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Medical Surveillance Monthly Report

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Data in the MSMR is provisional, based on reports and other sources of data available to the Medical Surveillance Activity. Notifiable conditions are reported by date of onset (or date of notification when date of onset is absent). Only cases submitted as confirmed are included.

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Preventive Medicine Report

Surveillance for Tuberculosis Infection Among Health Care Workers Walter Reed Army Medical Center (WRAMC)

As part of an effort to comply with OSHA mandated and CDC recommended measures (1) to protect Health Care Workers (HCW) from occupationally acquired tuberculosis (TB) infections, an aggressive PPD skin testing program was instituted at WRAMC. The guidelines recommend using the data gathered in such a screening program to analyze TB infection risk by occupational group and location in the hospital. Of note, 30 cases of culture proven *Mycobacterium tuberculosis* were treated at WRAMC in 1992, 17 cases in 1993, and 10 cases in 1994.

The screening program consisted of mandatory PPD skin testing of all new employees (phase I) and a hospital wide intensive screening for current employees from February 26 to March 21, 1995 (phase II). The results of the program from September 1, 1994 to March 21, 1995 are shown in figure 1. As of March 21, 1995, 2,998 HCW's (53.8%) had been evaluated. Those with PPDs greater than 5 mm or previously positive PPDs who were untreated were referred for further evaluation (see Table 1). The high follow-up rate observed during phase I was due to enforcement of the PPD testing requirement before allowing workers to begin employment. The intensive screening effort during phase II was judged a success because it resulted in an 84.9% follow-up rate of applied PPD skin tests compared with rates of less than 50% from previous efforts among current employees. One case of active pulmonary TB was discovered in a laboratory worker due to the screening program. This worker had no direct patient contact and did not work with microbiological specimens.

Using the data derived from this screening program, the 2-year conversion rate (requires that a PPD skin test be negative within 2 years of the positive test) for the hospital as a whole is 2.3% (55/2, 367). Occupational groups with 2-year conversion rates substantially above average were respiratory therapists (31.3%, 5/16), food service workers and dietitians (5.1%, 5/99), laboratory workers (4.1%, 6/148), practical nurses (3.5%, 3/86), and custodial workers (3.5%, 3/85). Although the 2-year conversion rate for practical nurses was substantially above the hospital average, the overall rate for the department of nursing was only slightly above average (2.5%, 15/601). All physician converters were active duty military and the 2-year conversion rate for that group was below the hospital average (1.8%, 5/282).

The estimates of 2-year conversion rates among active

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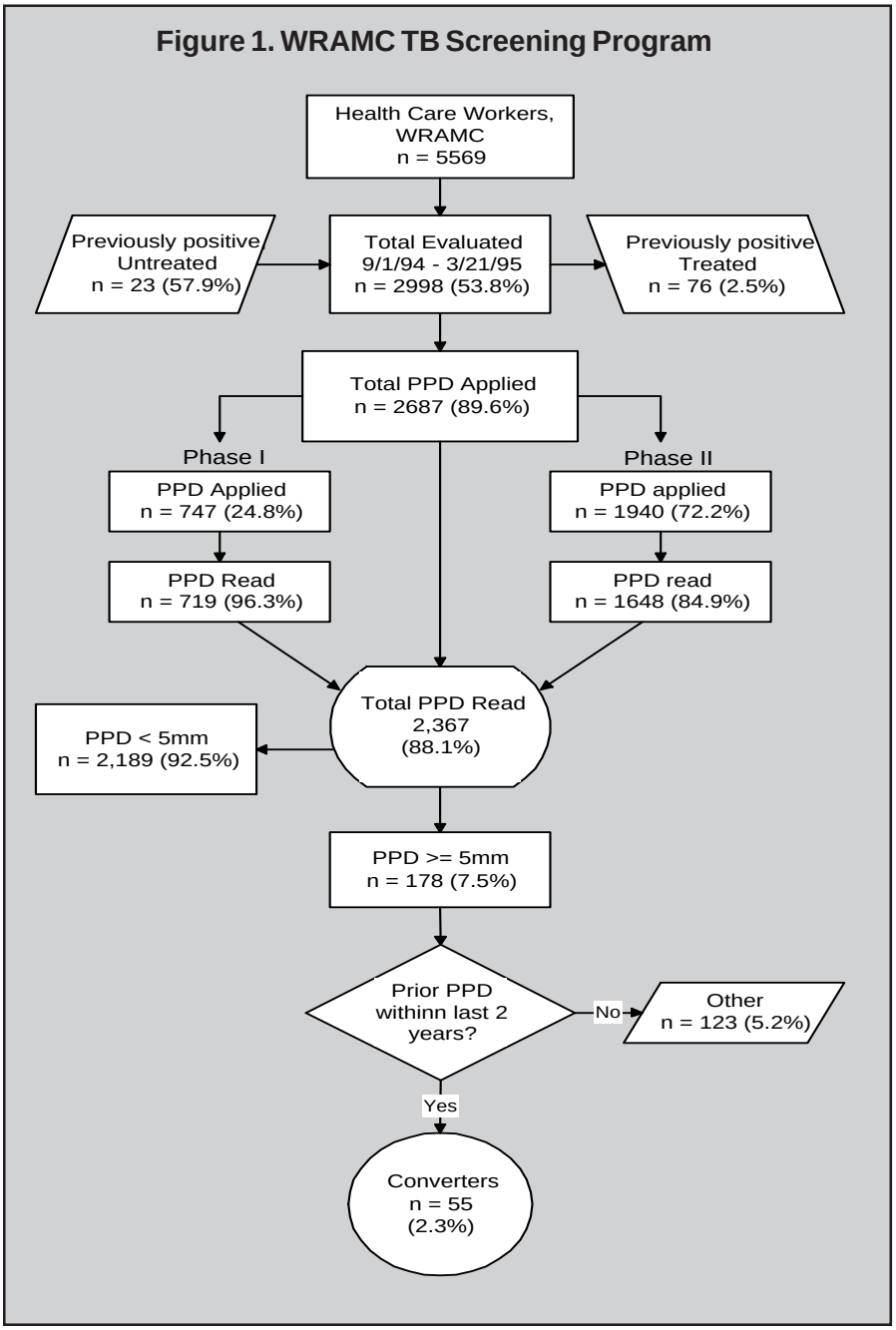
duty military and civilian personnel assigned to WRAMC are 3.1% (39/1,254) and 1.4% (16/1,113) respectively. This difference may be an artifact due to the definition of conversion. Civilian personnel are tested less frequently than military, and therefore are not as likely to be classified as converters.

