World Health Organization

Regional Office for the Western Pacific

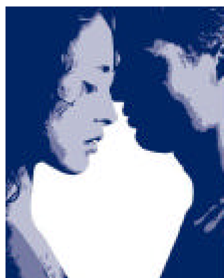
STI

HIV

STATUS AND TRENDS OF STI, HIV/AIDS AT THE END OF THE MILLENNIUM

Western Pacific Region

1999



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ABBREVIATIONS AND ACRONYMS

AIDS	acquired immune deficiency syndrome
CDC	Centers for Disease Control and Prevention
CSW	commercial sex worker
FCSW	female commercial sex worker
FSW	female sex worker
GASP	Gonococcal Antimicrobial Surveillance Programme
HIV	human immunodeficiency virus
IDU	injecting drug user
Lao PDR	Lao People's Democratic Republic
MIC	minimal inhibitory concentration
MSM	men who have sex with men
NGU	non gonococcal urethritis
QRNG	quinolone resistant gonococcus
RCSW	registered commercial sex worker
SHC	social hygiene clinic
STD	sexually transmitted disease
STI	sexually transmitted infection
SW	sex worker
TB	tuberculosis
UNDP	United Nations Development Programme
WHO	World Health Organization
WPRO	Western Pacific Regional Office (of WHO)

ACKNOWLEDGEMENTS

The Western Pacific Regional Office of the World Health Organization would like to thank the experts and epidemiologists from the Region who contributed to this document.

WHO Library Cataloguing in Publication Data

Status and Trends of STI, HIV and AIDS at
The End of the Millennium, Western Pacific Region, 1999

1. Sexually transmitted diseases - epidemiology. 2. HIV infections - epidemiology.
3. Acquired immunodeficiency syndrome - epidemiology.
I. Western Pacific

ISBN 92 9061 151 0

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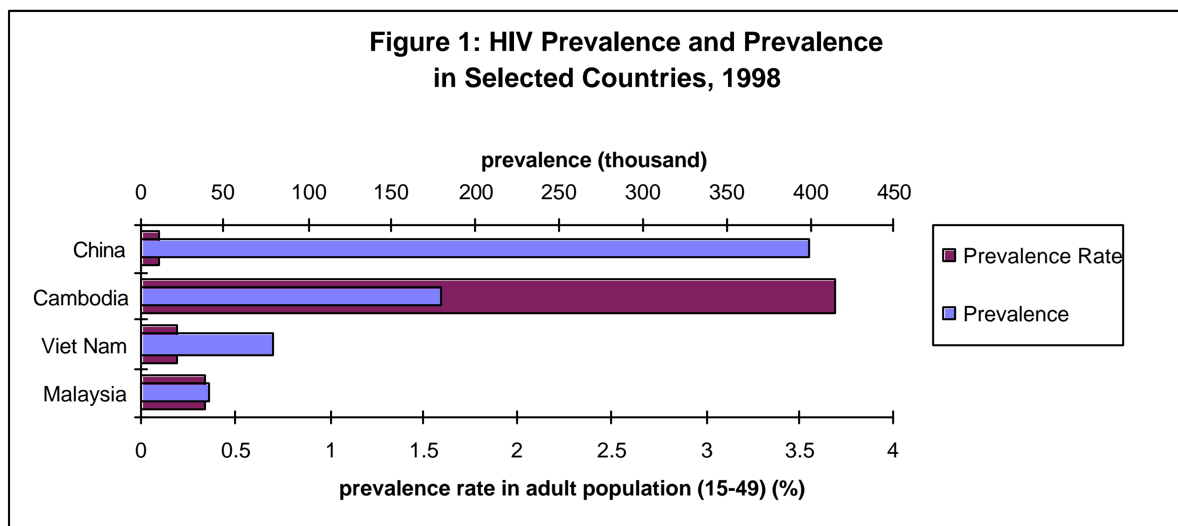
1. REGIONAL OVERVIEW

It is estimated that more than 700 000 people were living with HIV infection in the Western Pacific Region in 1998 (Figure 1), with more than 18 000 new AIDS cases occurring in the same year. In contrast, the cumulative number of HIV diagnoses reported in all countries of the Region was about 100 000 and reported AIDS incidence in 1998 was 3300. This reflects a very high level of underdiagnosis and underreporting of HIV and AIDS cases in the Region. The number of people living with HIV infection is projected to reach 1 million in 2000, and the yearly number of new cases of AIDS to be doubled.

