

## HEPATITIS C

*Includes Acute and Chronic Infection*

### Background

This case definition was developed by the Armed Forces Health Surveillance Center (AFHSC) for the purpose of epidemiological surveillance of acute and chronic hepatitis C. Hepatitis C degrades the health and military operational capabilities of those affected and demands significant health care resources for its clinical management. Also, the potential presence of hepatitis C in the blood of volunteer donors increases the risks associated with emergency battlefield blood transfusions.<sup>1</sup> In the U.S. military, potential applicants are considered medically ineligible for service if they have current acute or chronic hepatitis, hepatitis carrier state, clinically apparent hepatitis within the preceding six months, persistent symptoms of hepatitis, or evidence of liver function impairment.<sup>2</sup> Because applicants to military service are not screened for HCV, HCV infected individuals may be able to enter service if they have no signs or symptoms of liver disease, or if they are unaware of, or do not report their infection statuses.

### Clinical Description

Hepatitis C virus (HCV) causes acute and chronic inflammation of the liver in affected individuals. The virus is spread by percutaneous or mucous membrane exposure to infected blood or body fluids. Risk factors include illegal injection drug use, poor infection control practices (e.g., needle stick injuries), high-risk sexual activity, and birth to an infected mother. Most acute HCV infections have no or mild clinical effects; however, most HCV infections (75-85%) persist in the liver of the infected individual. Persistent HCV infections, overtime, may manifest as clinically significant liver disease. Chronic hepatitis C increases the risks of life threatening liver diseases such as cirrhosis and hepatocellular carcinoma, particularly when exacerbated by alcohol use. There is no vaccine available to prevent HCV infection.<sup>3,4</sup>

#### Case Definition and Incidence Rules

*Applicable independently to cases of acute hepatitis C and to cases of chronic hepatitis C*

For surveillance purposes, a case of *acute* or *chronic* hepatitis C is defined as:

- *One hospitalization* with a defining diagnosis of acute or chronic hepatitis C (see ICD9 and ICD10 code lists below) in *any* diagnostic position; or
- *Two outpatient medical encounters*, occurring *within 90 days* of each other, with a defining diagnosis of acute or chronic hepatitis C (see ICD9 and ICD10 code lists below) in *any* diagnostic position; or

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<sup>1</sup> Armed Forces Health Surveillance Center. Viral Hepatitis C, Active Component, U.S. Armed Forces, 2000-2010. *Medical Surveillance Monthly Report (MSMR)*; 2011 August; Vol 18(8): 10-14.

<sup>2</sup> Office of the Secretary of Defense. Department of Defense Instruction 6130.03:Medical Standards for Appointment, Enlistment, or Induction in the Military Services, April 28, 2010. <http://www.dtic.mil/whs/directives/corres/pdf/613003p.pdf>. Accessed: August 11, 2011.

<sup>3</sup> Centers for Disease Control and Prevention. Surveillance for acute viral hepatitis-United States, 2007. *MMWR*. 2009 May 22;58 (No.SS-3).

<sup>4</sup> Alter MJ, Margolis HS, Krawczynski K, et al. The natural history of community-acquired hepatitis C in the United States. *N Engl J Med*. 1992;327:1899-1905.



### **Case Definition and Incidence Rules (cont.)**

- One record of a reportable medical event of a confirmed case of hepatitis C (acute cases only).
- Individuals who have met the case definition of an *acute case* may be considered a subsequent *chronic case* after a single inpatient or outpatient diagnosis of chronic hepatitis C.
- For individuals with diagnoses of both acute and chronic hepatitis C recorded on the same day, all encounters on that day are considered chronic hepatitis C.

#### **Incidence rules:**

For individuals who meet the case definition:

- The incidence date is considered the date of onset documented in a reportable medical event report, or the first hospitalization or outpatient medical encounter that includes a defining diagnosis of acute or chronic hepatitis C.
- An individual is considered an incident case only *once per lifetime* for acute hepatitis C and *once per lifetime* for chronic hepatitis C.

#### **Exclusions:**

- Cases in which the affected individual had a hepatitis C medical encounter prior to the surveillance period.
- Any diagnosis of *acute hepatitis C* recorded *after* a diagnosis of chronic hepatitis C.

### **Codes**

The following ICD9 and ICD10 codes are included in the case definition:

<b>Condition</b>	<b>ICD-10-CM Codes</b>	<b>ICD-9-CM Codes</b>
Hepatitis C (Acute)	B17.1 (acute hepatitis C)	--
	- B17.10 (acute hepatitis C without hepatic coma)	070.51 (acute viral hepatitis C without mention of hepatic coma)
	- B17.11 (acute hepatitis C with hepatic coma)	070.41 (acute viral hepatitis C with hepatic coma)

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Hepatitis C (Chronic)	B18.2 (chronic viral hepatitis C)	070.44 (chronic viral hepatitis C with hepatic coma) 070.54 (chronic viral hepatitis C without mention of hepatic coma)
	- B19.20 (unspecified viral hepatitis C without hepatic coma)	070.70 (unspecified viral hepatitis C without hepatic coma)
	- B19.21 (unspecified viral hepatitis C with hepatic coma)	070.71 (unspecified viral hepatitis C with hepatic coma)
	Z22.52 (carrier of viral hepatitis C)	V02.62 (hepatitis C carrier)

### Development and Revisions

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- In June of 2014 the case definition was updated to include ICD10 codes.
- This case definition for hepatitis C was developed in August 2011 by the Medical Surveillance Monthly Report (MSMR) staff for use in a MSMR article on hepatitis C.<sup>1</sup> The case definition was developed based on reviews of the ICD9 codes, the scientific literature, and previous AFHSC analyses.

#### *Case Definition and Incidence Rule Rationale*

- The 90 day interval between the two outpatient visits is used to increase the sensitivity of the case definition because acute hepatitis C can take one to three months to resolve and repeat encounters are likely to occur within this time period. Further, the time interval permits medical evaluations to distinguish prolonged courses of acute hepatitis C from chronic hepatitis C.

### Reports

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None

### Review

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Jun 2014	Case definition reviewed and updated by the AFHSC Surveillance Methods and Standards (SMS) working group.
Oct 2011	Case definition reviewed and adopted by the AFHSC Surveillance Methods and Standards (SMS) working group.
Aug 2011	Case definition developed by AFHSC MSMR staff.

### Comments

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*Armed Forces Reportable Events:* Hepatitis C is a reportable medical event in the Armed Forces Reportable Events surveillance system.