The locations in the hospital with two or more converters were the fourth floor with 21 converters (including respiratory therapy, blood bank, the operating rooms, and the transplant service), the laboratory with 6 converters, the eye, ear, nose and throat ward with 3 converters, a mixed medicine ward with 2 converters, and the allergy clinic (where PPD testing is conducted) with 2 converters.

Submitted by LCDR Robert Ball, MC, USNR, Occupational Medicine Resident, USUHS, and Melissa Van Wey, MSN, RN, Preventive Medicine Service, Walter Reed Army Medical Center, Washington, DC, 20307-5001

Figure 1. WRAMC TB Screening Program



Editorial Comment: Infection with *M. tuberculosis* is an occupational risk for health care workers (HCWs). TB transmission occurs when an infectious person expels *M. tuberculosis* carried in airborne particles, droplet nuclei, which are subsequently inhaled by a susceptible person. Most transmission to healthy persons results in latent TB infection in which the immune response prevents spread of infection within 10 weeks. While some *M. tuberculosis* remains viable, persons with latent TB are not infectious and usually have reactive PPD skin tests. Although healthy persons have a 10% lifetime risk of developing active TB, that risk is highest in the first 2 years of infection.

The risk of a susceptible worker acquiring TB is related to the duration and concentration of exposure to droplet nuclei. As with other workplace hazards, controls can be directed at the source (persons with active TB), the environment (e.g., adequate ventilation) or the worker (e.g., respiratory protection). This hierarchy of primary preventive measures emphasizes control at the source, since most transmission occurs from persons with unrecognized active TB, who are not in isolation, or not on effective anti-TB therapy. Effective engineering controls in isolation rooms will minimize the concentration of droplet nuclei.

(Continued on page 8)

TABLE I. Cases of selected notifiable conditions, United States Army.*
May, 1995

Reporting MTF/Post**	Total number of reports submitted May, 1995	Environmental Injuries			Viral Hepatitis			Malaria	Varicella	
		Active Duty		CO intox.				Active Duty	Active Duty	Other Adult
		Heat	Cold		A	B	C			
		Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995
NORTH ATLANTIC HSSA										
Walter Reed AMC	14	-	-	-	-	3	-	1	-	-
Aberdeen Prov. Ground	7	-	-	-	1	-	-	-	-	-
FT Belvoir, VA	0	-	-	-	-	-	-	-	-	-
FT Drum, NY	21	-	21	-	-	-	-	1	13	1
FT Eustis, VA	0	-	-	-	-	-	-	-	-	-
FT Knox, KY	180	-	-	-	-	-	1	-	-	-
FT Lee, VA	14	1	-	-	-	-	-	-	9	-
FT Meade, MD	0	-	-	-	-	-	-	-	-	-
USMA, West Point, NY	0	-	-	-	-	-	-	-	-	-
CENTRAL HSSA										
Fitzsimons AMC	39	-	-	-	1	-	-	-	3	-
FT Carson, CO	90	-	-	-	-	-	-	-	6	-
FT Leonard Wood, MO	14	-	1	-	-	1	-	-	21	3
FT Leavenworth, KS	0	-	-	-	-	-	-	-	-	-
FT Riley, KS	16	-	1	-	-	-	-	-	-	-
SOUTH CENTRAL HSSA										
Brooke AMC	1	-	-	-	1	-	-	-	-	-
FT Hood, TX	182	5	-	-	-	1	-	-	26	1
FT Polk, LA	10	4	-	-	-	-	-	-	-	-
FT Sill, OK	39	-	-	3	-	-	-	-	-	-
Panama	6	2	-	-	2	1	1	-	-	-
SOUTHEAST HSSA										
Eisenhower AMC	0	-	-	-	-	-	1	-	1	-
FT Benning, GA	0	-	14	-	-	-	-	1	1	-
FT Bragg, NC	1	-	-	-	-	-	-	-	-	-
FT Campbell, KY	2	-	-	-	1	-	-	-	2	-
FT Jackson, SC	0	-	-	-	-	-	-	-	4	-
FT McClellan, AL	3	-	-	-	-	-	-	-	-	-
FT Rucker, AL	8	-	-	-	-	-	-	-	-	-
FT Stewart, GA	78	-	-	-	-	-	-	-	-	-
SOUTHWEST HSSA										
Wm Beaumont AMC	34	-	-	-	-	-	-	-	3	2
FT Huachuca, AZ	0	-	-	-	-	-	-	-	-	-
FT Irwin, CA	0	-	-	-	-	-	-	-	-	-
NORTHWEST HSSA										
Madigan AMC	4	-	-	-	-	-	-	-	-	-
FT Wainwright, AK	0	-	16	-	-	-	-	-	-	-
PACIFIC HSSA										
Tripler AMC	47	-	-	-	-	2	-	5	-	-
OTHER LOCATIONS										
Europe	17	-	4	2	-	1	-	-	1	1
Korea	38	-	8	-	-	1	-	-	12	-
Total	**865**	**12**	**65**	**5**	**6**	**10**	**3**	**8**	**102**	**8**

