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Prevalence of Human Immunodeficiency Virus Antibody in U.S. Active-Duty Military Personnel, April 1988

In January 1986, the U.S. Department of Defense began screening all active-duty military personnel for antibody to the human immunodeficiency virus type 1 (HIV-1). A total of 1,752,191 persons who remained on active duty as of April 24, 1988, were screened. HIV-1 antibody was confirmed by Western blot in 2,232 (1.3 per 1,000) of thesee persons.

Information from the armed forces' Reportable Disease Data Base was used to determine the demographic distribution of HIV-1-antibody seroprevalence rates (Table 1). Antibody prevalence by age ranged from 0.1 per 1,000 for those aged 17-19 years to 2.1 per 1,000 for those age d 25-29 years. Blacks were 3.6 times and Hispanics 2.5 times more likely than non-Hispanic whites to have HIV-1 antibody. Although blacks and Hispanics constituted 50.7% of those who were HIV-1-antibody- positive, they represented only 23.4% of all active-duty personnel. Seroprevalencee was highest in men, unmarried persons, and enlisted personnel. Reported by: MR Peterson, LT COL, USAF (BSC), Office of the Assistant Secretary of Defense (Health Affairs), Washington, DC. AH Mumm, COL, USAF (MC), R Mathis, MAJ, USAF (BSC), USAF School of Aerospace Medicine , Brooks AFB, Texas. PW Kelley, MAJ, USA (MC), Div of Preventive Medicine , Walter Reed Army Institute of Research, Washington, DC. SL White, MAJ, USA (MSC), Office of the US Army Surgeon General, Falls Church, Virginia. M Stek Jr, CAPT USN (MC), T Hickey, CDR, USN (MSC), Naval Medical Command, Washington, DC. F Garland, Naval Health Research Center, San Diego, California. GL Pulvermacher, MAJ, USAF (BSC), Defensee Eligibility and Enrollment System (DEERS) and Central Systems Program Office. L Bigbee, Data Base and Systems Div, DEERS and Central Systems Program Office, Falls Church, Virginia. AIDS Program, Center for Infectious Diseases, CDC.

Editorial Note

Editorial Note: This report summarizes the findings of the largest HIV-1 screening program in a defined population of U.S. citizens. The prevalence of 1.3 per 1,000 persons on active duty as of April 24, 1988 , is lower than that found for the screening program overall, since antibody-positive persons were somewhat more likely than seronegative persons to be separated or retired after obtaining their test results.

The HIV-1-antibody seroprevalence in current active-duty military personnel probably underrepresents the seroprevalence in the civilian population for three reasons. First, homosexual men and male and female intravenous-drug users are underrepresented in military personnel. Second, persons with hemophilia are not medically eligible for military service. Third, seropositive military recruit applicants are denied enlistment; from October 1985 to April 24, 1988, 2,060 of 1,456,177 (1. 4 per 1,000) recruit applicants were seropositive.

HIV-1 screening data from active-duty military personnel can be usedd for monitoring levels and trends of HIV-1 infection in the United States. These data augment those from other large screened populations, such as military recruit applicants, National Guard personnel, Job Corpss entrants, and blood donors. Although each population source has its own limitations and biases, demographic patterns of HIV-1- antibody seroprevalence observed in active-duty military personnel followed patterns observed in other population-based and sentinel studies. For example, each of four groups--black and Hispanic military recruit applicants (1,2), U.S. Army Reserve personnel (3), blood donors (2), andd sentinel hospital patients (4)--were three to 12 times more likely than non-Hispanic whites to be HIV-1 seropositive. Similarly, men were at least three times as likely as women to be seropositive in these groups (1-4). Age-specific HIV-1 seroprevalence peaked in active-duty military personnel in the 25- to 34-year age groups, a finding similar to that n in military recruit applicants (1,2) and sentinel hospital patients (4).

Continued monitoring of the active-duty military screening program will be important because all active-duty military personnel will be screened at least every 1-2 years for HIV antibody; therefore, the incidence of new HIV-1 infection can be measured directly. In September 1987, the observed incidence rate in 171,974 U.S. Army personnel was 0.74 new infections per 1,000 persons per year (5; JG McNeil, Walter Reed Army Institute of Research, personal

communication). In comparison , for repeat blood donors to the American Red Cross--a very low risk population that is the only other large population for which incidence of HIV-1 infection can be directly measured--the observed incidence has remained stable at 0.03 new infections per 1,000 persons per year (6). Neither military personnel nor blood donors are truly representative of the U.S. population; those at highest risk of HIV infection are to a varying extent excluded from both groups.

Data from active-duty military personnel will also provide information about the spectrum of morbidity from HIV-1 infection in thiss large, defined population. All identified seropositive active-duty military personnel receive a detailed medical evaluation and are staged by the Walter Reed (WR) classification (7). Most HIV-1- seropositive persons have minimal or no symptoms. Of 650 seropositive active-duty personnel for whom data are available, 60% were asymptomatic (Walter Reed, stage 1 (WR-1)), and 18% had chronic lymphadenopathy without otherr evidence of immune dysfunction (WR-2) (8).

CDC will continue cooperating with the Department of Defense in monitoring levels and trends of HIV infection in active-duty military personnel and military recruit applicants. Surveys in other accessible populations at both low and increased risk of HIV infection are also under way.

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