

Epidemiology Bulletin

181 AIDS in Taiwan: An Update
188 Cases of Notifiable and Reportable Diseases, Taiwan-Fukien Area

AIDS in Taiwan: An Update

1. Introduction

Since the first AIDS case was identified in the United States (US) in 1981⁽¹⁾, the number of infections world-wide has increased rapidly. By July of 1994, data from the World Health Organisation (WHO) showed that although there have been 980,000 reported AIDS cases, the actual number of patients could exceed 4 million, and the number of infections is probably likely to be more than 16 million⁽²⁾. Of these, 2.5 million are believed to be in Asia alone. In the period between 1980 and 2000, the number of AIDS-infected persons in Africa, America and Europe, respectively, will reach a plateau and decline thereafter. However, in Asia, the number will keep growing⁽³⁾. Asia, particularly Thailand and India, will then become the most seriously infected areas in the world.

With an increase in trade and tourism, the number of AIDS infections in Taiwan has also increased year by year. The risk factors for those infected and the epidemiological trend of the infection are important topics for further investigation.

2. AIDS in Taiwan

The first case of AIDS in Taiwan, that of a homosexual American traveler, was identified in December of 1984. The first indigenous case of AIDS was identified in 1986. By November, 1994, a total of 9,457,438 blood samples had been screened. From them, 746 were found to be HIV positive, of whom 671 were natives of the Island and 75 were foreigners. Of the native cases, 153 have developed AIDS and 95 have died: 87 died of AIDS; the remaining 6 met death from other causes such as accidents, suicide, stomach cancer, renal failure, *etc.*

Of the 671 native cases, 623 (92.8%) were male and 48 (7.2%), female. By age group, 277 (41.3%) of the cases were between 20 and 29; 195 (29.1%) were 30 to 39 years old (see Table 1). By occupation, 147 (21.9%) were laborers, 130 (19.4%) were in commerce, 88 (13.1%) were in military service and 53 (7.9%) were students. Of the students, 18 were hemophiliacs (see Table 2). By area, 231 (34.4%) of the

cases came from Taipei City, 171 (25.5%) from Taipei County, and 51 (7.6%) from Taoyuan County (see Table 3).

By risk factor, 270 (40.3%) cases were man has sex with man (MSM). Through heterosexual behavior, 239 (35.6%) cases had been infected: 49 (7.3%) were hemophiliac patients and 32 (4.8%), drug-abusers. Three cases were confirmed by Polymerase Chain Reaction (PCR) to have been infected through blood transfusion (see Table 4). Though thus far the proportion of male homosexuals and bisexuals is still high, in the period 1990 to 1993 the proportion of these patients to the total number of persons infected in the year had declined from 61% to 37% and the rate of infection between sexes had increased from 17% to 48%. Infection among drug-abusers showed no significant change, and infection of hemophiliacs has declined. Thus it would appear that, in Taiwan, heterosexual behavior has become one of the major routes of infection (Figure 1).

Only 48 female carriers have been identified in Taiwan. By risk factor, heterosexual behavior seems to be the major route of infection in women, with 39 (81.3%) cases infected heterosexually (see Table 5). Among adolescents younger than 13 years, 83.4% were hemophiliac; of those in the 14-19 age group, 18 (52.9%) were MSM (see Table 6).

Of the total 746 HIV positives, the first 100 cases emerged slowly to be identified over a 55-month period. Subsequently, over only a subsequent 6-month period, cases 601 through 700 were identified (Figure 2). The trend of infection in Taiwan seems to be growing faster. An effort must be directed to more immediate concern for prevention and control.