* Based on date of onset.

** Reports are included from parent and daughter clinics. Not all sites reporting.

Date of Report: 7-Jun-95

TABLE I. Cases of selected notifiable conditions, United States Army* (continued)
May, 1995

Reporting MTF/Post**	Salmonellosis			Shigella			Campylobacteriosis			Tuberculosis	
	Active Duty	Other		Active Duty	Other		Active Duty	Other		Active Duty	Other
		Adult	Child		Adult	Child		Adult	Child		
	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995	Cum. 1995
NORTH ATLANTIC HSSA											
Walter Reed AMC	-	-	-	-	-	-	-	-	-	-	-
Aberdeen Prov. Ground	-	-	-	-	-	-	-	-	-	-	-
FT Belvoir, VA	-	1	1	-	-	1	-	-	-	-	-
FT Drum, NY	-	-	-	-	-	1	-	1	-	-	-
FT Eustis, VA	-	-	-	-	-	-	-	-	-	-	-
FT Knox, KY	1	-	-	-	-	-	-	-	1	-	-
FT Lee, VA	-	-	-	-	-	-	-	-	-	-	-
FT Meade, MD	-	-	-	-	-	-	-	-	-	-	-
USMA, West Point, NY	-	-	-	-	-	-	-	-	-	-	-
CENTRAL HSSA											
Fitzsimons AMC	-	-	-	-	-	-	-	-	-	-	-
FT Carson, CO	-	1	1	-	-	-	-	-	1	-	-
FT Leonard Wood, MO	-	-	1	-	-	-	-	-	-	-	-
FT Leavenworth, KS	-	-	-	-	-	-	-	-	-	-	-
FT Riley, KS	-	1	-	-	-	1	-	-	-	-	-
SOUTH CENTRAL HSSA											
Brooke AMC	-	-	-	-	-	-	-	-	-	-	-
FT Hood, TX	-	-	-	-	1	-	-	-	-	-	-
FT Polk, LA	-	-	-	-	-	-	-	-	-	-	-
FT Sill, OK	-	-	-	-	-	-	-	-	-	-	-
Panama	2	2	5	-	2	-	1	2	9	-	-
SOUTHEAST HSSA											
Eisenhower AMC	-	-	-	-	-	1	-	-	1	-	-
FT Benning, GA	-	-	-	-	-	-	-	-	-	-	-
FT Bragg, NC	1	1	2	-	-	-	2	-	1	-	-
FT Campbell, KY	-	-	-	2	-	2	-	-	-	-	-
FT Jackson, SC	-	-	-	-	-	-	-	-	-	2	-
FT McClellan, AL	-	-	-	-	-	1	-	-	-	-	-
FT Rucker, AL	-	-	-	-	-	-	-	-	-	-	-
FT Stewart, GA	-	-	-	-	-	-	-	-	-	-	-
SOUTHWEST HSSA											
Wm Beaumont AMC	-	1	1	-	-	-	-	-	-	-	-
FT Huachuca, AZ	-	-	-	-	-	-	-	-	-	-	-
FT Irwin, CA	-	-	-	-	-	-	-	-	-	-	-
NORTHWEST HSSA											
Madigan AMC	-	1	-	-	-	-	1	-	-	-	-
FT Wainwright, AK	-	-	-	-	-	-	-	-	-	-	-
PACIFIC HSSA											
Tripler AMC	-	-	2	-	-	-	5	-	1	-	-
OTHER LOCATIONS											
Europe	-	1	2	-	-	-	2	1	-	-	-
Korea	1	-	1	-	-	2	-	-	-	-	-
Total	**5**	**9**	**16**	**2**	**3**	**9**	**11**	**4**	**14**	**2**	**0**

* Based on date of onset.

** Reports are included from parent and daughter clinics. Not all sites reporting. Date of Report: 7-Jun-95

TABLE II. Cases of notifiable sexually transmitted diseases, United States Army.*
May, 1995

