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NAVAL MEDICAL SURVEILLANCE REPORT

N M S R

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Data in the NMSR are provisional, based on reports and other sources of data available to the Navy Environmental Health Center. Notifiable conditions are classified by date of report. Only cases submitted as confirmed are included.

COMMUNICABLE DISEASE

FOODBORNE AND WATERBORNE ILLNESS TRENDS, U. S. NAVY

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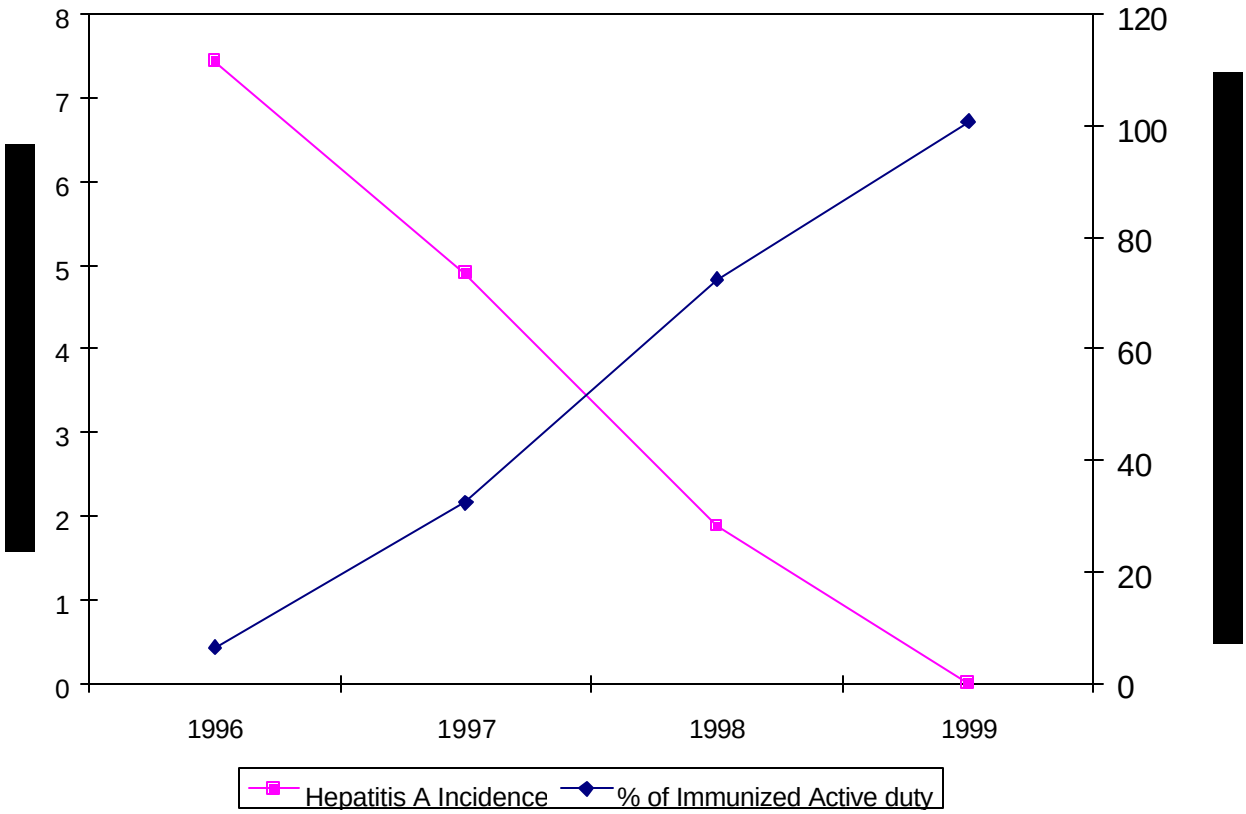
This analysis is a continuation to the *Foodborne and Waterborne Illness Trends, U.S. Navy* article published in the Jan–Mar 00 issue of this publication. The four-year trend of Hepatitis A was tracked utilizing data from the Navy Environmental Health Center, *Reported Communicable Diseases in Active Navy and Marine Corps Personnel: 10 Year Report, 1988-1997* for 1996 and 1997 and Naval Disease Reporting

Figure 1. Incidence of Hepatitis A Indexed to Percentage of U.S. Navy Active Duty Inoculated



Naval Medical Surveillance Report

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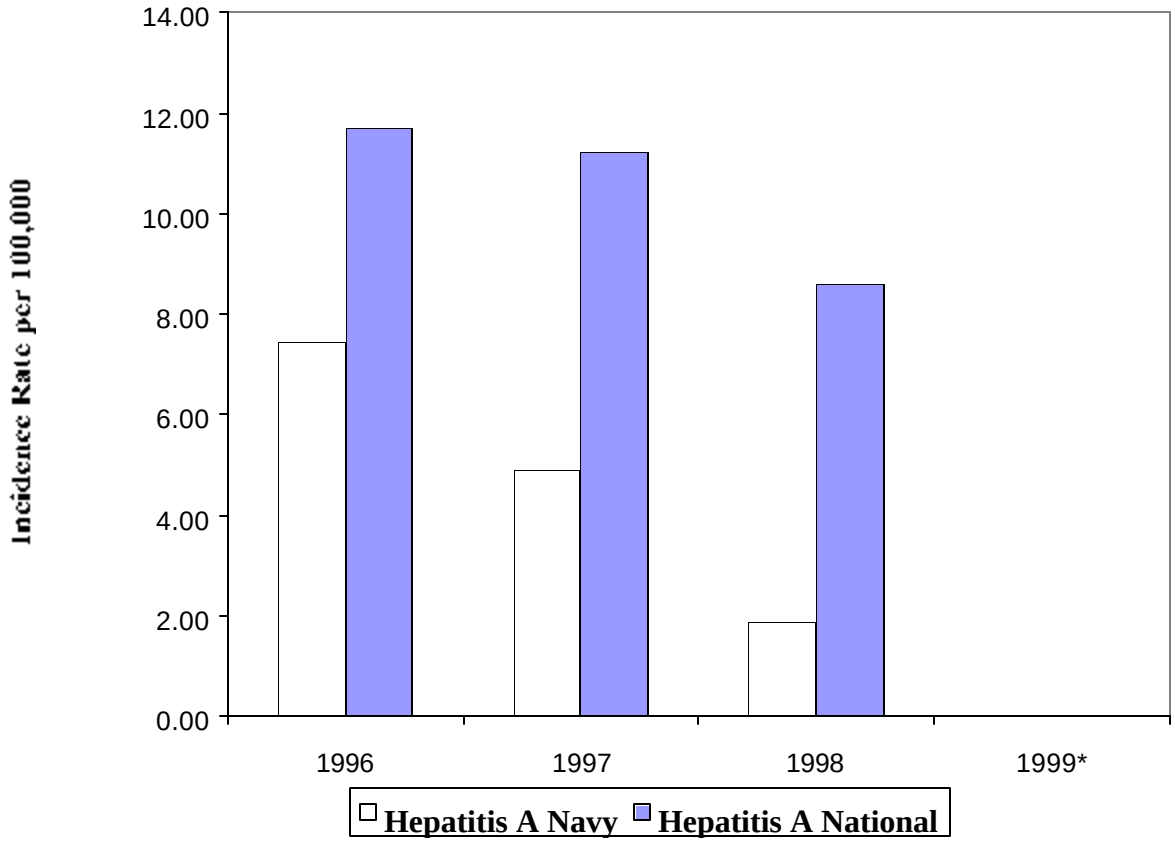
System (NDRS) for 1998 and 1999. Immunization data was provided by the Naval Medical Information Management Center (NMIMC). National data was obtained from the Center for Disease Control and Prevention (CDC). Figure 1. shows a sharp and continuous decline in numbers of active duty Navy reported cases for Hepatitis A to 1999. There were no cases of Hepatitis A in active duty Navy members in 1999, reported through NDRS.