3. Discussion

In the mid-1980's, the epidemiological patterns of AIDS were considered to fall into three types. Type 1 was MAINLY in Europe and America, where patients were primarily homosexuals and drug-abusers, and where very few had been infected heterosexually; therefore, patients were predominantly male. Type 2 was found in sub-Saharan Africa, where infection among homosexuals and drug-abusers was low but, because of greater sexual freedom, infection was higher in males with multiple sex partners and for prostitutes; thus, infection rates in men and women were similar. Type 3 was in Asia; with infection making a later appearance; initially there was more infection among homosexuals and drug-abusers, and this was thought to follow the pattern of Type 1. However, given the rapid spread of infection in Thailand, scholars and experts are now inclined to classify that country's pattern separately, and call it "Type 4". They also predict that the future trend of infection in Asia will follow that of Thailand: that is, from MSM to prostitutes, sexually-transmitted disease (STD) patients, customers of prostitutes and thus intrude further into families, including their innocent infants. Analysis by Tim Brown *et al* of the US East-West Center⁽⁴⁾ shows that AIDS is now less serious in some Asian countries such as Hong Kong, Japan, Korea, China (except for Yun-nan) and Taiwan. However, considering the trend of infection in Taiwan, the need

exists for more prevention and control measures while time remains. The goals of the AIDS control program in Taiwan are: 1) to prevent infection by, and to effectively control the transmission of AIDS; 2) to provide adequate medical care for those infected and to improve their quality of life⁽⁵⁾. Disease surveillance has been strengthened. Work has been done to upgrade laboratory testing and improve medical care; to intensify control of STDs; to promote health education about AIDS; to develop professional manpower and to promote local research about AIDS. In 1988 screening of all bloods for transfusion, and of all blood products, was begun in order to safeguard recipients. In 1990, the AIDS Control Act was legislated, giving a legal basis for control of AIDS. Efforts continue and will be increased to encourage the use of condoms among high-risk groups, to set up surveillance systems for sexual behavior and diseases and to establish mid-way houses for care of AIDS patients.

Reported by: Bureau of Communicable Disease Control, Department of Health, The Executive Yuan.

4. References

1. Chuang CY. All about AIDS 1992; p.93.
2. World Health Organization. Weekly Epidemiological Record 1994; 69: 189-196.
3. Mann J, Tarantola DJM, Netter TW. AIDS in the world. In: Cambridge, MA. University Press 1992; pp. 83-107.
4. Brown T, Xenos P. AIDS in Asia. In: The Gathering Storm. East-West Center 1994; 16: 1-15.
5. Department of Health, The Executive Yuan. HIV/AIDS prevention and control program, 1993; p. 7.

Table 1. HIV (+) by Age and Sex, Taiwan Area

30 November 1994

Age	Male		Female		Total	
	No.	%	No.	%	No.	%
0 — 9	7	(1.2)	1	(2.1)	8	(1.2)
10 — 19	36	(5.8)	2	(4.2)	38	(5.7)
20 — 29	257	(41.3)	20	(41.7)	277	(41.3)
30 — 39	181	(29.0)	14	(29.2)	195	(29.1)
40 — 49	70	(11.2)	4	(4.2)	72	(10.8)
50 — 59	30	(4.8)	3	(6.3)	33	(4.9)
60 — 69	25	(4.0)	5	(10.3)	30	(4.5)
70 +	7	(1.1)	0	(0.0)	7	(1.0)
Unknown	10	(1.6)	1	(2.1)	11	(1.5)
Total	623	(100.0)	48	(100.0)	671	(100.0)

Table 2. HIV Positives by Occupation, Taiwan Area

30 November 1994

Occupation	HIV (+)* (%)	Cases (%)
Labor	147 (21.9)	29 (19.0)
Commerce	130 (19.4)	35 (22.9)
Service	88 (13.1)	22 (14.3)
Unemployed	82 (12.2)	19 (12.4)
Students***	53 (7.9)	8 (5.2)
Professional**	45 (6.7)	20 (13.1)
Others****	126 (18.8)	20 (13.1)
Total	671 (100.0)	153 (100.0)

* including cases

** professionals include school teachers, scientists, architects, engineers, lawyers, journalists, medical care personnel, accountants, writers, musicians, artists, religious workers and performers

*** include 18 hemophiliac patients

**** others include civil service, military, agriculture, fishery, transportation, housewife and unknown.

Table 3. HIV (+) and AIDS Cases by Residence, Taiwan Area

30 November 1994

Residence	HIV (+)* (%)	Cases (%)
Taipei City	231 (34.4)	49 (32.0)
Taipei County	171 (25.5)	39 (25.5)
Taoyuan County	51 (7.6)	13 (8.5)
Kaohsiung City	34 (5.1)	11 (7.2)
Others	184 (27.4)	41 (26.8)
Total	671 (100.0)	153 (100.0)