Reporting MTF/Post**	Chlamydia		Gonorrhea		Herpes Simplex		Syphilis Prim/Sec		Syphilis Latent		Urethritis non-spec.		Other STDs**	
	Cur. Month	Cum. 1995	Cur. Month	Cum. 1995	Cur. Month	Cum. 1995	Cur. Month	Cum. 1995	Cur. Month	Cum. 1995	Cur. Month	Cum. 1995	Cur. Month	Cum. 1995
NORTH ATLANTIC HSSA														
Walter Reed AMC	4	12	1	2	3	4	-	1	-	-	-	-	2	6
Aberdeen Prov. Ground	1	21	-	11	-	-	-	-	-	-	2	4	-	-
FT Belvoir, VA	-	9	-	7	-	2	-	1	-	-	-	-	-	1
FT Drum, NY	6	27	1	16	-	8	-	-	-	-	2	10	-	-
FT Eustis, VA	-	6	-	6	-	-	-	-	-	-	-	-	-	-
FT Knox, KY	15	121	6	33	5	27	-	-	-	-	-	-	-	-
FT Lee, VA	2	16	3	23	-	1	-	-	-	-	-	1	-	-
FT Meade, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-
USMA, West Point, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CENTRAL HSSA														
Fitzsimons AMC	2	21	-	5	-	-	-	-	-	1	-	-	-	-
FT Carson, CO	20	131	11	56	6	30	-	-	-	-	24	142	2	3
FT Leonard Wood, MO	1	27	1	17	-	3	-	2	-	-	3	19	1	2
FT Leavenworth, KS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Riley, KS	5	53	2	14	-	-	-	2	-	-	-	-	-	-
SOUTH CENTRAL HSSA														
Brooke AMC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Hood, TX	39	329	16	159	2	16	-	3	-	8	5	58	-	2
FT Polk, LA	1	4	1	4	-	1	-	-	-	-	-	-	-	-
FT Sill, OK	-	18	-	24	-	3	-	-	-	-	-	5	-	3
Panama	-	-	1	8	-	3	-	6	-	-	-	-	-	1
SOUTHEAST HSSA														
Eisenhower AMC	-	31	-	13	-	11	-	1	-	-	-	2	-	1
FT Benning, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Bragg, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Campbell, KY	-	101	-	36	-	6	-	1	-	-	-	51	-	-
FT Jackson, SC	-	52	-	16	-	11	-	-	-	1	-	-	-	1
FT McClellan, AL	-	10	-	8	-	1	-	-	-	-	-	-	-	-
FT Rucker, AL	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Stewart, GA	4	23	-	28	-	8	-	-	-	-	-	45	1	5
SOUTHWEST HSSA														
Wm Beaumont AMC	6	22	1	4	-	-	-	-	-	-	-	-	-	-
FT Huachuca, AZ	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Irwin, CA	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NORTHWEST HSSA														
Madigan AMC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Wainwright, AK	-	9	-	5	-	-	-	-	-	1	-	-	-	-
PACIFIC HSSA														
Tripler AMC	11	76	7	39	17	57	-	-	-	-	-	-	-	2
OTHER LOCATIONS														
Europe	-	22	-	2	-	1	-	-	-	-	-	-	-	2
Korea	12	32	3	14	1	5	-	-	-	1	-	-	-	3
Total	**129**	**1173**	**54**	**550**	**34**	**198**	**0**	**17**	**0**	**12**	**36**	**337**	**6**	**32**

* Reports are included from parent and daughter clinics. Not all sites reporting. Date of Report: 7-Jun-95

** Other STDs: (a) Chancroid (b) Granuloma Inguinale (c) Lymphogranuloma Venereum (d) Syphilis unspec. (e) Syph, tertiary (f) Syph, congenital

Table 1. Summary of interpretation of purified protein derivative (PPD)-tuberculin skin-test results

1. An induration of >=5 mm is classified as positive in:

   - persons who have human immunodeficiency virus (HIV) infection or risk factors for HIV infection but unknown HIV status;
   - persons who have had recent close contact* with persons who have active tuberculosis (TB);
   - persons who have fibrotic chest radiographs (consistent with healed TB).

2. An induration of >= 10 mm is classified as positive in all persons who do not meet any of the criteria above but who have other risk factors for TB, including:

   High risk groups —
   - injecting-drug users known to be HIV seronegative;
   - persons who have other medical conditions that reportedly increase the risk for progressing from latent TB infection to active TB (e.g., silicosis; gastrectomy or jejuno-ileal bypass; being >=1O% below ideal body weight; chronic renal failure with renal dialysis; diabetes mellitus; high-dose corticosteroid or other immunosuppressive therapy; some hematologic disorders, including malignancies such as leukemias and lymphomas; and other malignancies);
   - children <4 years of age.

   High-prevalence groups —
   - persons born in countries in Asia, Africa, the Caribbean, and Latin America that have high prevalence of TB;
   - persons from medically underserved, low-income populations;
   - residents of long-term-care facilities (e.g., correctional institutions and nursing homes);
   - persons from high-risk populations in their communities, as determined by local public health authorities.

3. An induration of >= 15 mm is classified as positive in persons who do not meet any of the above criteria.

4. Recent converters are defined on the basis of both size of induration and age of the person being tested:

   - >=1O mm increase within a 2-year period is classified as a recent conversion for persons <35 years of age;
   - >=15 mm increase within a 2-year period is classified as a recent conversion for persons >=35 years of age.

5. PPD skin-test results in health-care workers (HCWs)

   - In general, the recommendations in sections 1, 2, and 3 of this table should be followed when interpreting skin-test results in HCWs.

     However the prevalence of TB in the facility should be considered when choosing the appropriate cut-point for defining a positive PPD reaction. In facilities where there is essentially no risk for exposure to Mycobacterium tuberculosis (i.e., minimal- or very low-risk facilities, an induration >=15 mm may be a suitable cut-point for HCWs who have no other risk factors. In facilities where TB patients receive care, the cut-point for HCWs with no other risk factors may be >=1O mm.