Figure 1: HIV Prevalence and Prevalence in Selected Countries, 1998



Analysis of the trend of the relative proportion in HIV risk exposure based on reported cases in the Region suggests that there have been three waves. First, sexual contact among men was the driving force in the early epidemic in Australia and New Zealand, with rapid decrease in prevalence by the late 1980s. Second, the widespread sharing of equipment among injecting drug users (IDUs), primarily in Malaysia, China and Viet Nam was most important during the late 1980s and early 1990s, eventually leveling off around 40% of reported cases (it should be noted that this mode of transmission is probably over-represented due to the mandatory HIV testing of injecting drug users in rehabilitation centres or prison). Finally, the more recent trend has been a steady increase in the proportion of reported cases associated with heterosexual contact. Transmission of the virus through this mode has been gradually increasing since the beginning of the epidemic and is expected to continue to increase in the future (Figure 2).

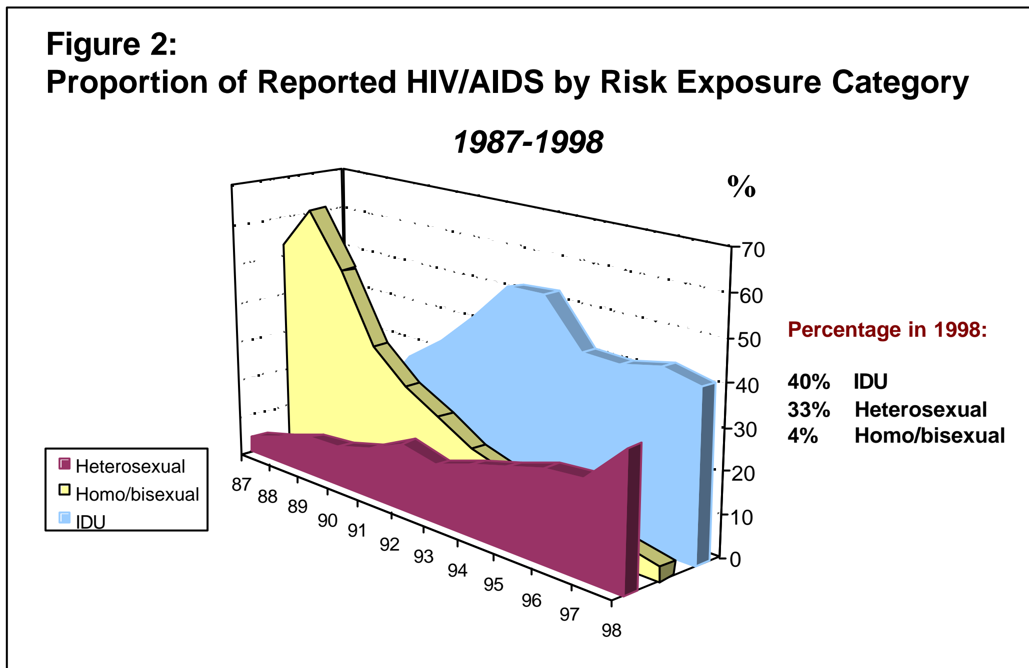


Figure 2:
Proportion of Reported HIV/AIDS by Risk Exposure Category
1987-1998

As the HIV epidemic has developed in Asia and the Pacific, a wide range of transmission patterns has emerged and it is possible to identify several broad categories of transmission patterns in the Region.

- **Countries with declining HIV prevalence** (Australia and New Zealand). In these countries the vast majority of HIV infections have been acquired through sexual contact between men, a mode of transmission that reached a peak in the mid-1980s (Figures 3 and 4). Surveillance of clientele of needle exchange and methadone programmes reveals that HIV prevalence among IDUs has remained very low. Heterosexual transmission remains quite rare in these countries.