As hypothesized by the previous article, Figure. 1 indicates a strong correlation between the decline in incidence of Hepatitis A and the institution of the Hepatitis A vaccine for all active duty Navy personnel. Hepatitis A vaccine was licensed in 1995, by the Food and Drug Administration (FDA) and is required for all U.S. active duty Naval personnel, since 1996.

Figure 2. compares Navy data with data from the general U.S. population, showing similar trends with Hepatitis A. While the incidence of Hepatitis A is on a steady decline in the general population for the same period, the U. S. Navy downward trend is much sharper. We contend this difference resulted from the current Navy policy of immunizing all active duty personnel against Hepatitis A.

Figure 2. Incidence Rates per 100,000 of Hepatitis A, U.S. Navy Compared to National Data 1996-1999



*** 1999 Report on U.S. Population was unavailable. 1999 Navy has no reported cases of Hepatitis**

HIV AMONG ACTIVE DUTY MEMBERS OF THE U.S. NAVY AND U.S. MARINE CORPS

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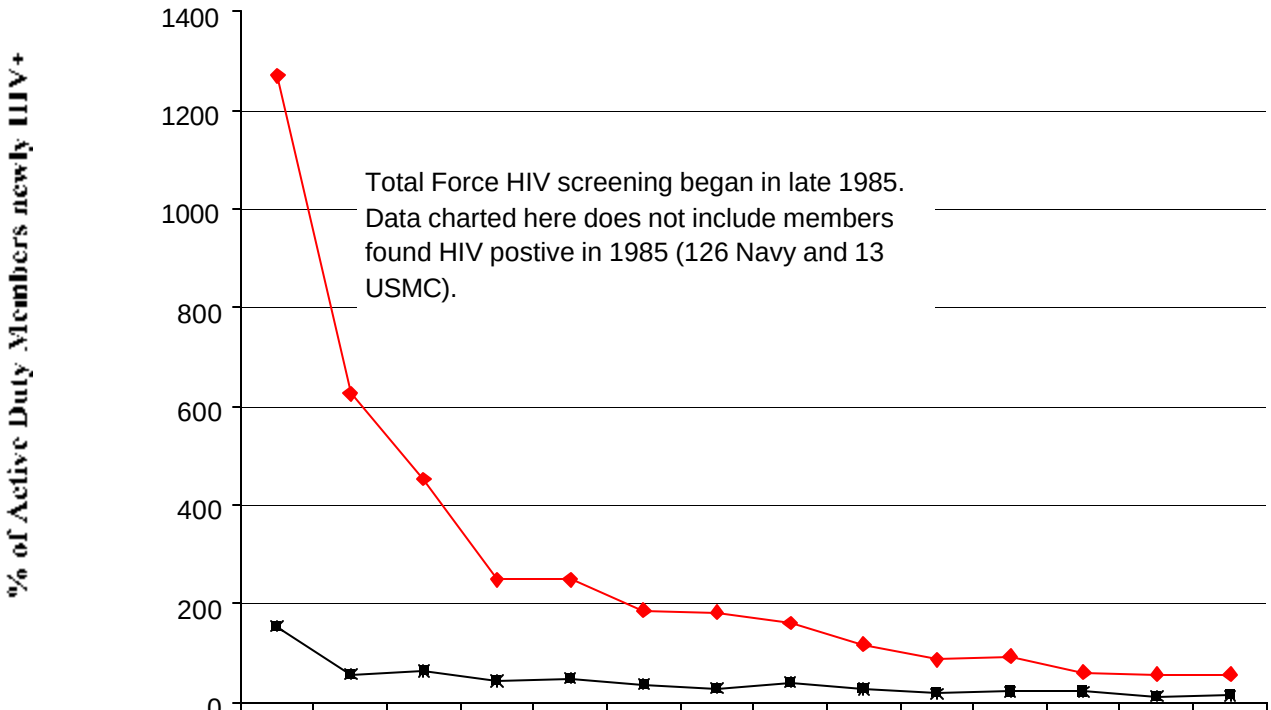
The Department of Defense (DoD) began testing all active duty military personnel for HIV in 1985. The total force screening program sought to test all active duty members at least once within the first 2 years, and again during the next 2 years.

