

HUMAN IMMUNODEFICIENCY VIRUS SEROSURVEILLANCE

Background

This case definition was developed by the Armed Forces Health Surveillance Branch (AFHSB) for the purpose of epidemiological surveillance of the results of routine screening for antibodies to the human immunodeficiency virus (HIV) in military-associated populations.

The AFHSB surveillance reports using this case definition are based on HIV test results maintained in the serum data table in the Defense Medical Surveillance System (DMSS). In addition to AFHSB surveillance, the individual Services in the Armed Forces conduct and maintain their own HIV surveillance and clinical management programs.

As part of the U.S. military's total-force HIV screening program, civilian applicants for military service are screened for antibodies to HIV during pre-accession medical examinations. Infection with HIV is medically disqualifying from entry into U.S. military service.¹ Since 1986, all members of the active and reserve components of the U.S. Armed Forces have been periodically screened to detect newly acquired HIV infections. In 2004, the Department of Defense (DoD) set a standard testing interval of 2 years for all service members.²

Clinical Description

Acquired immunodeficiency syndrome (AIDS) is a chronic, potentially life-threatening sexually transmitted disease caused by the human immunodeficiency virus (HIV). The virus attacks the body's CD4 T cells and weakens the immune system over time, thereby placing the individual at increased risk of opportunistic infections and certain types of cancer. The symptoms of HIV and AIDS vary depending on the phase of infection. Untreated, progression from primary or acute HIV infection to symptomatic AIDS takes approximately 10 years. While there is no vaccine to prevent HIV and no cure for infection, treatment with highly active antiretroviral therapy (HAART) reduces viral load and slows the progression of disease.³ Service members who are infected with HIV receive clinical assessments, treatments, and counseling and may remain in service as long as they are able to fully perform their military duties.⁴

Case Definition and Incidence Rules

For surveillance purposes, a case of HIV antibody seropositivity is defined by:

- *Two* DoD laboratory reports with a *positive* serologic HIV antibody test result from two different specimens from the same individual; or

(continued on next page)

¹ Personnel and Readiness. Department of Defense Instruction 6130.03, Medical Standards for Appointment, Enlistment, or Induction in the Military Services. 6 May 2018.

² Office of the Under Secretary of Defense for Personnel and Readiness. Department of Defense, Instruction 6485.01. Human Immunodeficiency Virus (HIV) in Military Service Members. 7 June 2013.

³ Centers for Disease Control and Prevention. *HIV*. Available at: <https://www.cdc.gov/hiv/default.html>. Accessed August 2019.

⁴ Armed Forces Health Surveillance Branch. Update: Routine Screening for Antibodies to Human Immunodeficiency Virus, Civilian Applicants for U.S. Military Service and U.S. Armed Forces, Active and Reserve Components, January 2014-June 2019. *Medical Surveillance Monthly Report (MSMR)*. 2019 August; 26(8): 35.



Case Definition and Incidence Rules

- One DoD laboratory report with a *positive* serologic HIV antibody test result from the most recent specimen provided by an individual.
- For both civilian applicants for service and for service members, annual prevalences of HIV seropositivity are calculated by dividing the number of individuals identified as HIV-antibody seropositive during each calendar year by the number of individuals (applicants or service members) tested during the corresponding year.

Incidence rules:

- The prevalence date is considered the date documented on the first DoD laboratory report of an HIV antibody seropositive test result.
- An individual is considered an incident case only *once per lifetime*

Exclusions:

- None

Codes

Condition

HIV antibody seropositivity	For the purposes of this case definition, ICD9 and ICD10 codes are not used for routine surveillance of HIV. Laboratory data from the Department of Defense Serum Repository (DoDSR) <i>only</i> are used to identify HIV antibody seropositive individuals. See <i>Code Set Determination and Rationale</i> below.
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Development and Revisions

- This case definition was developed in 1995 by the *Medical Surveillance Monthly Report (MSMR)* staff for surveillance of HIV antibody seropositivity. The definition was developed based on reviews of the scientific literature.

Case Definition and Incidence Rule Rationale

- NA

Code Set Determination and Rationale

- The AFHSB does not use ICD9 and ICD10 codes (see list below) documented in Military Health System (MHS) electronic health records for routine surveillance of HIV infection. AFHSB also does not use data from the Armed Forces Reportable Medical Event system because HIV infection



is not a Reportable Medical Event. To identify HIV antibody seropositive individuals, AFHSB uses HIV testing result data maintained in the serum table in DMSS because it is considered a more sensitive and specific indicator of incident HIV infection. Furthermore, ICD codes documented in health records may be unspecific for the condition due to coding errors or providers inadvertently using HIV diagnostic codes to indicate a tentative diagnoses or the performance of an HIV screening test. A credible ICD code for HIV infection is dependent upon a positive laboratory test result for such infection.

Condition	ICD-10-CM Codes	ICD-9-CM Codes
Human immunodeficiency virus	B20 (human immunodeficiency virus) <i>Used for HIV disease, AIDS, AIDS-related complex [ARC], AIDS-related conditions, HIV infection, symptomatic</i>	042 (human immunodeficiency virus [HIV] disease)
	Z21 (asymptomatic human immunodeficiency virus [HIV] infection status) <i>Used for HIV infection, HIV positive, HIV, Known HIV, HIV virus, HIV status, HIV test positive, HIV infection, asymptomatic</i>	V08 (asymptomatic human immunodeficiency virus [HIV] infection status)
	Z11.4 (encounter for screening for human immunodeficiency virus [HIV])	<i>Translated code too broad to be included</i>

Reports

AFHSB reports on the test results of routine screening for antibodies to HIV in civilian applicants for U.S. military service and the active and reserve components of the U.S. Armed Forces in the following reports:

- Annual *MSMR* update; published in August

Review

Oct 2019	Case definition reviewed and updated by the AFHSB Surveillance Methods and Standards (SMS) working group.
Jun 1995	Case definition developed and adopted by the Army Medical Surveillance Activity (AMSA) <i>MSMR</i> staff.

Comments

- None