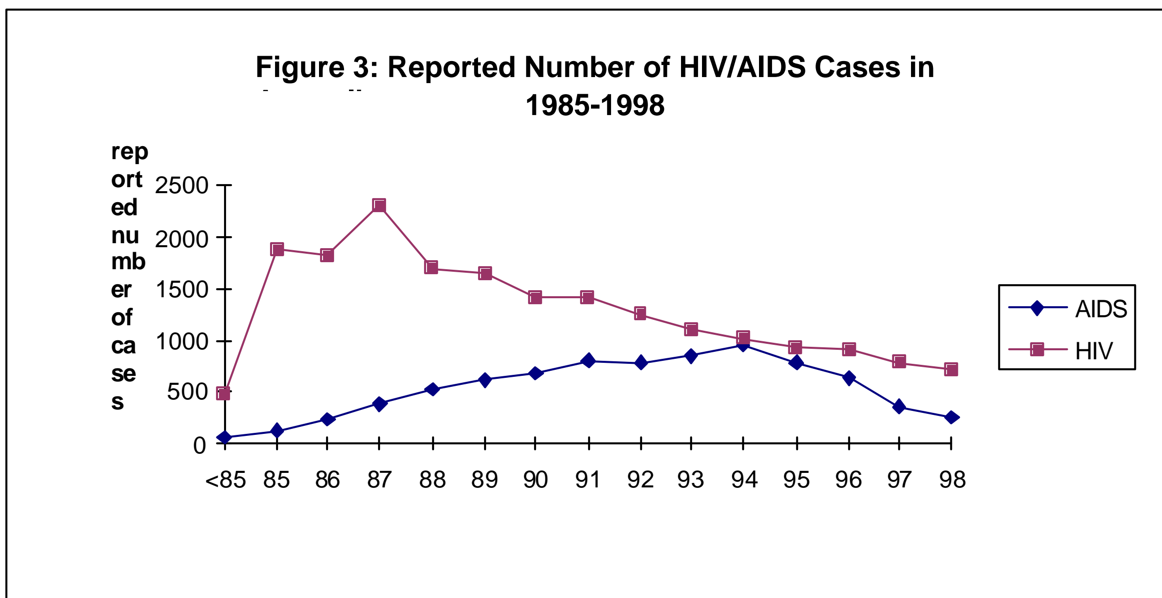


Figure 3: Reported Number of HIV/AIDS Cases in
1985-1998

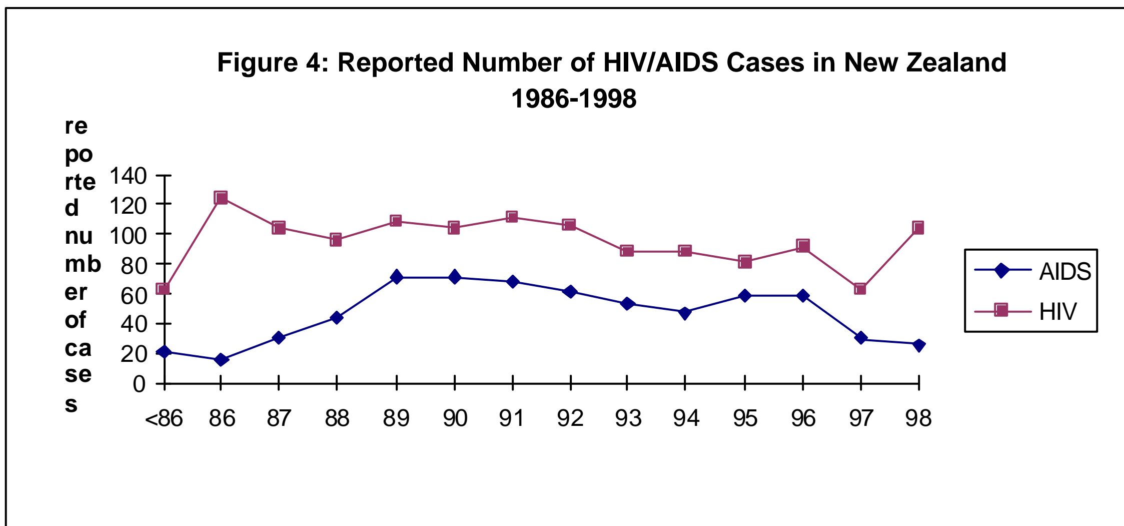


Figure 4: Reported Number of HIV/AIDS Cases in New Zealand 1986-1998

- **Countries with high HIV prevalence among injecting drug users** (China, Malaysia and Viet Nam). The pattern of HIV transmission in these countries has predominantly involved IDUs (Figures 5 and 6). High levels of transmission among IDUs probably began in the late 1980s in Malaysia, the early 1990s in China, and even more recently in Viet Nam. Based on surveillance data, prevalence among IDUs in Malaysia ranges from 15% to 20%. In Viet Nam, rapid increases in prevalence in some areas have been observed (from 0.4% in 1995 to 66% in 1998). The epidemic among IDUs in that country started in the south and has spread to the north in the last few years. Reported prevalence among IDUs in parts of Yunnan and Xinjiang provinces, China, has been about 60% to 80%.

