

SEXUALLY TRANSMITTED DISEASES IN DOMESTIC EXPATRIATE WORKERS IN JEDDAH, SAUDI ARABIA

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This study was conducted to determine the sexually transmitted diseases in domestic expatriate workers (DEWs) screened for pre-employment in the general clinics of a teaching hospital. The study included 1648 domestic expatriate workers who were reviewed by a general practitioner, and who underwent serological tests for treponemal infections and human immunodeficiency virus (HIV). Screening for hepatitis B surface antigen (HBsAg) was also done routinely as part of the requirement of the pre-employment screening. The relative frequencies for syphilis and HIV were 23.8% and 19% respectively. HIV was detected more frequently in DEWs from Africa, and syphilis in DEWs from Indonesia and the Philippines, whereas HgAg was more frequently detected in DEWs from the African subcontinent, and was significant among males (2.8%), compared to females (1.0%), where $P < 0.05$. These findings indicate that pre-employment screening is a viable means of identifying major STDs (venereal syphilis, HIV) and communicable diseases such as hepatitis B in the DEWs. It is recommended that stringent measures be adopted to prevent fraudulent reporting from laboratories and health care providers locally, and from the home country of the DEW. *Ann Saudi Med* 1997;17(1):29-31.

Physicians and other health-care providers have a critical role in the effort to prevent and treat sexually transmitted diseases (STDs).¹ The directives of the Government of Saudi Arabia, through the Ministry of Health (MoH), for the screening of all expatriate workers, are intended to assist with that effort.

This report was produced through a routine process of screening of domestic expatriate workers (DEW) in the general clinic (GC) of King Abdulaziz University Hospital (KAUH). The KAUH is a 296-bed teaching hospital, providing outpatient services through the GC to the indigenous population of the city of Jeddah. According to the directives of the MoH, services were extended to include the systematic pre-employment screening of the DEWs for treponemal infections (venereal syphilis), human immunodeficiency virus (HIV) and hepatitis B surface antigen (HBsAg). Focusing on data that were gathered during this period (1987-1994), the findings are reported.

Methods

The study population consisted of all DEWs reporting to the GC for pre-employment screening, from 1987 to 1994. Subsequent data were obtained on each individual with positive serology for venereal syphilis, HIV and hepatitis B. This included pertinent personal information, such as age, sex, nationality, marital status, history of sexual contact (if single) and occupation.

Nontreponemal reagent tests (Venereal Disease Research Laboratory [VDRL], rapid plasma reagin [RPR]), and specific tests, including fluorescent treponemal antibody absorption (FTA-ABS) and treponema-microhem-agglutination assay (TP-MHA), were used to identify active and latent syphilis. A history of nonsyphilitic conditions which could give Biological False Positives (BFPs) using VDRL and RPR tests was taken into consideration. A reactive enzyme-linked immunosorbent assay (ELISA) test was repeated in duplicate using the same blood sample. If repeatedly reactive, Western blot test was performed as a confirmatory test for the presence of antibody to HIV.

Although hepatitis B is not necessarily a STD, it may be sexually transmitted. Therefore, the data were included in the study. The presence of antibodies to hepatitis B "e" antigen, along with anti-HBc, was determined to confirm a recent acute or convalescent stage in the absence of HBsAg and anti-HBs. If the underlying cause of STD was treated,

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the treatment modality or other intervention strategies and outcome measures were assessed.²

Results

A total of 1648 DEWs (585 males [35.5%], 1063 females [64.5%]) were screened for treponemal infection (venereal syphilis), HIV and hepatitis B between April 1987 and November 1994. The DEWs were of 22 different nationalities. The majority of the DEWs were from Indonesia (683). The next largest group of DEWs were from the Philippines (457), followed by Egyptians (164) (Table 1). By occupation, the predominant categories were drivers (554) and housemaids (1079).

All 1648 DEWs were screened for venereal syphilis, HIV, and HBsAg. HBsAg was detected more frequently in the DEWs (57%). The relative frequency for venereal syphilis (23.8%) and HIV (19%) was almost similar. The mean age of the DEWs was 32 ± 7.9 years. Hepatitis B was more prevalent in DEWs over the age of 40 years (2%), while syphilis and HIV were more prevalent in the age group of 20 years or less (1.5%). However, these differences were not statistically significant (Figure 1). Hepatitis B was more significantly encountered among males (2.8%), compared to females (1.0%), where $P < 0.05$. There was no significant predilection observed for syphilis and HIV (Figure 2).

The highest percentage of DEWs detected positive for hepatitis B were from the African subcontinent (Somalia 75%, Ethiopia 11.76%, Morocco 11.8%). Similarly, HIV was also frequently detected among DEWs from Africa (Ethiopia 23.5%, Kenya 25.0%), whereas DEWs who tested serologically positive for venereal syphilis were from the Southeast Asian countries (Indonesia 0.78%, Philippines 0.44%, India 1.7%). A few cases of hepatitis B and HIV were also detected in the DEWs from Indonesia and the Philippines.

Discussion

In Saudi Arabia, DEWs must undergo mandatory pre-employment screening for treponemal infections (venereal syphilis), and HIV. Although hepatitis B is not necessarily a STD, testing of the DEWs is required by the MoH, as part of its infectious disease surveillance program.³

During the last decade, progressive economic change increased the demand for expatriate workers. A recent population census estimates 4,624,459 expatriate workers in the country (3,255,328 males [70.4%], 1,369,131 females [29.6%]).⁴ The demand for drivers, working exclusively outside the house, and housemaids performing domestic chores such as cooking, housekeeping and baby-sitting, increased proportionately. As the literature suggests, such an influx could lead to the transmission

TABLE 1. Distribution of DEWs screened for STDs by nationality and gender, KAUH, Jeddah, 1987 to 1994.