Newly identified cases of HIV infection among active duty Sailors and Marines from 1986-1999 are shown in Figure 1. Note that Figure 1 plots newly identified infections, not necessarily newly acquired infections. The distinction is important, particularly in

Figure 1. Newly Identified HIV Positive Active Duty Members
Total Number of New Cases by Year: Navy and USMC, 1986-1999



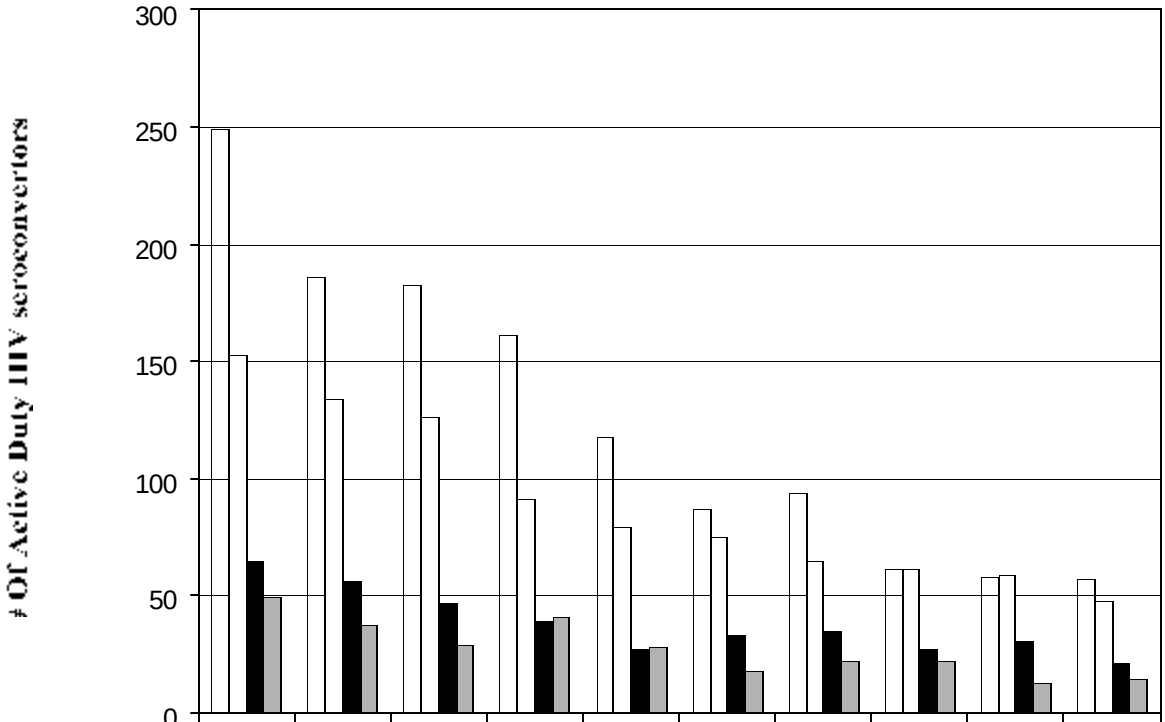
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Navy	1271	626	453	249	249	186	183	161	118	87	94	61	58	57
USMC	155	58	64	43	49	37	29	41	28	18	22	22	13	14

Source: Bethesda NNMC data; March 2000
Total force screening began in late Dec 1985. Data here does not include 1985 HIV + members

the early two or three years, where the number of positive members is more an indication of pre-existing plus newly acquired HIV infection (prevalence). Predictably, the first few years of testing identified higher numbers of HIV positive members. Since all new accessions into the Navy and U.S. Marine Corps (USMC) are screened for HIV infection (and people who are positive are excluded), the number of HIV infections identified in later years is more an indication of newly acquired infections (annual incidence).

HIV among active duty members of the Navy and USMC, along with those of the U.S. Army and U.S. Air Force (USAF) from 1990-1999 are shown in Figure 2. Note that these data are **not** rates. They are numerator data **only**.

Figure 2. Number of HIV Seroconvertors Active Duty Members of the Army, Navy, USMC, and USAF, 1990-1999



	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Navy	249	186	183	161	118	87	94	61	58	57
Army	153	134	126	91	79	75	65	61	59	48
USAF	65	56	47	39	27	33	35	27	31	21
USMC	49	37	29	41	28	18	22	22	13	14

Sources:

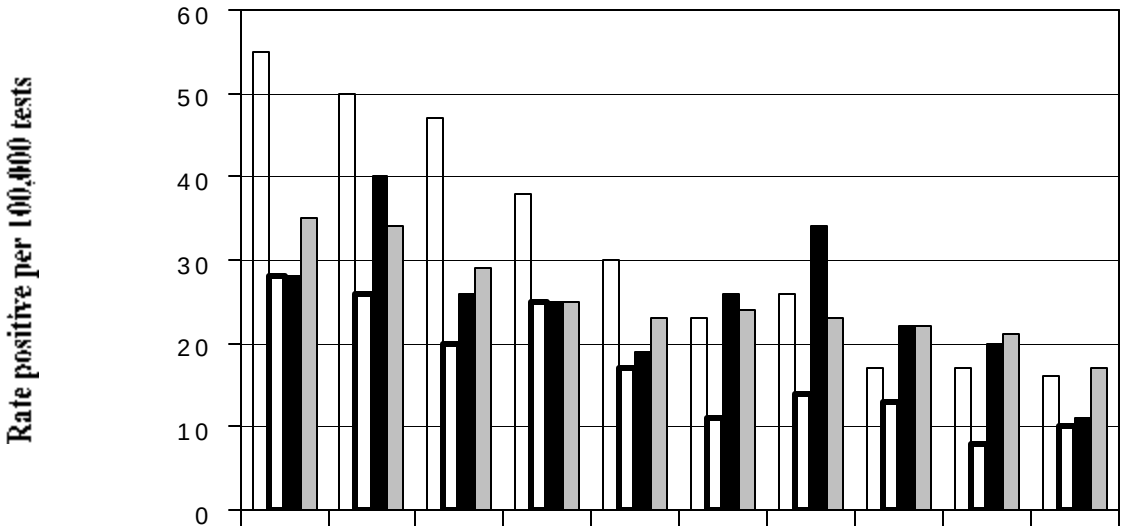
1. **USN and USMC: NEHC; NMSR, Vol 1 No 1, Jan-Mar 98, p12; NNMC Bethesda data, March 2000**
2. **USAF: 311 HSW/Force Protection and Surveillance, unpublished data, Oct 99; NNMC Bethesda data, March 2000**
3. **Army: MSMR, Vol 5, No 5, pp3, Jun/Jul 99; NNMC Bethesda data, March 2000**

These data can **not** be used alone to draw conclusions about HIV infection in these populations. These data do demonstrate that new HIV infections continue to occur in all of the military services. In 1999, 140 active duty members of the military services tested HIV positive. This total includes 57 Sailors and 14 Marines.