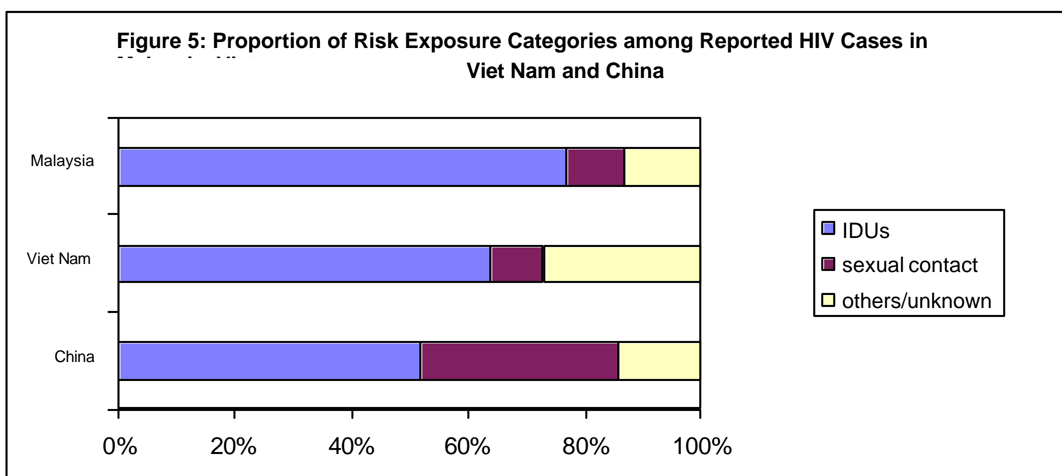
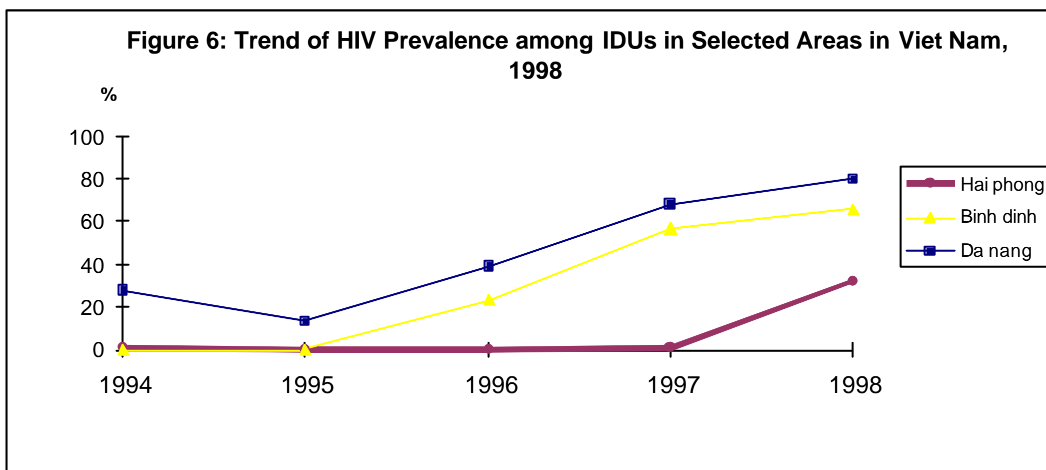
