

## HIV/AIDS in Asia

# HIV/AIDS in the Philippines

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From 1984 (when the first case of AIDS in the Philippines was reported) to December 2005, there were 2,410 cumulative confirmed seropositive cases recorded in the AIDS Registry of the Department of Health (Figure 1) of which 1,692 (70%) were asymptomatic and 718 (30%) were AIDS cases at the time of initial report. Majority (69%) of the cases were in the 20–39 age group and 63% (1,529) were males (Figure 2) Sexual intercourse (86%) was still the most frequently reported mode of transmission (Table 1).

Of the 2,410 HIV seropositive cases, 821 (34%) were overseas Filipino workers (OFWs) (Figure 3). Since HIV antibody testing is a requirement of receiving countries for Filipinos applying for work, about half of new cases of HIV infection reported each year are OFWs.

Compared to its neighboring countries, the rate of infection in the Philippines has been described to be low and slow with an overall prevalence rate of less than 1 percent (0.03%). The low prevalence of HIV infection in the country has been attributed to the following possible conditions: the sex workers had fewer sex partners, few men engaged in anal sex, low ulcerative STI prevalence, small IDU population, the Philippine geography which limited travel and the early and accelerated multi-sectoral response of the Philippine government to prevent an HIV epidemic.

However, the high prevalence of sexually transmitted infection<sup>7)</sup>, the persistently low condom use (Figure 4) and the existence of injecting drug users are continuous threat of a possible rise in the rate of infection in epidemic proportion.

### Tracking HIV/AIDS in the Philippines

To keep track of the epidemiology of HIV/AIDS in the Philippines, the Department of Health (DOH) established passive and active surveillance systems. The passive surveillance system, the HIV/AIDS Registry, was established in 1987. It continuously logged West-

ern Blot-confirmed HIV cases reported by hospitals, laboratories, blood banks and clinics. Before 1990, less than 50 cases were reported each year. Starting 1993, more than 100 cases were reported each year. Other information revealed by the HIV/AIDS Registry were: sexual intercourse remained to be the main mode of HIV transmission, the most economically productive age groups were most commonly infected and increasing numbers HIV positive Filipino migrant workers were reported through the years.