   - A recent conversion in a HCW should be defined generally as a >=10 mm increase in size of induration within a 2-year period. For HCWs who work in facilities where exposure to TB is very unlikely (e.g., minimal-risk facilities), an increase of >=15 mm within a 2-year period-may be more appropriate for defining a recent conversion because of the lower positive-predictive value of the test in such groups.

* Recent close contact implies either household or social contact or unprotected occupational exposure similar in intensity and duration to household contact.

Information regarding PPD interpretations taken from MMWR, Vol. 43 / No. RR-13, p 62-63.

(Tuberculosis screening continued)

Use of personal respiratory protection during high risk procedures will also help prevent transmission. Educating and training of HCWs will enhance control efforts at all levels.

Appropriate PPD skin testing of HCWs may prevent TB transmission, development of active TB in some persons with latent TB, and secondary transmission of TB. The frequency of skin testing is based on a risk assessment of the patient population served, and the health status, work area and occupation of the HCW. The PPD skin test should be read 48-72 hours after placement with the transverse induration recorded in millimeters. See text box on page 7 for interpretation. The results of skin tests not only direct individual treatment but also serve to evaluate and improve the TB infection control program and thus can help prevent TB transmission and active TB in HCWs.

References

1. Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Facilities, 1994. MMWR 43:RR-13, October 28, 1994.

Top Ten Corner

Top Ten Causes of Lost Duty Days in Active Duty Females, Secondary to Hospitalization, 1994*

3 digit ICD-9 Code	Description	Total sick days	Non-effective rates**
296	Affective psychoses	4978	70.9
724	Oth/unspec disorders of back	4212	60.0
309	Adjustment reaction	3081	43.9
218	Uterine leiomyoma	2487	35.4
719	Oth/unspec disorder of joint	2432	34.6
625	Pain/oth symptoms assoc with female genital organs	2065	29.4
303	Alcohol dependence syndrome	2033	28.9
780	General symptoms	1914	27.3
717	Internal derangement of knee	1909	27.2
733	Oth disorders of bone/cartilage	1882	26.8

** Excludes complications of pregnancy, childbirth, and the puerperium (630-676)*

** * Rates are calculated as lost duty days per 1000 soldiers per year based on mid-interval 1994 DMDC data.*

Report from the field

Adenovirus Outbreak — Basic Trainees, Fort Jackson, SC

On 5 May l995, an increased number of acute respiratory disease (ARD) admissions was noted among basic trainees of one battalion at Fort Jackson, SC. A review of all ARD admissions revealed that 73 trainees were admitted to Moncrief Army Community Hospital during a two week period (23 April — 6 May) with 50 of these occurring in 1/61 Infantry Battalion. Thirty-three (66%) of these admissions were from E Company which was in its fifth and sixth weeks of training.

Clinical presentation for the majority of soldiers included the acute onset of fever, myalgias, pharyngitis, headache, dry cough, and dizziness. All throat cultures among the 1/61 Battalion were negative for group A beta strep. The average hospital stay was 48 - 72 hours without significant complications.

The ARD admission rate for the training center reached a peak of 0.89% during the week ending 6 May (see figure on page 10 and ARD graph, page 11). Rates for the 1/61 Battalion and E Company were 2.9% and 11.6% respectively.

Viral specimens and serology among acutely ill soldiers from E company were sent to Eisenhower Army Medical Center for testing and revealed 6 of 7 viral cultures positive for adenovirus type 4. Laboratory surveillance was performed in view of the potential role of adenovirus in this ARD outbreak. With the recent shortage of adenovirus vaccine experienced by the military, Fort Jackson did not reinstate the administration of adenovirus vaccine until late March 1995. The 1/61 Battalion had already commenced training at that time, so did not receive this vaccine during medical inprocessing.

In response to the outbreak, the local preventive medicine staff reinforced guidelines concerning crowding and ventilation. The ARD rate for E Company declined to 3.2% the week ending 13 May, the last week of training for this company.

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Top Ten Corner

Top Ten Causes of Lost Duty Days in Active Duty Males, Secondary to Hospitalization, 1994