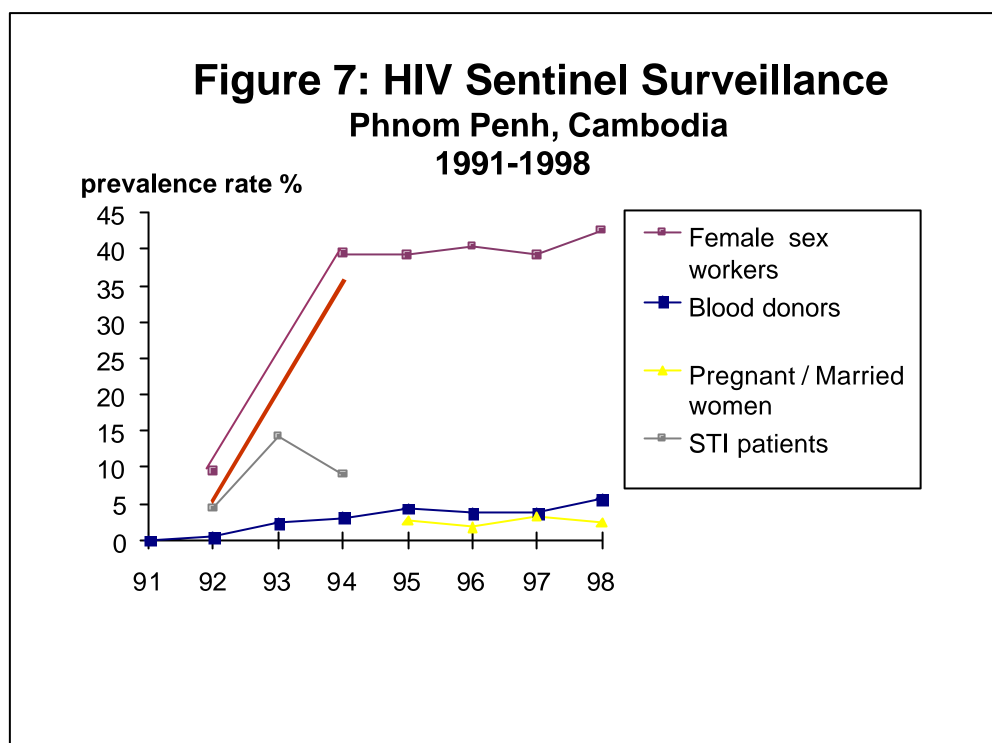
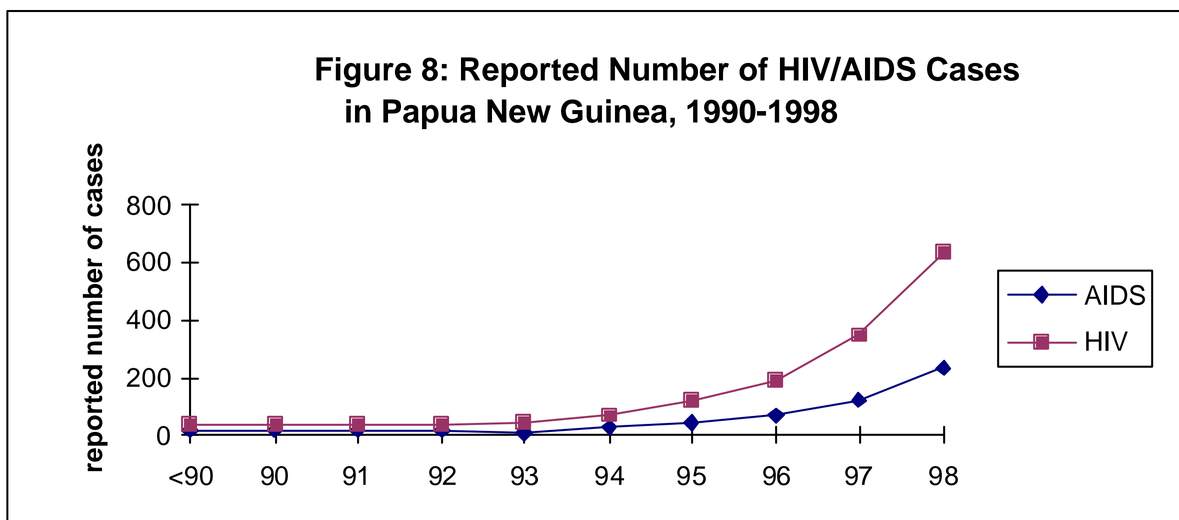