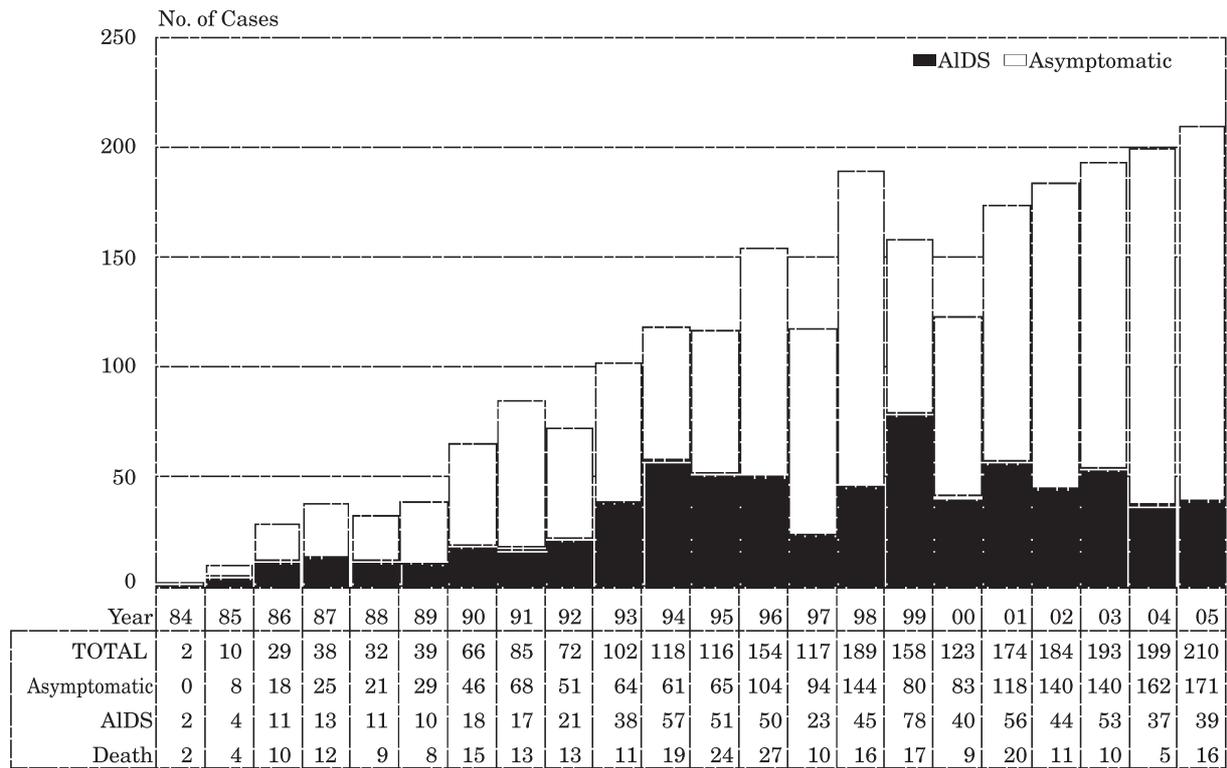
Considering the limitations inherent to passive surveillance such as under- and delayed reporting, the DOH established the HIV Serologic Surveillance (HSS) in 1993 with funding support from United States Agency for International Development through the *AIDS Surveillance and Education Project* and technical assistance from World Health Organization. This system consistently monitored the High Risk Groups (HRGs) for HIV: the Registered Female Sex Workers (RFSWs), the Freelance Female Sex Workers (FLSWs), the Men having Sex with Men (MSM) and the Injecting Drug Users (IDUs). Its main objective was to serve as early warning for increases in HIV seroprevalence. The Local Government Unit (LGU) staff in two cities, Quezon and Cebu, initially implemented this active surveillance system. Each year, new sites were added and by 1996, eight other cities were conducting periodic HSS: the cities of Angeles, Pasay, Iloilo, Davao, Cagayan de Oro, General Santos, Baguio and Zamboanga. The ten cities completed at least seven HSS rounds each by 2001. Based on the past nine years of HSS implementation, it could be concluded that HIV seroprevalence was 1% among RFSWs in all sites except in Zamboanga City where it is still < 1%. Likewise, HIV seroprevalence is <sup>2)</sup> 1% among FLSWs in the cities of Angeles, Pasay and Iloilo; among MSM in the cities of Quezon and Cebu and among the IDUs of Cebu City.

To track the behaviors of the HRGs that predispose them to acquiring HIV, another active surveillance system, the Behavioral Sentinel Surveillance (BSS) was established in 1997 in the ten HSS sites. Independent research institutions carried out the activities, except in the cities of Baguio and Cagayan de Oro where the BSS rounds were conducted by the local health units. The system monitored the same HRGs as in the HSS and

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**Figure 1** HIV Ab Seropositive Cases by Year  
 HIV/AIDS Registry, January 1984–December 2005 (N=2,410)

