

Epidemiology consensus workshops on HIV, AIDS and STDs in Cambodia, Malaysia and Viet Nam

Introduction

It is important to use good quality data to monitor the patterns and trends of HIV epidemics and STI infections. These data sources often include sentinel surveillance, ad-hoc surveys and case reports. However, the quality of these data has significant limitations in many countries. Therefore, it is important for national and international experts to come together regularly to: 1) discuss the quality and limitations of available data; and 2) agree on appropriate estimates and projections.

In the Western Pacific, Member States and WHO regularly hold national consensus workshops on HIV, AIDS and STI epidemiology. The purpose of these workshops is to:

- analyse surveillance systems and their results;
- develop or revise HIV and AIDS estimates and projections;
- incorporate these estimates and projections into national planning for HIV/AIDS;
- improve national capacity to analyse and design surveillance systems; and
- recommend ways to improve surveillance.

National consensus workshops were held recently in Cambodia, Malaysia and Viet Nam. The main findings of these workshops are summarized below. Complete workshop reports are available from Western Pacific Regional Office, Manila.

CAMBODIA

The first known HIV positive person in Cambodia was reported in 1991. Since then, HIV has been reported from every province and every population group. HIV is mostly transmitted heterosexually in Cambodia.

Table 1. HIV Prevalence in Cambodia, 1998

Population group	HIV prevalence rates
Sex workers	Up to 64%
Police	Up to 25%
Male blood donors	4.1%
Female blood donors	2.5%
Pregnant women/ married women	Up to 6%
Hospital in-patients	12 %

Methodology used for establishing HIV estimates

Estimates of the number of people living with HIV in Cambodia were previously based on the reported provincial HIV prevalence in antenatal women (1995-97). In 1998, HIV sentinel surveillance was not performed among pregnant women but among married women of reproductive age. However, these two population groups have different age structures. Therefore, the provincial HIV prevalence estimates for the 15-49 female age group were adjusted according to the findings of the 1996 population estimates. This was done using a direct adjustment method with females in two age groups, 15-29 and 30-49 years.

This article was previously published in issue no. 13 of the STI/HIV/AIDS Surveillance Report.

After the age adjustment, the estimated HIV prevalence for women aged 15-49 for each province was applied to the corresponding population, as reported in the 1998 census. This gave an estimated number of women of reproductive age living with HIV infection in each province in 1998.

These provincial estimates for HIV prevalence for women aged 15-49 years were used as the basis for estimating HIV prevalence among males of the same age group. However, it is known from multiple data sources that more men than women are infected with HIV in Cambodia. After discussions at the national consensus workshop, the sex ratio for HIV prevalence between men and women was estimated to be 2:1. This sex ratio was based on the known sex ratio between HIV positive men and women recorded from blood donors (ratio 1.6:1); tuberculosis patients (2.2:1) and AIDS cases in one hospital (2:1).

National HIV prevalence estimates were then made by applying the average of the provincial estimates from the 18 provinces included in the 1998 HIV surveillance round to the national population totals for the 15-49 year male and female age groups.

important that the HIV sentinel groups remain the same for the next three years, in order to allow effective data comparisons to be made. They also developed a 3-5 year surveillance plan.

The workshop participants also called for better estimates of HIV incidence. HIV incidence and prevalence are most similar with young adult age groups, who are only beginning sexual activities. Therefore, it was recommended that HIV prevalence be calculated specifically for the 15-19 year age group in the sentinel groups (e.g. antenatal clinic attendees 15-19 years). And the workshop participants also recommended that a pilot test of the "detuned Elisa" test be conducted as a way of measuring incidence.

MALAYSIA

The first known case of HIV infection in Malaysia was reported in 1986. A total of 28 185 were reported by the end of November 1998. Nearly all (96%) of these were males. Injecting drug use (IDU) is the major mode of transmission in Malaysia (77%). Because most IDUs are from peninsular Malaysia, the majority of reported HIV/AIDS are from there.

HIV surveillance system and case screening

Sentinel HIV surveillance is undertaken with: women attending antenatal clinics in all states (N=8 000), and among STD patients (N=500) or TB patients (N=150) in selected states. Sex workers are not systematically included in HIV sentinel surveillance in Malaysia. From 1986 to 1996, the HIV prevalence rate continued to increase among most population groups included in the sentinel surveillance system. Since 1996, the HIV prevalence rate has leveled off, and has remained stable since then.