Figure 5: Proportion of Risk Exposure Categories among Reported HIV Cases in Viet Nam and China



- **Countries with increasing HIV prevalence due to heterosexual HIV transmission** (Cambodia and Papua New Guinea). In these countries, the dominant transmission pattern has been through heterosexual contact (Figures 7 and 8). HIV seroprevalence surveys among antenatal women in Cambodia have shown rapid and steady increase in prevalence (from 0% in 1992 to 3.2% in 1997). HIV seroprevalence among SWs has reached 43% in 1998. In Papua New Guinea a steady increase in HIV prevalence has been observed among pregnant women in Port Moresby (from 0.05% in 1994 to nearly 0.2% in 1996). Reported cases of HIV infection have nearly doubled every year for the last several years.



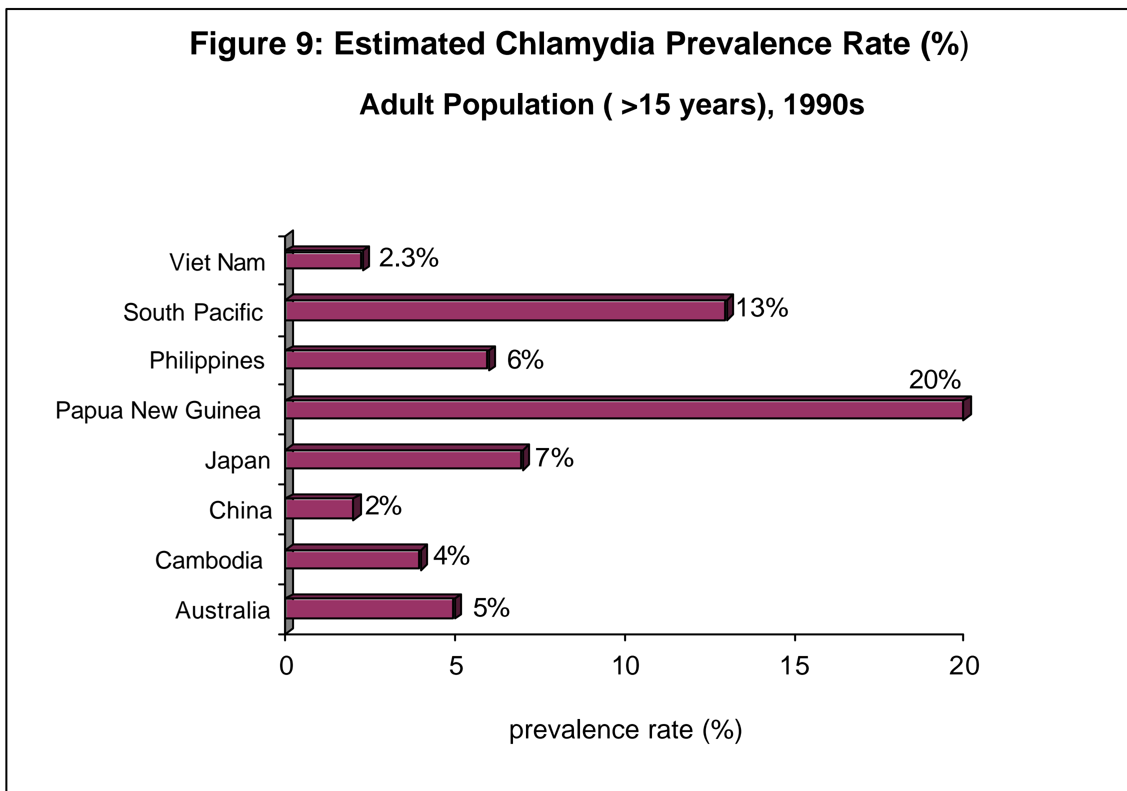


- ▶ **Countries with limited HIV transmission** (all other countries). There is so far little indication of rapid increases in infection rates due to sexual contact or injecting drug use.