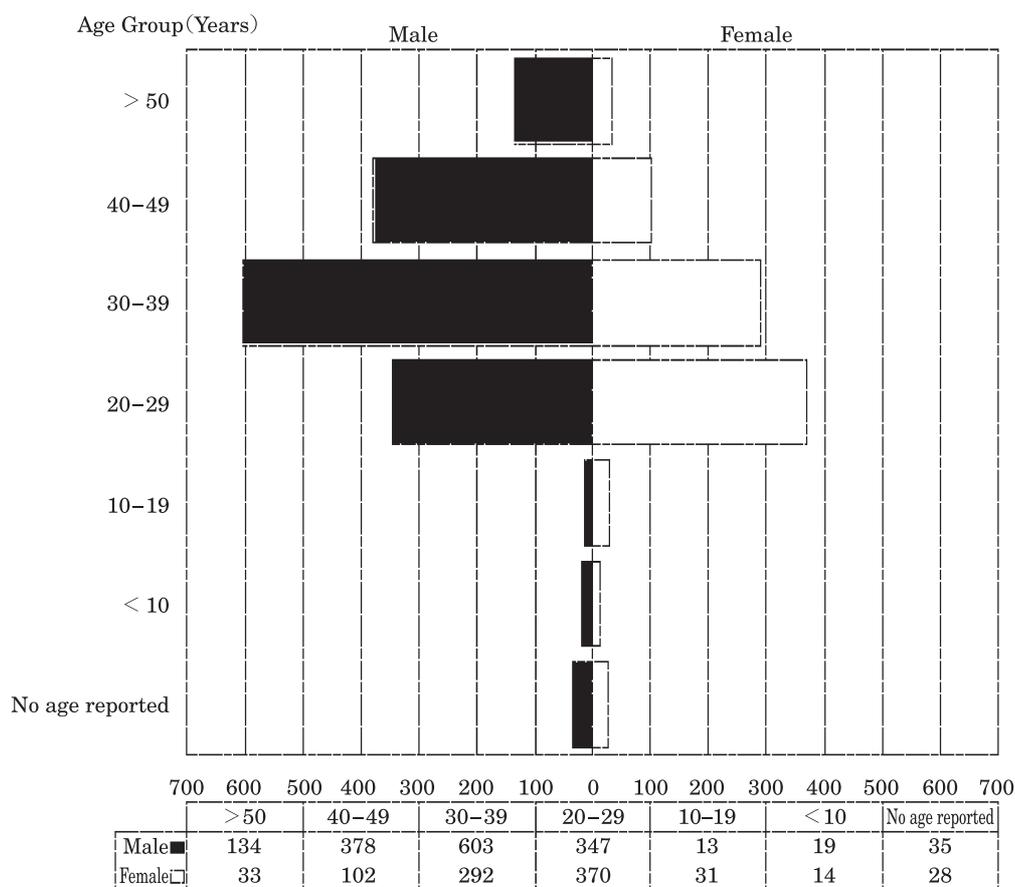
other sub-population groups at risk of acquiring HIV. The BSS showed that consistent condom use among the HRGs was low, most IDUs still shared injecting equipment, only a small proportion of “sharers” used bleach and water to clean injecting equipment and the many HRGs’ health-seeking behavior when confronted with sexually transmitted infections was far from ideal, particularly the MSM.

The Sentinel STI Etiologic Surveillance System was set up in December 2001 and was operationalized in 2003. This was established based on the fact that STI is a cofactor of HIV and that in a low prevalent country like the Philippines, monitoring STI trend could guide program intervention to prevent transmission of HIV. Data showed that most of the males who consult Social Hygiene Clinics were clients of sex workers. Moreover, housewives and children were also infected with STI. Despite these, there had been no evidence of an explosive increase in HIV prevalence among the HRGs, more so, in the general population. The possible factors that inhibited the rapid spread of HIV in the Philippines were : the sex workers had fewer sex partners, few men engaged in anal sex, low ulcerative STI prevalence, small IDU population, the Philippine geography which limited travel and the early and accelerated multi-

sectoral response of the Philippine government to prevent an HIV epidemic <sup>2)</sup>.

**Molecular Epidemiology**

A retrospective study on stored plasma samples collected from 51 patients from 1987 to mid-1996 at the Research Institute for Tropical Medicine analyzed the genetic variability of HIV-1 and demonstrated the presence of multiple genetic subtypes in the Philippines <sup>3)</sup>. Polymerase chain reaction amplification and direct sequencing of a 204 base-pair fragment of the *env* C2–V3 region from uncultured peripheral blood mononuclear cells were done. The 51 Philippine strains were classified into five *env* V3 subtypes, namely subtype B (n=37), subtype E (n=8), subtype A (n=3), subtype C (n=2) and subtype D (n=1). The overall *env* nucleotide divergence ranged from 11.7 to 32.2%. The nucleotide variation appeared to be random and no temporal ordering was observed. The variation of the sequences at the tip of the V3 loop was very broad. Subtypes B and C isolates did not show close genetic relationship to other Asian variants. Only three of the subtype E strains had close affinity to known Asian sequences. The majority (94%) of the subjects acquired the infec-