* including cases

Table 4. HIV (+) and AIDS Cases by Risk Factors, Taiwan Area

30 November 1994

Risk Factor	HIV (+)* (%)	Cases (%)
Man has sex with man (MSM)	270 (40.3)	73 (47.7)
Heterosexual	239 (35.6)	53 (34.6)
Hemophiliac	49 (7.3)	7 (4.6)
Drug-abuse	32 (4.8)	6 (3.9)
Homo/bisexual + Drug abuse	2 (0.3)	0 (0.0)
Blood transfusion	3 (0.4)	0 (0.0)
Vertical from mother to child	1 (0.1)	0 (0.0)
Unknown and others	75 (11.2)	14 (9.2)
Total	671 (100.0)	153 (100.0)

* including cases

**Table 5. Female HIV (+) and AIDS Cases by Risk Factor,
Taiwan Area**

30 November 1994

Risk Factor	HIV (+)*		Cases	
	No.	(%)	No.	(%)
Heterosexual	39	(81.3)	7	(77.8)
Drug-abuse	3	(6.3)	1	(11.1)
Vertical infection	1	(2.1)	0	(0.0)
Unknown	5	(10.3)	1	(11.1)
Total	48	(100.0)	9	(100.0)

* including cases

Table 6. Young HIV (+) by Risk Factor, Taiwan Area

30 November 1994

Risk Factor	≤ 13 years		14-19 years	
	No.	(%)	No.	(%)
Hemophiliac	10	(83.4)	5	(14.7)
Homo/bisexual	0	(0.0)	18	(52.9)
Heterosexual	0	(0.0)	5	(14.7)
Drug-abuse	0	(0.0)	1	(2.9)
Vertical infection	1	(8.3)	0	(0.0)
Blood transfusion	1	(8.3)	1	(2.9)
Unknown	0	(0.0)	4	(11.9)
Total	12	(100.0)	34	(100.0)

Figure 1. Risk Factors of HIV Positives in Taiwan by Year

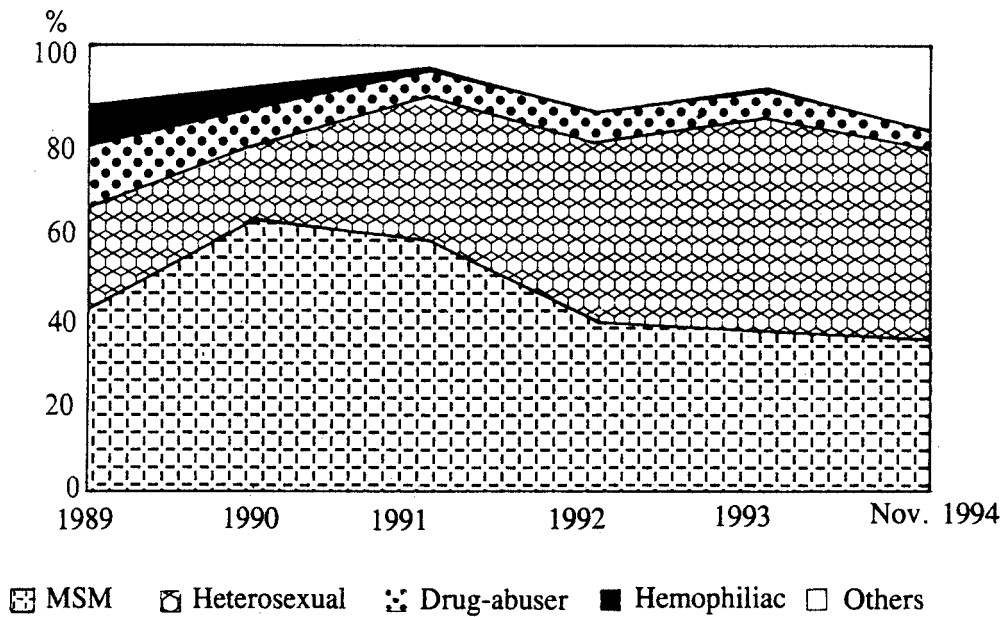


Figure 2. Years Required for Every 100 HIV Positives to be Identified in Taiwan