HIV seroconversion rates (cases per 100,000 tested) among active duty members of the Navy, USMC, Army, and USAF; from 1990-1999, are shown in Figure 3. Over the period of a decade, these rates ranged from a high of 40 (USAF, 1991) to a low of 8 (USMC, 1998). In 1999, HIV seroconversion rates were: USMC-10, USAF-11, Navy-16, and Army-17.

HIV screening policies of the Navy/USMC, Army, and USAF differ somewhat, and should be taken into account when comparing data. Standard policies for all services require screening of active duty members upon presentation in prenatal clinics, upon diagnosis with or exposure to an STD, drug or alcohol abuse incidents, occupational blood exposure incidents, and diagnosis of active tuberculosis. All the military services also screen medical personnel annually, and all members prior to separation/retirement and prior to overseas deployment/ assignment.

Figure 3. HIV Seroconversion Rates (cases Per 100,000 tested) Active Duty Members of the Navy, USMC, USAF and Army 1990-1999



	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Navy	55	50	47	38	30	23	26	17	17	16
USMC	28	26	20	25	17	11	14	13	8	10
USAF	28	40	26	25	19	26	34	22	20	11
Army	35	34	29	25	23	24	23	22	21	17

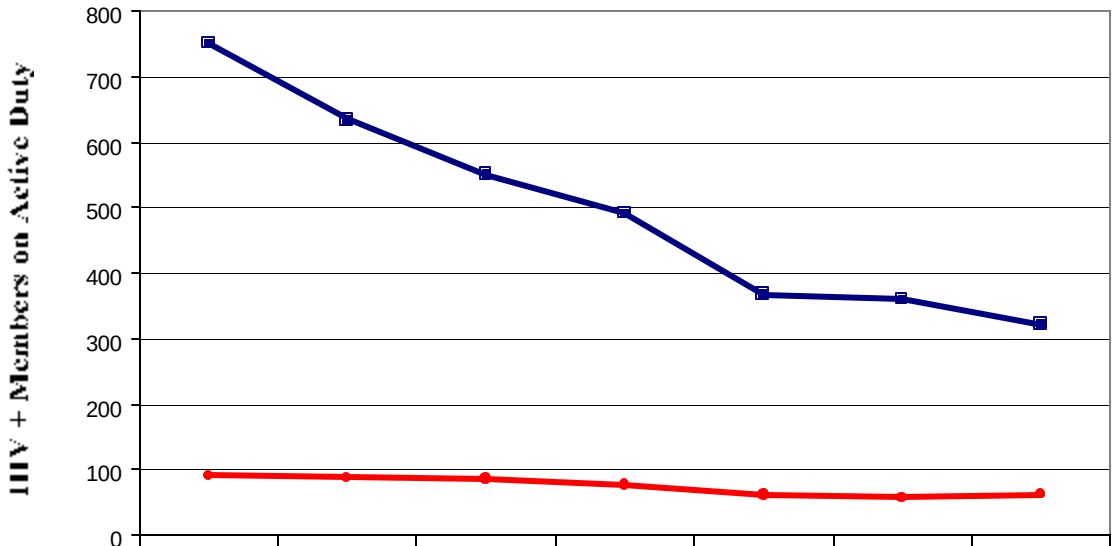
In addition to these standard policies, the Army screens all members not less than biennially while the Navy and USMC conduct annual screening of members assigned to overseas or deployable units. This policy results in nearly universal screening of Marines.

These policies are given in DoD Directive 6485.1 (all services), Secretary of the Navy Instruction (SECNAVINST) 5300.30C (Navy and USMC), Army Regulation 600-110; and Air Force Instruction 48-135. The policy variations yield different levels of screening coverage. The average number HIV tests conducted per 1000 active duty members from 1990-1999 by service were, from greatest to least, USMC-903, Navy-828; Army-605; and USAF-363. Screening fewer people at low risk(i.e. universal annual screening) may affect seroconversion rates compared to more highly targeted screening (i.e. incident-based screening). Hence, caution must be used when comparing data between the Navy/USMC, Army and USAF.

Comparisons of military rates to national rates should also be made cautiously. Two obvious differences between these groups include age-range, and the selective pressures of HIV testing practice (voluntary versus mandatory). Note that the military data presented here do not include testing of prospective recruits. Recruits who test positive for HIV are not accepted into military service.

The number of HIV positive Sailors and Marines on active duty by year from 1993-1999 are shown in Figure 4.

Figure 4. HIV Positive Sailors and Marines on Active Duty Navy and USMC, 1993-1999 (all races and genders)