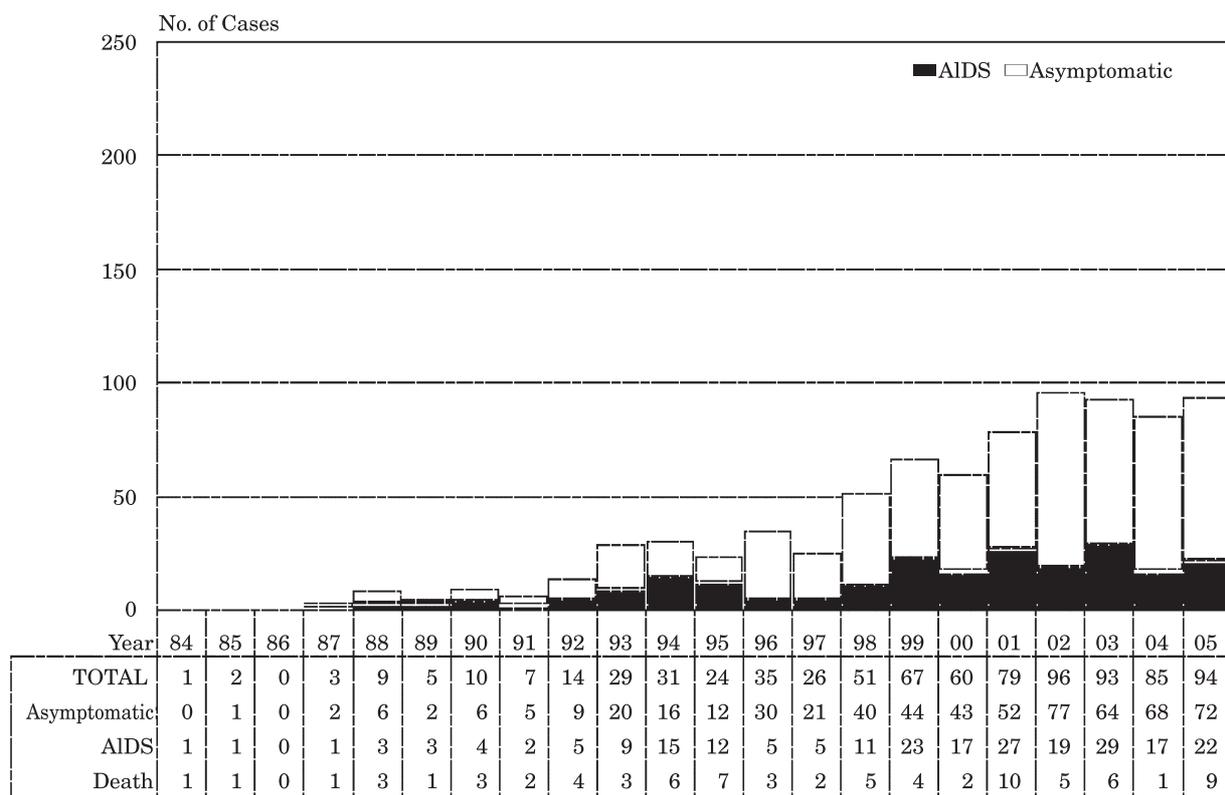


Note: 10 cases had no reported age and gender. (1 in 1991, 3 in 1993, 3 in 1994 and 3 in 2000)  
 1 case had no reported gender (2003)