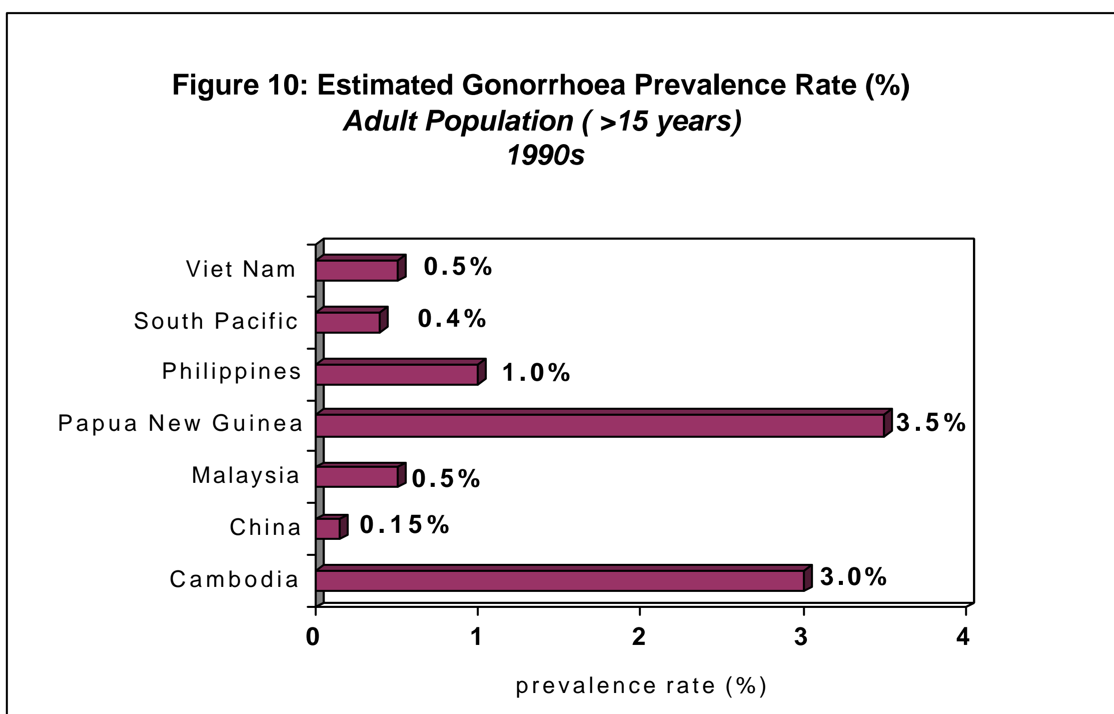
STI other than HIV

WPRO receives annual sexually transmitted infection (STI) data on reported cases and surveillance data from member states. However, the data vary greatly in coverage and prevalence surveys are not conducted regularly in most countries. While they must be interpreted cautiously, working estimates of the prevalence of selected STI in the general population of reproductive age (15-49) have been developed from available STI prevalence surveys. Following are some key points.

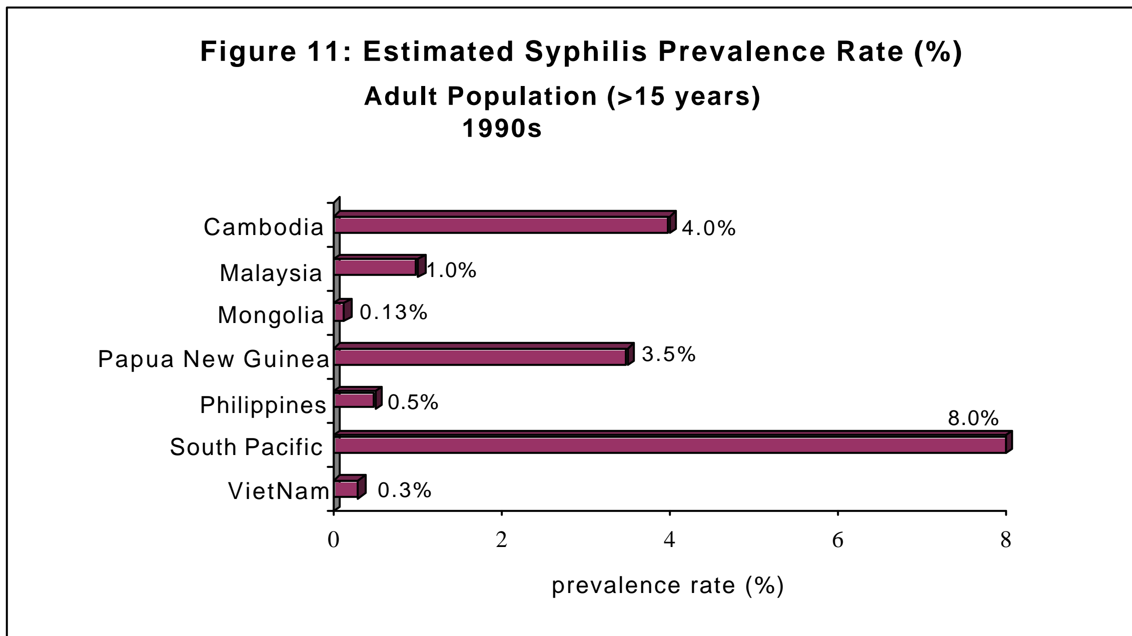
- ▶ Chlamydia infections appear to be the most prevalent STI in the Region. Prevalence rates in the general population are estimated to be as high as 20% in Papua New Guinea and 13% in Pacific Island countries (excluding Australia, New Zealand and Papua New Guinea). Estimated prevalence rates of between 4% and 10% are found in Australia, Cambodia, Japan and the Philippines. China and Viet Nam have rates of about 2% (Figure 9).