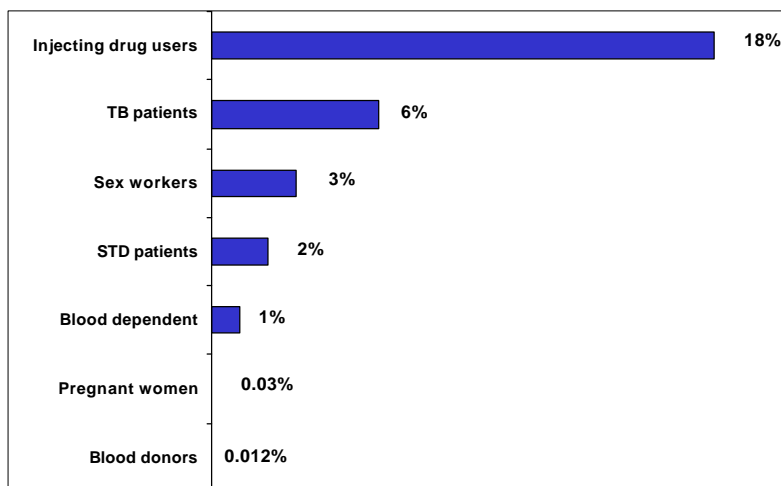
HIV/AIDS estimates and projections Cambodia

The national consensus workshop estimated that 180 000 Cambodians aged 15-49 years (3.7%) were infected with HIV in 1998. The number of new AIDS cases among adults was estimated to be 6 000 in 1998 and was projected to be 11 000 in the year 2000 and 25 000 in the year 2005.

HIV surveillance system

The workshop participants also reviewed the current HIV surveillance system in Cambodia. The participants agreed that it is

**Figure 1. Average HIV prevalence rate in selected populations
Malaysia - 1998**



HIV testing is undertaken with all IDUs arrested by the police and those attending drug rehabilitation centres (about 13 000-25 000 annually). Universal HIV case screening is planned for all women attending antenatal clinics, STI and TB patients.

Methodology used in establishing HIV estimates

To estimate the number of people in Malaysia infected with HIV, the HIV prevalence among various subgroups of the population was estimated. Data from HIV sentinel surveys, routine screening, case finding and special studies were used to estimate the HIV prevalence rate among IDUs, sex workers and antenatal women.

To estimate the number of HIV cases among STI patients, it is first necessary to estimate the number of annual STI cases. It is known that most people with STI go to private doctors, and these cases are not reported to the Ministry of Health (a recent study estimated that only 7% of STI cases are reported). The number of STI cases reported to the MOH in 1998 was multiplied by 14 to obtain the total number of STI cases. The number of STI patients likely to be infected with HIV was then estimated.

1998 estimates of HIV prevalence were used with the EPIMODEL software programme to estimate the number of AIDS cases in 1998 and projections of HIV and AIDS through the year 2003. The assumptions used in developing these projections were that HIV in Malaysia began to spread extensively in 1990; and the incidence of HIV peaked in 1998. These estimates assume that, based on current data, about one third (38%) of HIV cases are unreported. The male to female ratio used was 7:1 (although it is 25:1 in reported cases, with a bias towards men because of IDUs).

HIV/AIDS estimates and projections - Malaysia

It is estimated that by the end of 1998:

- there was a cumulative total of about 45 000 HIV-infected persons;
- there were about 11 200 newly infected persons in 1998;
- 3 000 to 5 000 of these HIV-infected persons have already progressed to AIDS; and that
- 2 000 to 4 000 of these AIDS cases have already died.
- It is projected that by the year 2003:
- there will be 82 000 individuals infected with HIV;
- the cumulative total of HIV-infected persons will have reached 103 000; and
- the number of adults newly infected with HIV will have declined to 8 700 per year.

VIET NAM

The first known case of HIV infection in Viet Nam was reported in 1990. By 1998, 9 941 HIV-infected persons had been reported by 59 of the 61 provinces. The majority of reported HIV infections are among IDUs (65%), followed by sex workers (5%) and STI patients (3%). Nine out of 10 (85%) HIV-infected persons were males. Sentinel surveillance for HIV was set up in the first quarter of 1994 in eight provinces and was expanded to four other provinces in 1995 and a further eight provinces in 1996. Populations monitored are STI patients, commercial sex workers (CSWs) and massage girls, IDUs, TB patients, antenatal clinic attendees and military recruits.