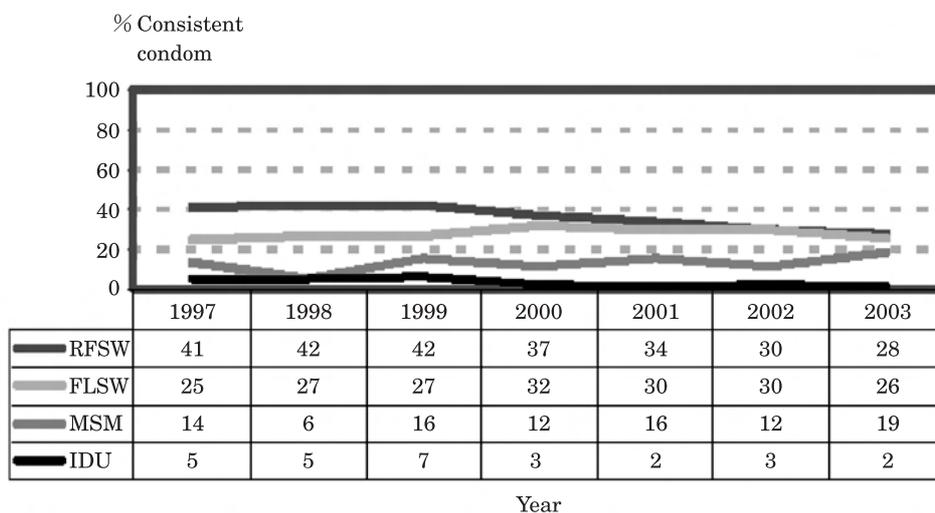
**Figure 2** HIV Ab Seropositive Cases by Gender and Age Group  
 HIV/AIDS Registry, January 1984–December 2005 (N=2,410)

**Table 1** Reported Modes of Transmission  
 HIV/AIDS Registry, January 1984–December 2005  
 (N=2,410)

Reported Modes of Transmission	Jan. 1984–Dec. 2005 N=2,410	December 2005 n=17
<b>Sexual Transmission :</b>		
<i>Heterosexual contact</i>	1,505	13
<i>Homosexual contact</i>	433	3
<i>Bisexual contact</i>	130	1
Blood/blood product	19	0
Injecting Drug Use	7	0
Needle prick injuries	3	0
Perinatal	33	0
No exposure reported	280	0



**Figure 3** HIV Ab Seropositive Cases among OFWs  
HIV/AIDS Registry, January 1984–December 2005 (N=821)



**Figure 4** Proportion of HRGs who consistently used condoms during sex  
BSS 1997–2003

tion by sexual transmission. About two-thirds were presumably infected outside the Philippines, whereas the remaining were infected indigenously. Information was limited to allow segregation of the identified subtypes by mode of transmission or risk groups. Since the study was done more than a decade ago and with current knowledge of evolving strains of HIV-1 like the circulating recombinant forms, there is a need to update the current knowledge on the molecular epidemiology of HIV-1 in the country.

### Clinical Profile of HIV/AIDS

Of the AIDS cases recorded in the Registry, 281 (39%) were already dead at the time of the report due to AIDS related complications. There is however underreporting of death cases. Based on the clinical experience at Research Institute for tropical Medicine, it is estimated that half of the seropositive cases reported to DOH have already died.

It is estimated that one third of people with HIV infection have indications to start antiretroviral therapy and one third of newly diagnosed each year need ARV treatment. By the end of 2005, there were about 120 patients in the country on ARV treatment almost all of whom are using generic formulation. The number of Filipinos on ARV treatment has significantly increased since the introduction of the generic formulation in year 2001. The most commonly used first line therapy is the combination of zidovudine, lamivudine and nevirapine. It has been observed that one third of patients had hypersensitivity to nevirapine.

In a cohort of patients followed up at the Research Institute for Tropical Medicine from 1986 to 2005, most common AIDS related disease was tuberculosis <sup>4</sup>.

The country prevalence of tuberculosis infection (based on a positive tuberculin skin test using purified protein derivative) is 63.4% <sup>5</sup>. The prevalence of active tuberculosis is 42 per 1000 population with culture and spear positive prevalence of 8.1/1000 and 3.1/1000 population, respectively <sup>6</sup>. In a small survey done in a tuberculosis unit in a government hospital in Manila, none of the patients were found to be HIV seropositive.

The Philippines' low prevalence status is not something that will remain so forever if the country lets its guard down and becomes complacent. There is a need for continuous and concerted effort to expand and replicate documented good practice on prevention, care and support in the country.

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