Nationality	Male (585)		Female (1063)	
	No.	%	No.	%
Afghanistan	2	0.34	4	0.37
Algeria	50	8.50	30	2.82
Bangladesh	10	1.70	0	0.00
Egypt	115	19.60	49	4.60
Eritrea	1	0.17	4	0.37
Ethiopia	8	1.36	9	0.84
India	43	7.35	14	1.31
Indonesia	194	33.16	489	46.00
Kenya	0	0.00	4	0.37
Lebanon	00	0.20	0	0.00
Morocco	4	0.68	17	1.59
Nigeria	9	1.53	5	0.47
Pakistan	22	3.76	4	0.37
Palestine	00	0.00	2	0.18
Philippines	83	14.18	374	35.10
Somalia	3	0.51	1	0.09
Sri Lanka	13	2.22	38	3.57
Sudan	19	3.24	2	0.18
Syria	3	0.51	0	0.00
Thailand	3	0.51	8	0.75
Turkey	2	0.34	0	0.00
Yemen	1	0.17	9	0.84

of diseases from expatriate workers to the local population.^{5,6}

The MoH takes necessary precautions to contain outbreaks and the spread of communicable diseases in the community through extensive measures.³ One of the measures is pre-employment screening of expatriate workers (including DEWs), which is conducted according to the following guidelines: 1) In the native country of the DEW: eligibility for a work visa requires a complete medical examination, including screening for major STDs (syphilis, HIV) and HBsAg. 2) Upon arrival in Saudi Arabia: complete medical examination, including screening for major STDs (syphilis, HIV) is repeated within a period of four weeks in order for the DEW to be eligible for a work permit (iqama). 3) For renewal of a work permit (iqama) every two years: screening for HIV is mandatory. 4) DEWs who test positive for major STDs (syphilis, HIV) are not eligible for employment and are repatriated to their country of origin.

The DEWs who tested positive for venereal syphilis were treated according to the STD treatment guidelines,

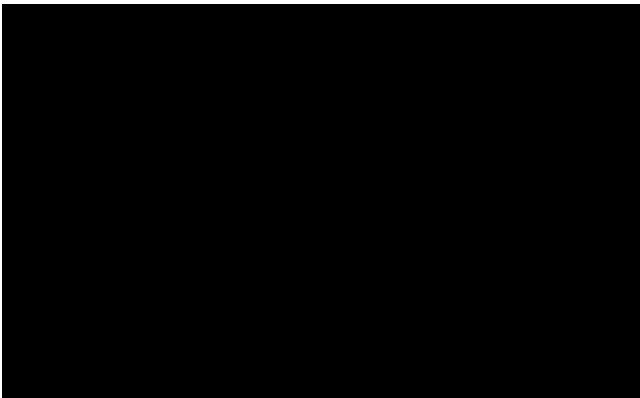


FIGURE 1. Distribution of STDs in DEWs screened for pre-employment by gender in KAUH.

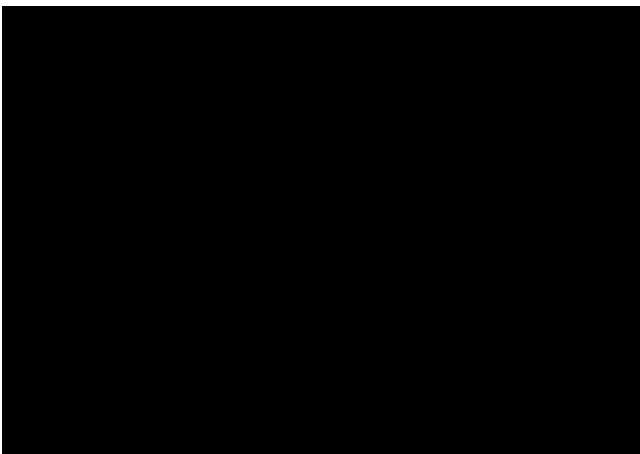


FIGURE 2. Distribution of STDs in DEWs screened for pre-employment by age in KAUH.

MMWR, 1993.² Due to limited time, lumbar punctures were not performed to detect asymptomatic neurosyphilis prior to treatment. Necessary measures to determine proper follow-up of the DEWs upon their return to their home country were taken. This was done by appropriate counseling through interpreters (if necessary), and providing medical reports with copies of test results and

treatment given to the DEWs at the time of their departure.

This study makes no claims to establish incidence or prevalence of STDs in the DEW population of Saudi Arabia. It reports only the number of DEWs testing positive for venereal syphilis, HIV and hepatitis B during routine pre-employment screening at KAUH. Since detailed records were not available from other health service agencies (government and private), providing similar screening services for DEWs, this report was unable to specify the extent of the problem.⁷ It is suggested that measures must be implemented to prevent fraudulent reporting from laboratories and health care providers locally, and from the home country of the DEW. Taking into consideration the limitations mentioned, it is extremely important to implement stringent national surveillance strategies to identify STDs as well as other communicable diseases in the DEWs for the welfare of the community.^{8,9}

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