Methodology used in establishing HIV estimates

A wide range of data sources was used to develop estimates of the number of current HIV-infected persons. These data sources included results of the sentinel surveillance system, case reporting and published scientific reports. The EPIMODEL software programme was then used to develop projections.

To develop HIV estimates, estimates of the number of IDUs, sex workers, and annual number of people with STI were made.

The lower and upper bounds of the total number of drug users and CSWs were obtained from reports of the Ministry of Labor and Invalid Affairs for the year 1995. A range of sources from the years 1990 to 1997 were used to estimate the number of annual STI cases. Generally, these sources of information were less uniform than those used for estimating the numbers of HIV and AIDS cases. The reported total number of STIs was considered the lower bound of STI cases. This number was multiplied by a factor of 10 to obtain the upper bound of STI cases, given the estimation that only one-tenth of patients with STI infections seek care from government health services.

The number of HIV-infected persons in each population group was estimated by multiplying the appropriate HIV prevalence rate by the population of that group:

- the number of the female general population aged 15-49 infected with HIV: was estimated by multiplying the female 15-49 year old population by the HIV prevalence among women attending antenatal clinic.

Population	HIV prevalence (%)		
	1994	1998	
Antenatal	North	0	0.16
	Central	0	0.05
	South	0.03	0.18
Military recruits	North	0	0.64
	Central	0	0.04
	South	0	0.12
STI-patients	North	0.12	0.32
	Central	0.27	0.41
	South	0.68	2.80
Sex Workers	North	0	2.35
	Central	0.78	0.46
	South	0.89	8.07
IDU	North	0.27	16.99
	Central	14.52	56.06
	South	28.79	17.43

NOTE: North - Hanoi, Hai Phong and Lang Son
 Central - Hue, Da Nang and Khanh Hoa
 South - Ho Chi Minh City, An Giang and Can Tho

- the number of HIV-infected infants: was calculated by multiplying the number of women aged 15 to 49 years by the HIV prevalence rate among women attending antenatal clinic, which was then multiplied by the birth rate (2.3%), and the antenatal transmission rate (30%).
- the number of HIV-infected males: was calculated by multiplying the number of infected IDUs plus estimated number of HIV-infected male adult aged 15 to 49 years plus 25% of HIV infected STI patients.
- the number of HIV-infected females: was calculated by multiplying the estimated number of sex workers by the HIV prevalence rate for sex workers; plus the estimated number of HIV-infected female adult aged 15 to 49 years, plus 75% of HIV-infected STI patients.

Estimates of the numbers of HIV infections were made for the three geographical regions of northern, central and southern Viet Nam.

Recommendations of the National Consensus Workshop

The participants recommended that:

1. the assumptions of HIV prevalence, estimates and trends used in EPIMODEL be reviewed each year;
2. the current projections should be revised based on these annual reviews;
3. uniform guidelines for HIV sentinel surveillance should be developed;
4. HIV, AIDS and STI case reporting be improved by providing continuing education for clinicians and officers responsible for reporting cases
5. STI surveillance be integrated into the current HIV surveillance system (this should include STI behavioural surveillance).

HIV/AIDS estimates and projections - Viet Nam

Over time, HIV prevalence rates have increased significantly in all groups included in the sentinel surveillance system. By the end of 1997 there were an estimated 64 000 to 78 000 cumulative HIV-infected persons. Of these, 3 000-5 000 have developed AIDS and 2 000-4 000 have died of AIDS. By the year 2000, it is projected that there will be a cumulative total of 135 000 to 160 000 people infected with HIV and among them, 14 000-21 000 will develop AIDS and 10 000-15 000 will die of AIDS.

With the exception of IDUs, HIV transmission appears to be greater in the south than in north of the country. Among IDUs however, there has been an explosive spread of HIV in many provinces since 1996.

Estimates of other STIs

It was estimated that in 1997, 910 000 STI cases occurred of which 14% were gonorrhoea, 14% were syphilis and 71% were chlamydia. Of these, 140 000 (15%) were among sex workers.

The resistance of gonococcus to penicillin has been increasing rapidly in the past few years and has become a major problem. About 80% to 90% of gonococcal strains are already resistant to penicillin. The recent emergence of gonococci resistance to quinolones has been documented (increasing from 3% to 7% between 1994 and 1997).