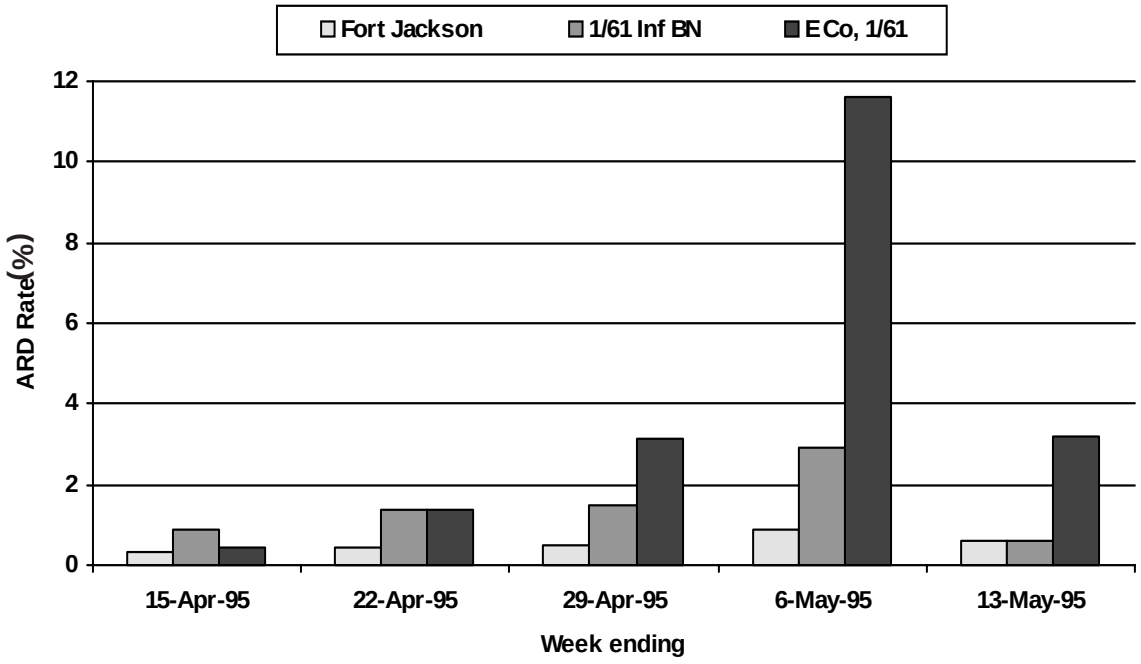
3 digit ICD-9 Code	Description	Total sick days	Non-effective rates*
303	Alcohol dependence syndrome	30560	63.8
296	Affective psychoses	18776	39.2
717	Internal derangement of knee	18224	38.1
722	Intervertebral disc disorders	17910	37.4
719	Oth/unspec disorder of joint	15560	32.5
718	Oth derangement of joint	14856	31.0
309	Adjustment reaction	14144	29.5
724	Oth/unspec disorders of back	13396	28.0
733	Oth disorders of bone/cartilage	12656	26.4
295	Schizophrenic psychoses	11282	23.6

** Rates are calculated as lost duty days per 1000 soldiers per year based on mid-interval 1994 DMDC data.*

(Adenovirus outbreak continued)

Editorial Comment: This outbreak of adenovirus, type 4, disease is the first documented since 1984, the year the Army instituted year round immunization of basic trainees with adenovirus types 4 and 7 vaccines. The nonavailability of the vaccines in 1994-95 created, for the first time since the early 1970s, a large population of unimmunized trainees during the high risk fall-winter seasons (see "ARD update: adenovirus vaccine shortage," MSMR,1:1,8-9). The explosive nature and magnitude of this outbreak in which more than 11% of trainees in one company were hospitalized in a single week documents the continuing threat that adenovirus type 4 presents to susceptible trainee populations.

Figure 2. ARD rates for weeks 15 Apr 95 - 13 May 95, Fort Jackson



ARD Surveillance Update

Legend

———	ARD Rate	= (ARD cases / Trainees) * 100
▪ ▪ ▪	SASI*	= ARD Rate * Strep Rate**

FT Benning

Ft Jackson

Ft Knox

Ft Leonard Wood

Ft McClellen

Ft Sill

Table IV. ARD surveillance rates, submitted by Army TRADOC posts

* Strep/ARD Surveillance Index (SASI) **Strep Rate = (GABHS(+) / Cultures) * 100

Note: SASI has proven to be a reliable predictor of serious strep-related morbidity, especially acute rheumatic fever.

Supplement : HIV-1 in the Army

In October 1985, the Department of Defense initiated programs of routine screening of Active and Reserve Component soldiers and civilian applicants for military service. The Army medical department has tested more than a million individuals each year since then. Across beneficiary categories, there has been a general trend of declining prevalences of HIV-1 infection.

Figures S1 and S2 show trends of HIV-1 prevalence among civilian applicants for military service. Overall and in gender and race/ethnicity defined subgroups, prevalences have generally declined. In 1994, for the first time, prevalence of HIV-1 among female applicants exceeded that among males. While the prevalence among black/non-Hispanic applicants still significantly exceeds that among others, there has been approximately a threefold decline among black/non-Hispanic applicants between 1985/86 and 1994.

Since 1985, there have been 3,864 Active and Reserve Component soldiers diagnosed with HIV-1 infection. The last known status of these individuals, by year of diagnosis, is shown in table S1. Overall, 769 (20%) are known to be deceased and 362 (9%) remain on active duty. Figures S3 and S4 show demographic characteristics of current active duty soldiers with HIV-1 infection. Most soldiers with HIV-1 infection are male, senior enlisted, and married.

Table S2 shows, by year, the rate of new diagnoses of HIV-1 infections in the active force (i.e., first HIV+ tests / number of soldiers screened). In 1994, there were 338,980 active duty and 368,180 Reserve Component soldiers screened for antibody to HIV-1. Of these, there were 65 (0.19 / 1000 screened) active duty and 85 (0.23 / 1000 screened) Reserve Component soldiers who had a first documentation of an HIV-1(+) test. Most had at least one previous HIV-1(-) test and thus are seroconverters.

Since screening began, there have been 416 family members (55 younger than 18 years old) who have been diagnosed with HIV-1 infection (data not shown). More than 25% of family members diagnosed with HIV-1 infection are known to be deceased.