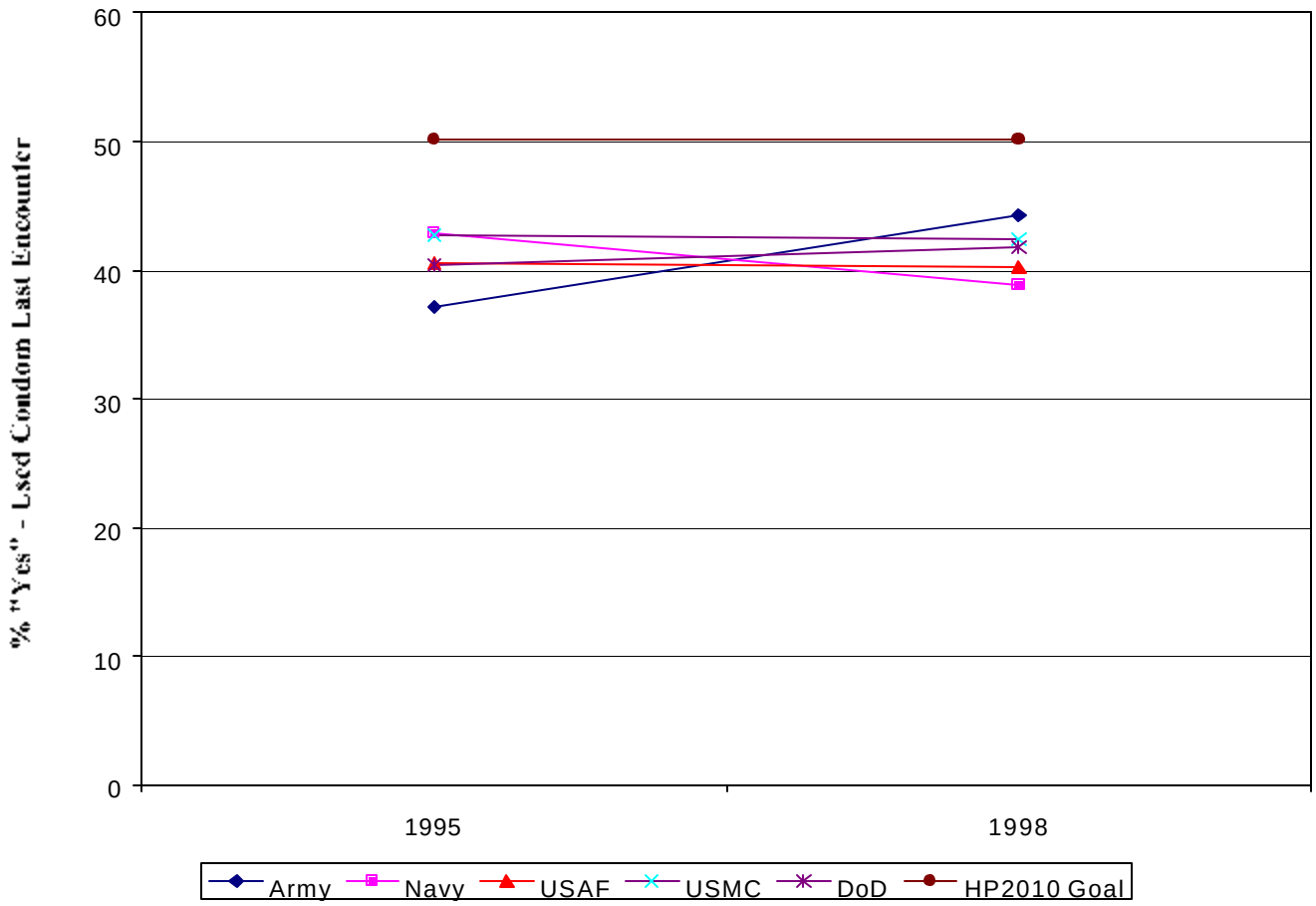
	1993	1994	1995	1996	1997	1998	1999
Navy	751	634	551	492	368	360	322
USMC	91	88	86	76	62	57	63

Source: 1993-1998 data from Navy Central HIV Program, NNMC Bethesda; 3 May 99; 1999 (mid-2000) data from Navy Pers Com, 18 Jul 00.

The 1995 and the 1998 Department of Defense (DoD) *Survey of Health Related Behaviors Among Military Personnel* (Bray et al., 1995 & 1999) include data on self-reported condom use at last sexual encounter by unmarried active duty military personnel in 1995 and 1998. This data is shown in Figure 5. Condom use at last sexual encounter among sexually active unmarried personnel was 42% for the total DoD, (Army -44%, USMC-42%, USAF-40%, and Navy-39%). Condom use was lowest for Navy personnel and lower for enlisted personnel when compared to officers for all services. Further, more than half of all military personnel who had one or more casual partner used condoms inconsistently if they used them at all.

(cont. on page 15)

Figure 5. Condom Use at Last Encounter Among Sexually Active Military Personnel 1995 & 1998
Source: DOD Health Related Behaviors Among Military Personnel, March 1999



NAVY DISEASE REPORTING SYSTEM (NDRS)

SUMMARY OF 2000 DATA

Tables 1 and 2 display the Medical Event Reports (MERs) received at Navy Environmental Health Center (NEHC) as of 30 Jun 2000. Interested readers may calculate rates by dividing the frequencies by estimated mid-year strength of 370,053 for USN and 171,607 for USMC. Table 1 shows active duty only. Table 2 shows non active duty beneficiaries.

Table 1. Reportable Medical Events, Combined Navy & Marine Corps Active Duty, Case Frequencies, 1 Jan - 30 Jun, 2000

Disease	Total	USN	USMC	Disease	Total	USN	USMC
Amebiasis	2	2	0	Lyme Disease	0	0	0
Anthrax	0	0	0	Malaria	2	1	1
Biological warfare agent exposure	0	0	0	Measles	0	0	0
Bites, rabies vaccine & human rabies immune	10	10	0	Meningitis (aseptic, viral)	4	3	1
Bites, venomous animal	0	0	0	Meningitis (bacterial other than Meningococcus)	0	0	0
Botulism	0	0	0	Meningococcal disease	0	0	0
Brucellosis	0	0	0	Mumps	1	1	0
Campylobacteriosis	3	2	1	Occupational exposure to blood borne pathogens	0	0	0
Carbon Monoxide poisoning	0	0	0	Onchocerciasis	0	0	0
Chemical warfare agent exposure	0	0	0	Pertussis	0	0	0
Chlamydia	215	145	70	Plague	0	0	0
Cholera	1	0	1	Pneumococcal pneumonia	0	0	0
Coccidioidomycosis	0	0	0	Poliomyelitis	0	0	0
Cold injuries	0	0	0	Psittacosis (Ornithosis)	0	0	0
Cryptosporidiosis	0	0	0	Q Fever	0	0	0
Cyclospora	0	0	0	Rabies, clinical human	0	0	0
Dengue fever	0	0	0	Relapsing fever	0	0	0
Diphtheria	0	0	0	Rift Valley fever	0	0	0
E. Coli 0157:H7 infection	0	0	0	Rocky-Mountain Spotted Fever	0	0	0
Ehrlichiosis	0	0	0	Rubella	0	0	0
Encephalitis	0	0	0	Salmonellosis	2	2	0
Filariasis	0	0	0	Schistosomiasis	0	0	0
Giardiasis	7	7	0	Shigellosis	0	0	0
Gonorrhea	49	35	14	Smallpox	0	0	0
Haemophilus influenza, type b	0	0	0	Streptococcal disease, Group A	0	0	0
Hantavirus infection	0	0	0	Syphilis	4	3	1
Heat injuries	4	1	3	Tetanus	1	1	0
Hemorrhagic fever	0	0	0	Toxic shock syndrome	0	0	0
Hepatitis, A (acute, symptomatic only)	0	0	0	Trichinosis	0	0	0
Hepatitis, B (acute, symptomatic only)	1	1	0	Trypanosomiasis	0	0	0
Hepatitis, C (acute, symptomatic only)	2	1	1	Tuberculosis, pulmonary active	1	1	0
Influenza (confirmed)	0	0	0	Tularemia	0	0	0
Lead poisoning	0	0	0	Typhoid fever	0	0	0
Legionellosis	0	0	0	Typhus	0	0	0
Leishmaniasis	0	0	0	Urethritis (non gonococcal)	13	12	1
Leprosy (Hansen's disease)	0	0	0	Varicella	4	4	0
Leptospirosis	0	0	0	Yellow fever	0	0	0
Listeriosis	0	0	0				

