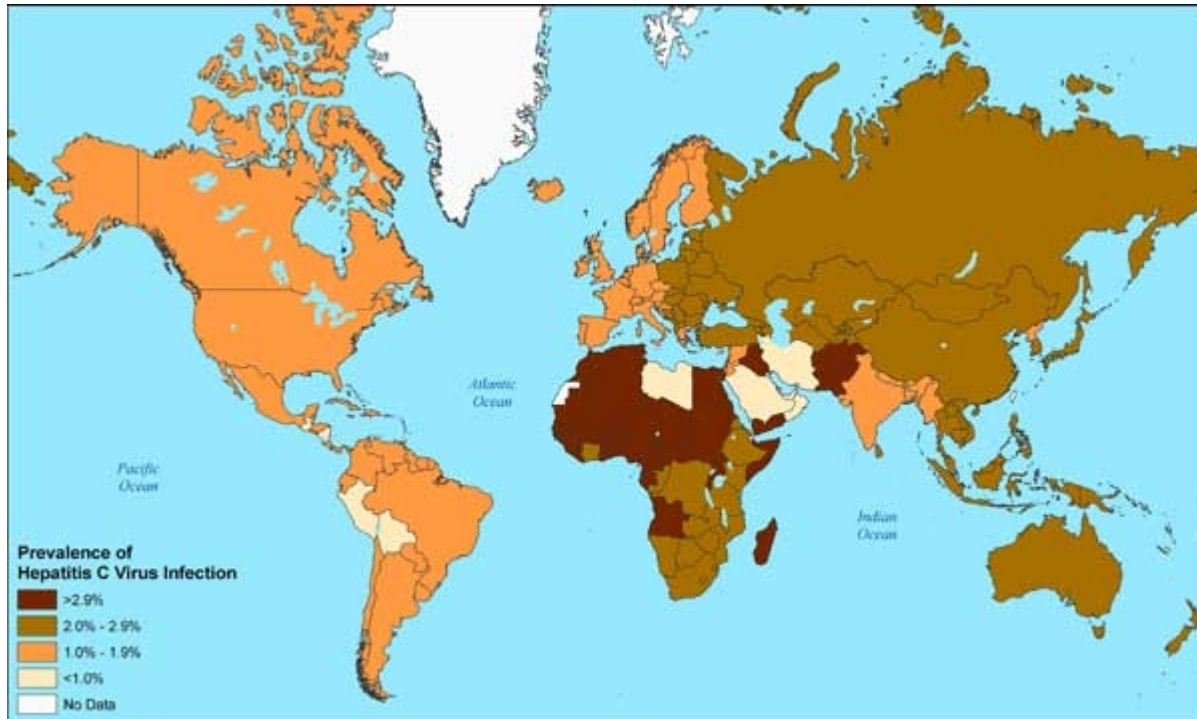
Mode of Transmission

- Transmission of HCV is bloodborne and occurs mainly through sharing drug-injection equipment or from transfusion of untested blood or untreated clotting factors.
- Overseas, unsterile medicinal and other injection practices account for many infections.
- HCV is infrequently transmitted through sexual contact.

Occurrence

- Approximately 3% (170 million) of the world's population has been infected with HCV. For most countries, the prevalence of HCV infection is less than 3%. The prevalence is higher (up to 15%) in some countries in Africa and Asia, and highest (over 15%) in Egypt (Map 5-3).
- The most frequent mode of transmission in the United States is through sharing drug-injecting equipment among injecting drug users.
- For international travelers, the principal activities that can result in blood exposure include—
 - Receiving blood transfusions that have not been screened for HCV
 - Having medical or dental procedures
 - Engaging in activities (e.g., acupuncture, tattooing, or injecting drug use) in which equipment has not been adequately sterilized or disinfected or in which contaminated equipment is reused
 - Working in health-care fields (e.g., medical, dental, or laboratory) that entail direct exposure to human blood.

Map 5-3. Prevalence of hepatitis C infection



(Modified from Perz JF, Farrington LA, Pecoraro C, et al. Estimated global prevalence of hepatitis C virus infection. 42nd Annual Meeting of the Infectious Diseases Society of America; Boston, MA, USA; Sept 30–Oct 3, 2004. Data source: World Health Organization.)

Risk for Travelers

- Travelers' risk for contracting HCV infection is generally low.
- Travelers should be advised to consider the extent of their direct contact with blood, particularly receipt of blood transfusions from unscreened donors, or exposure to contaminated equipment used in health care-related or cosmetic (e.g., tattooing) procedures.

Clinical Presentation

- Most persons (80%) with acute HCV infection have no symptoms.
- If symptoms occur, they may include loss of appetite, abdominal pain, fatigue, nausea, dark urine, and jaundice.
- About 75%–85% of HCV-infected persons develop chronic hepatitis C. The most common symptom of chronic infection is fatigue; severe liver disease develops in 10%–20% of infected persons.

Diagnosis

Two major types of tests are available:

- Immunoglobulin (IgG) antibody assays for anti-HCV and nucleic acid amplification testing (NAT or NAAT) to detect HCV RNA.
- Assays for IgM, to detect early or acute infection, are not available.

- False-negative results early in the course of acute infection can result from the prolonged interval between exposure and onset of illness and seroconversion. Within 15 weeks after exposure—5 to 6 weeks for persons with symptoms—80% of patients will have positive test results for serum HCV antibody.

Treatment

- No specific treatment is available for acute hepatitis C. For patients who remain viremic 2–4 months after acute infection, some experts recommend treatment with pegylated interferon, based on growing evidence that suggests early treatment improves the proportion of patients who achieve a sustained virologic response.
- Several different forms of pegylated interferon as well as ribavirin are available for the treatment of chronic hepatitis C.

Preventive Measures for Travelers

- No vaccine is available, and immune globulin does not provide protection.
- When seeking medical or dental care, travelers should be advised to be alert to the use of medical, surgical, and dental equipment that has not been adequately sterilized or disinfected, reuse of contaminated equipment, and unsafe injecting practices (e.g., reuse of disposable needles and syringes).
 - HCV and other bloodborne pathogens can be transmitted if tools are not sterile or if the tattoo artist or piercer does not follow other proper infection-control procedures (e.g., washing hands, using latex gloves, and cleaning and disinfecting surfaces and instruments).
 - Travelers should be advised to consider the health risks if they are thinking about getting a tattoo or body piercing in areas where adequate sterilization or disinfection procedures might not be available or practiced.

References

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4. The Global Burden of Hepatitis C Working Group. Global burden of disease (GBD) for hepatitis C. *J Clin Pharmacol.* 2004;44(1):20–9.
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