Table S1. Last known status of patients infected with HIV-1, by year of diagnosis*

Year Diagnosed	Active Duty	Former AD**	Retired	Reserve Component	Deceased	Total
1985/86	55	223	334	268	416	**1296**
1987	21	69	164	482	184	**920**
1988	18	29	90	183	74	**394**
1989	19	50	79	140	48	**336**
1990	29	41	62	136	25	**293**
1991	39	32	54	104	11	**240**
1992	51	20	49	33	9	**162**
1993	57	17	24	14	1	**113**
1994	58	11	8	13	1	**91**
1995	15	0	2	2	0	**19**
Total	**362**	**492**	**866**	**1375**	**769**	**3864**

* Includes only AD, AR and NG

** No longer a benificiary of DoD health care

Figure S1. Prevalence of antibody to HIV-1, civilian applicants for US military service, by gender and year of screening, 1986 - 1994

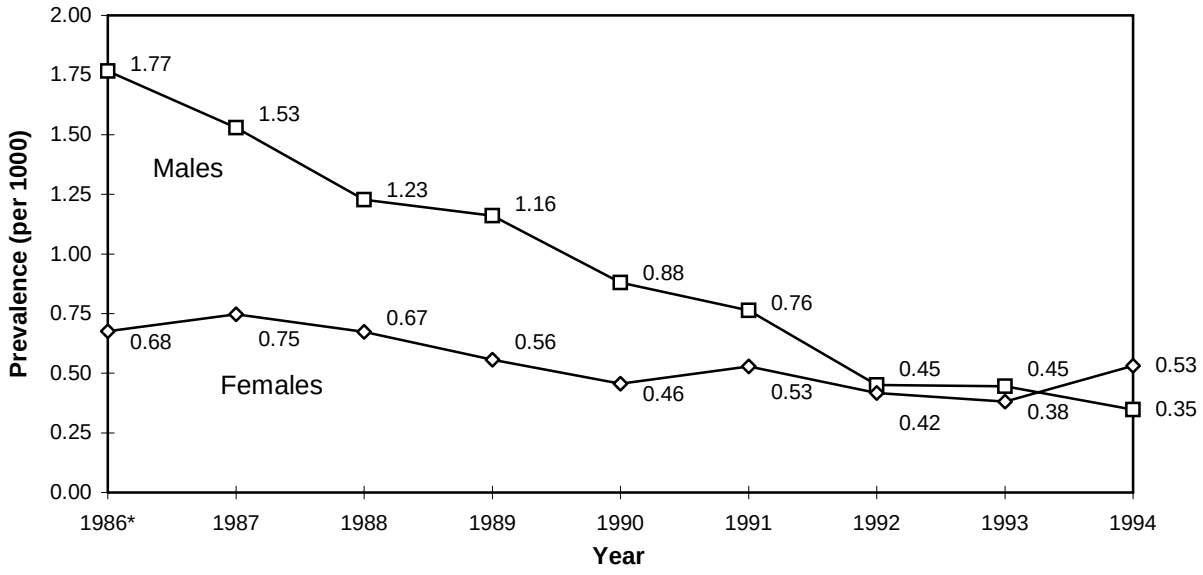
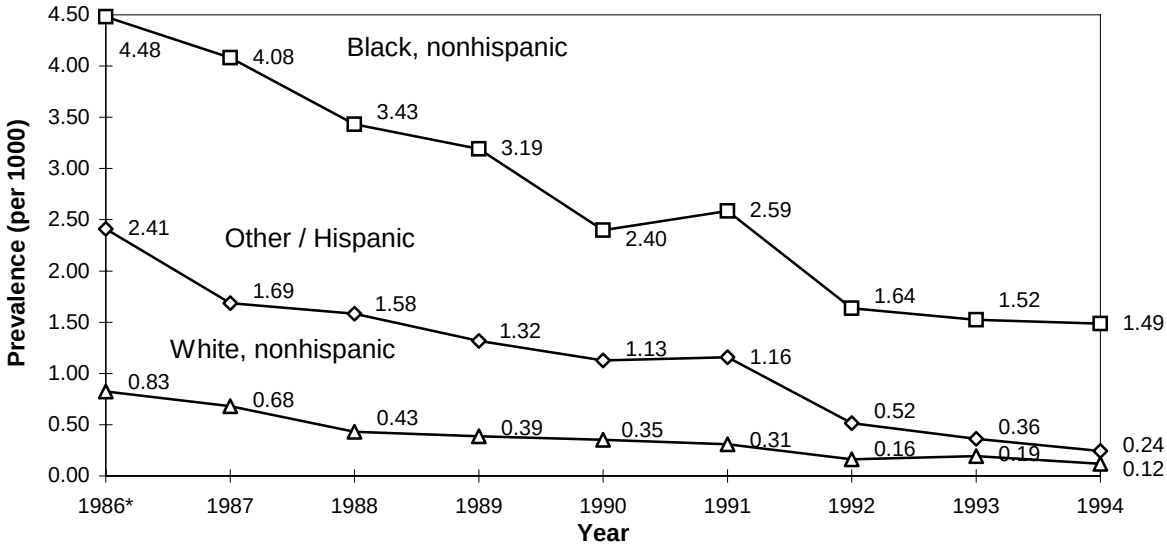


Figure S2. Prevalence of antibody to HIV-1, civilian applicants for US military service by race/ethnicity and year of screening, 1986 - 1994



* Includes Oct 85 - Dec 85

Figure S3. Current active duty soldiers infected with HIV-1, by gender and marital status*