Table 1. Reportable Medical Events, Combined Navy & Marine Corps Beneficiaries, Case Frequencies, 1 Jan - 30 Jun, 2000

Disease	Total	USN	USMC	Disease	Total	USN	USMC
Amebiasis	0	0	0	Lyme Disease	0	0	0
Anthrax	0	0	0	Malaria	0	0	0
Biological warfare agent exposure	0	0	0	Measles	7	6	1
Bites, rabies vaccine & human rabies immune	2	2	0	Meningitis (aseptic, viral)	0	0	0
Bites, venomous animal	0	0	0	Meningitis (bacterial other than Meningococcus)	0	0	0
Botulism	0	0	0	Meningococcal disease	1	1	0
Brucellosis	0	0	0	Mumps	0	0	0
Campylobacteriosis	0	0	0	Occupational exposure to blood borne pathogens	0	0	0
Carbon Monoxide poisoning	0	0	0	Onchocerciasis	0	0	0
Chemical warfare agent exposure	0	0	0	Pertussis	0	0	0
Chlamydia	91	81	10	Plague	0	0	0
Cholera	0	0	0	Pneumococcal pneumonia	0	0	0
Coccidioidomycosis	2	2	0	Poliomyelitis	0	0	0
Cold injuries	0	0	0	Psittacosis (Ornithosis)	0	0	0
Cryptosporidiosis	0	0	0	Q Fever	0	0	0
Cyclospora	0	0	0	Rabies, clinical human	0	0	0
Dengue fever	0	0	0	Relapsing fever	0	0	0
Diphtheria	0	0	0	Rift Valley fever	0	0	0
E. Coli 0157:H7 infection	0	0	0	Rocky-Mountain Spotted Fever	0	0	0
Ehrlichiosis	0	0	0	Rubella	3	3	0
Encephalitis	0	0	0	Salmonellosis	0	0	0
Filariasis	0	0	0	Schistosomiasis	0	0	0
Giardiasis	0	0	0	Shigellosis	0	0	0
Gonorrhea	6	6	0	Smallpox	0	0	0
Haemophilus influenza, type b	12	10	2	Streptococcal disease, Group A	0	0	0
Hantavirus infection	0	0	0	Syphilis	0	0	0
Heat injuries	0	0	0	Tetanus	0	0	0
Hemorrhagic fever	0	0	0	Toxic shock syndrome	0	0	0
Hepatitis, A (acute, symptomatic only)	2	1	1	Trichinosis	0	0	0
Hepatitis, B (acute, symptomatic only)	0	0	0	Trypanosomiasis	3	2	1
Hepatitis, C (acute, symptomatic only)	0	0	0	Tuberculosis, pulmonary active	0	0	0
Influenza (confirmed)	0	0	0	Tularemia	0	0	0
Lead poisoning	0	0	0	Typhoid fever	0	0	0
Legionellosis	0	0	0	Typhus	0	0	0
Leishmaniasis	0	0	0	Urethritis (non gonococcal)	0	0	0
Leprosy (Hansen's disease)	0	0	0	Varicella	0	0	0
Leptospirosis	0	0	0	Yellow fever	0	0	0
Listeriosis	0	0	0				

Errata - The following diseases should be added to the Summary of 1999 Data on Page 3 of the October-Dec 1999 issues (Vol 2:No 4). These represent a the number of cases which were not included in the previously published table.

Disease	Total	USN	USMC
Chlamydia	1656	892	764
Gonorrhea	852	402	182
E. coli infection	0	0	0
Varicella	71	42	28

GLOBAL SURVEILLANCE OF EMERGING DISEASES

WEST NILE VIRUS
A SHORT DESCRIPTION OF KNOWN EPIDEMIOLOGY AND VECTOR BIOLOGY

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CDR Jim LaMar, MC, USN - Navy Environmental and Preventive Medicine Unit Two, Norfolk, VA

West Nile virus (WNV) is the most widespread flavivirus, distributed through Africa, Europe, and Asia, and possibly Australia and the Pacific Islands. Like all other known members of the Japanese encephalitis complex, WNV is mosquito borne, and like many in this group can cause serious illness or death in man. Sporadic outbreaks have occurred throughout Africa and the middle east, in Russia and France, and recently in Italy, Romania, Israel, and the Czech Republic.

WNV was first identified in the United States in the fall of 1999, following an outbreak of encephalitis in New York. Sixty two confirmed cases with seven deaths occurred in and around New York City between August and October. Initial diagnosis was St. Louis encephalitis (SLE), a closely related flavivirus. Like SLE, WNV circulates between birds through infected bird-feeding mosquitoes. Since October WNV has been found in 18 species of birds, in New York, New Jersey, and Connecticut and in approximately 50% of dead birds tested. Two common mosquito species, *Culex pipiens* (New York and Connecticut) and *Aedes vexans* (Connecticut) have been found virus-positive. A major surveillance effort is underway in Atlantic and Gulf Coast states in collaboration with CDC. Surveillance activities on DoD installations, particularly in the Northeast, are also increased. Because dynamics of the New York outbreak appear to mimic Old World epidemics, the following information will be of interest to DoD health care providers and vector surveillance and control personnel.