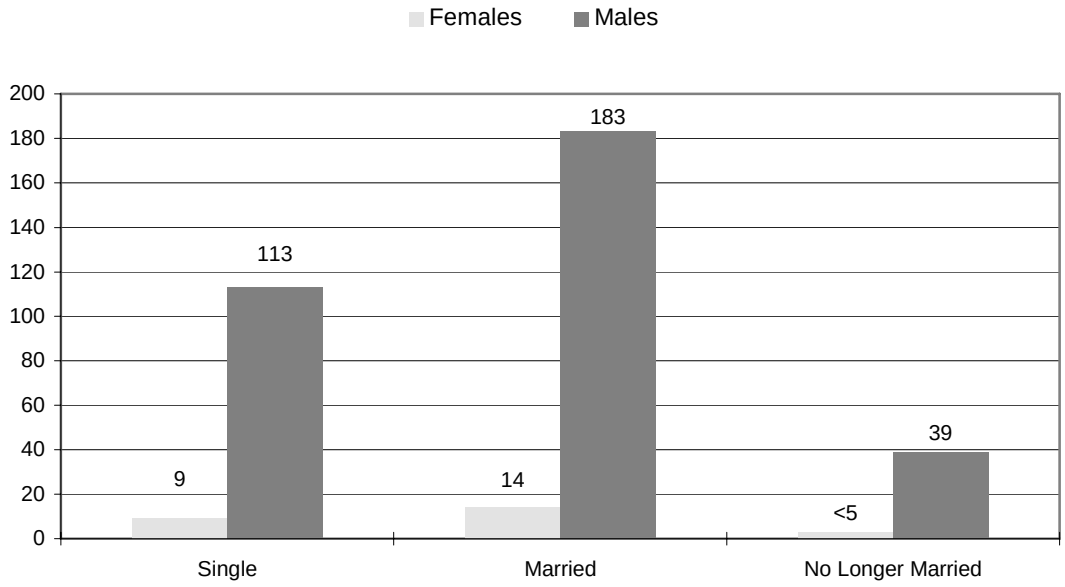
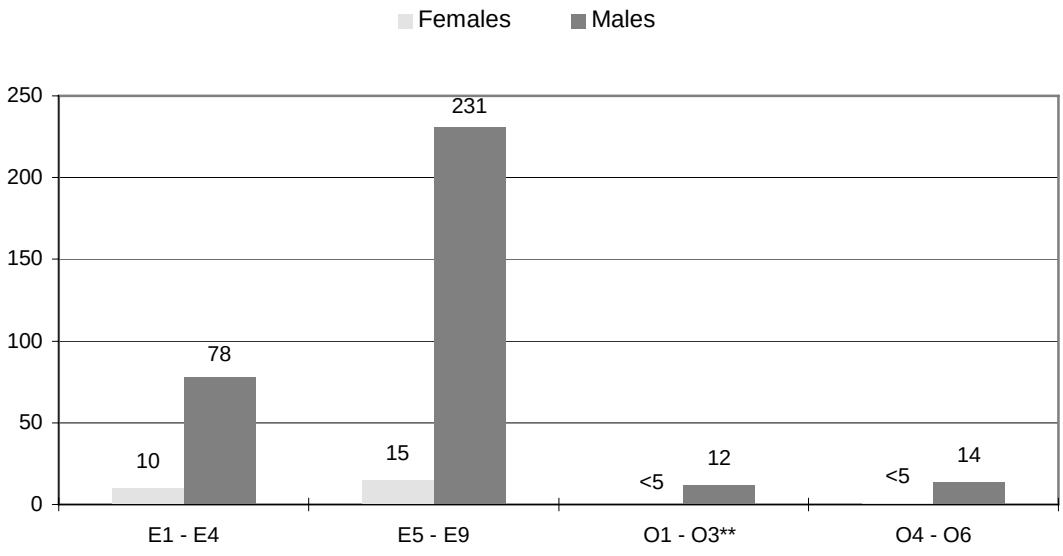


Figure S4. Current active duty soldiers infected with HIV-1, by gender and rank*



* Army active duty only
** Includes warrant officers

Table S2. Rates of new diagnoses of HIV-1 infections, US Army, 1985-1994*

Year	Persons Tested	Number of Newly Identified Positives	Rate per 1000 tested
1985/86	367,372	1040	2.83
1987	351,439	407	1.16
1988	380,563	189	0.50
1989	385,249	172	0.45
1990	432,743	145	0.34
1991	382,674	135	0.35
1992	422,691	125	0.30
1993	356,574	91	0.26
1994	338,980	65	0.19

Table S3. HIV-1 tests performed for active duty and reserve component, 1994

Test Purpose	Active Duty	Reserve Component	Total
Clinical / STD	46,849	-	46,849
Force testing	223,645	399,165	622,810
Physical exam	115,496	-	115,496
Other / Unknown	31,166	-	31,166
Total Tests	**417,156**	**399,165**	**816,321**
Total persons tested	**338,980**	**368,180**	**707,160**

Table S4. Active duty and reserve component personnel with first HIV-1 positive in 1994*

Test Purpose		Active Duty	Reserve Component	Total
Clinical / STD		9	1	10
Force testing		31	79	110
Physical exam		10	3	13
Other / Unknown		15	2	17
Total		**65**	**85**	**150**
Male	**White**	19	17	36
	Black	33	35	68
	Hispanic/Other	9	3	12
Female	**White**	2	2	4
	Black	2	3	5
	Hispanic/Other	0	0	0
Unknown		0	25	25
Total		**65**	**85**	**150**

* Includes active duty only

** Includes all persons with first positive HIV-1 test in 1994, unless followed by a negative test.

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