The virus was first isolated in 1937 from human blood in the West Nile district of Uganda. It has since been isolated from 43 species of mosquitoes, some hard and soft ticks, and from several species of birds. Wild birds are the primary vertebrate hosts, and generally have a symptomatic infection with high, long-term viremia. Bird migration appears to be important in distribution and intermittent epidemics of WNV. In Africa, a rural or sylvatic cycle (bird-mosquito-bird) exists; in Europe there is an urban cycle of domestic/synanthropic bird-mosquito-bird (and occasionally man) similar to SLE in the US. Similar to Eastern Equine encephalitis, WNV causes Near Eastern encephalitis in horses, which results in a moderate to high case fatality rate. WNV causes illness in sheep but is asymptomatic in dogs and pigs.

Most mosquito vectors are in the genus *Culex*, and *C. pipiens* is most closely associated. Table 1 lists some species which

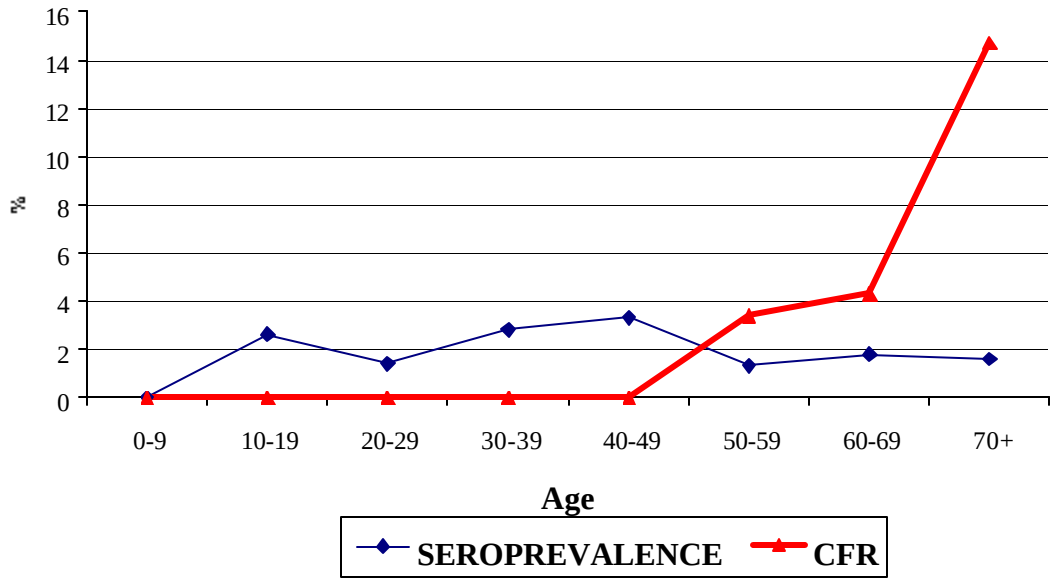
Table 1. Mosquito species found naturally infected with WNV

SPECIES	SPECIES
Aedes aegypti	*Culex antennatus*
A. albothorax	*C. guiarti*
A. cantans	*C. modestus*
A. caspius	*C. neavei*
A. vexans	*C. pipiens*
	C. quinquefasciatus
Anopheles maculipennis	*C. theileri*
	C. tritaeniorhynchus
Coquillettidia metallica	*C. univittatus*
	C. vishnui

have been found naturally infected. *Aedes vexans*, which was found positive in Connecticut after the New York outbreak, was the most abundant species (9,100 of 11,334) collected during an outbreak in the Czech Republic in 1997, but none were WNV positive. During the Czech outbreak, *C. pipiens* was the lone species found WNV positive, and only 232 were collected.

WNV infection in humans cannot be distinguished clinically from other central nervous system (CNS) infections, so in order to diagnose it clinicians must maintain a high index of suspicion. It may result in a febrile illness of variable severity associated with neurologic symptoms ranging from headache to aseptic meningitis or encephalitis. Serosurveys indicate subclinical infections far outnumber clinical cases. The estimated ratio in Romania during a 1996 epidemic was between 140-320:1 with as many as 96,000 infected. IgG and IgM antibody prevalence indicate a relatively even distribution of infection among all age groups and between genders. Occurrence and severity of illness increase with age. In the young, healthy active duty population most patients will probably either be asymptomatic or present with only a mild viral syndrome (fever, headache). Those who are infected and at increased risk for significant morbidity/mortality are those who have a compromised immune system; elderly, infants, HIV infected, and patients on steroids or chemotherapy. Almost all fatalities occur in people over 50 years old. Most of the cases in New York City last fall (and all of the deaths) were in the elderly. Figure 1 demonstrates the same trend during the epidemic in Romania.

Figure 1. Age Distribution of Infection and Mortality in Romania Outbreak, 1996



CFR = Case Fatality Rate

The epidemic in Romania included 767 illnesses that met the case definition for WNV. Of those, 393 were laboratory confirmed. The pattern of illness was similar to that in New York (Table 2.). During the outbreak in Romania, 96% of 5577 mosquitoes collected were *C. pipiens*, and virus was recovered from one pool. No other mosquito species was implicated. Among birds, 41% of 73 domestic fowl had WNV antibodies, and a small number of wild birds were positive. Two risk factors were strongly significant: mosquitoes in the home, and flooded basements. More specifically, flooded basements were found to routinely have leaking fresh water and sewer pipes, so standing water was high in organic content and attractive for *C. pipiens* oviposition. Presence of domestic fowl or rainwater collection containers showed no correlation. Relatively clean rainwater would support other mosquito species, but would not be attractive to *C. pipiens.*

Table 2. Reported Symptoms of WNV Cases; New York, 1999; Romania 1996

Symptom	% of Hospitalized Cases		% of Serosurvey Positives
	Romania (n=393)	New York (n=59)	New York (n~136)
Fever	91	90	100
Chills	45		
Headache	77	46	89
Altered Mental Status	34	44	
Photophobia		15	
Coma	13		
Myalgia		14	100
Arthralgia		17	76
Muscle Weakness		54	
Stiff Neck	57	19	
Fatigue			87
Vomiting	53		
Rash		22	
Clinical Presentation			
Encephalitis	16		
Encephalitis With Muscle Weakness		39	
Encephalitis Without Muscle Weakness		22	
Meningioencephalitis	44		
Aseptic Meningitis	40	32	
Fever And Headache Only		7	
CFR (%)	4.3	12	

The WNV strain associated with the New York epidemic has been shown to be most closely related to a strain recovered from a dead goose in Israel in 1998. Route of entry into the US is now believed to have been by an infected traveler or by (legally or illegally) imported infected birds. The concern that WNV would become established within the US was heightened when evidence of infection was found in over wintering mosquitoes and in a red-tailed hawk in Connecticut in February. If migratory birds remain healthy (mobile) and viremic, the virus could spread throughout the eastern states quickly. It is critical that physicians monitor illnesses which could be WNV, and that the vector control community monitors mosquito populations, particularly *C. pipiens.*

Incubation is three to six days, with peak viremia four to eight days after infection. Symptoms can include headache, confusion or other alteration in sensorium, nausea, and vomiting. Signs may include fever, meningismus, cranial nerve palsies, paresis or paralysis, sensory deficits, altered reflexes, convulsions, abnormal movements, and coma of varying degree. Diffuse muscle weakness was identified as a unique symptom in the New York outbreak. A history of mosquito bites may also be helpful in making a diagnosis.

The national case definition of arboviral encephalitis (including WNV) should be used to classify cases as confirmed or probable. Those definitions are:

a) Probable: A clinically compatible case occurring during a period when West Nile Virus transmission is likely with supportive serology. Supportive serology is defined as a stable (less than or equal to twofold change) elevated antibody titer to an arbovirus (e.g., greater than or equal to 320 by hemagglutination inhibition, greater than or equal to 128 by complement fixation, greater than or equal to 256 by immuno-fluorescence, and greater than or equal to 160 by neutralization, or greater than or equal to 400 by enzyme immunoassay IgM).

b) Confirmed: A clinically compatible case that is laboratory confirmed. Laboratory criteria for diagnosis include one of the following: 1) fourfold or greater change in serum antibody titer, or 2) isolation of virus from or demonstration of viral antigen or genomic sequences in tissue, blood, cerebrospinal fluid (CSF), or other body fluid, or 3) specific immunoglobulin M (IgM) antibody by enzyme immunoassay (EIA) antibody captured in CSF or serum. Serum IgM antibodies alone should be confirmed by demonstration of immunoglobulin (IgG) antibodies by another serologic assay (e.g., neutralization or hemagglutination inhibition).

Since definitive diagnosis of WNV can only be made by laboratory tests, coordination between military and state and regional laboratories and adequate laboratory support through the medical treatment facility (MTF), in cooperation with state or regional laboratories, is absolutely essential. Increased surveillance, through testing all personnel who present c/o fever and headache, along with educating medical staff, is strongly encouraged. This increased effort may help identify some cases of St. Louis Encephalitis and Eastern Equine Encephalitis.

The close tie between WNV and *C. pipiens*, and the ability to effectively control this well known mosquito, improve the potential for preventing further spread of the virus. Mosquito surveillance and control and elimination of standing polluted water near human dwellings are key to control of WNV.

ANTHRAX VACCINE IMMUNIZATION PROGRAM (AVIP)

ANTHRAX VACCINE ADVERSE EVENT REPORT (VAERS) UPDATE

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Table 1 displays the Anthrax Vaccine Adverse Event Reporting System (VAERS) received at Navy Environmental Health Center (NEHC).

***Editor's Note**: The number of reports from the Air Force far exceed those from the other services. Approximately 60% of these reports are from one location. The Air Force is conducting a study of this situation. Look for an article reporting the results of this study in a future edition of the NMSR.*

Table 1. Cumulative Data (Commencing Aug 1998 - Jun 2000)

Service	VAERS Report Required		Classification				
			Local Reaction			Systemic Reaction	Cum. Totals
	Yes	No	Mild	Moderate	Severe		
USA	12	89	14	18	13	56	101
USN	4	38	4	4	8	26	42
USAF	30	362	26	42	22	302	33
USMC	2	26	1	6	2	19	28
USCG	0	1	0	1	0	0	1
Excludes 4 ODS/DS VAERS Reports on Anthrax and Non-DoD Reports							

(page 7 cont.)

These rates are below the Healthy People 2000 and 2010 objective of 50% (National Center for Health Statistics, 1999). In 1996, almost two-thirds of the pregnancies among Navy enlisted women were unplanned (Thomas & Uriell, 1998). The U.S. military should strive to exceed the Healthy People objective to counter our high STD and unplanned pregnancy rates.

Three components have been identified as strategies for the prevention of sexual transmission of HIV (Cohen, Dallagetta, Laga & Holmes, 1997). They include (1) increasing the use of condoms, (2) decreasing the frequency of unsafe sexual behavior (decreasing number of partners and/or number of sexual encounters), and, (3) controlling STDs which facilitate the transmission of HIV. Considering these three components, prevention strategies for all STDs would include the first two components since the prevention of HIV transmission is closely related to the prevention of other STDs. For those individuals who choose to engage in sexual activity, increasing condom usage appears to be the best prevention strategy.

According to the Navy Environmental Health Center (1999), HIV disease is a threat to military readiness. Preparedness is hampered if highly skilled and experienced personnel are lost due to HIV disease. Even though new recruits can be found to replace HIV infected service members, readiness and smooth teamwork are compromised if people who have not served together previously fill vacant billets. HIV disease is of particular concern to the military since it tends to disproportionally affect young adults and costs have increased for the recruitment and training of replacements. The US Navy has identified over 4,500 active duty personnel infected with HIV, most of who have been medically retired. It costs approximately $40,000 to recruit and train each of these individuals, equating to $180 million of avoidable lost dollars. The additional cost to recruit and train their replacements would double this amount to $360 million.

Sexual health education and information targeted for Sailors and Marines is available from the Sexual Health and Responsibility Program (SHARP) of the Navy Environmental Health Center at http://www-nehc.med.navy.mil/hp/sharp (757) 462-5566, (DSN 253).

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