▶ Relatively The highest estimated prevalence rates for gonorrhoea (3% or greater) are found in Cambodia and Papua New Guinea. In other countries, estimated rates are below 1% (Figure 10).



- Relatively high syphilis prevalence rates characterize Cambodia (4%), Papua New Guinea (3.5%) and the South Pacific (8%) (Figure 11). In all other countries, estimated rates are below 1%.

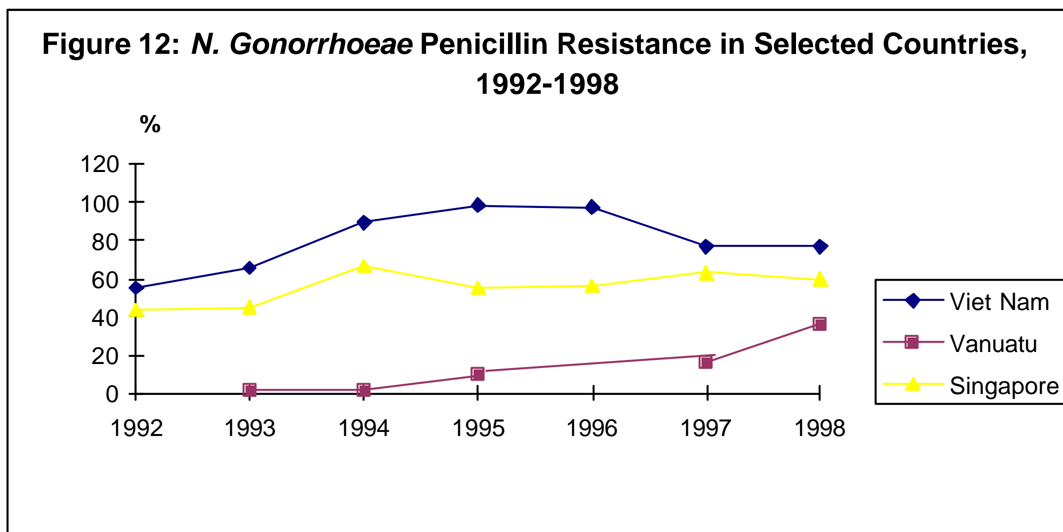


Gonococcal Susceptibility to Antimicrobials

The WHO Western Pacific Gonococcal Antimicrobial Surveillance Programme (WHO WPR GASP) has undertaken antibiotic susceptibility surveillance of gonococci since 1992. Sixteen countries in the Region contributed data on about 10 000 isolates in 1998.

- Resistance to the penicillins is widespread. The highest rates of penicillin resistance are reported from the Republic of Korea (90%); the Philippines (82%); Viet Nam (76%); Mongolia (70%); Hong Kong, China (69%); China (62%); and Singapore (59%). These percentages represent the total of all forms of penicillin resistance (Figure 12).

Figure 12: *N. Gonorrhoeae* Penicillin Resistance in Selected Countries, 1992-1998



- Quinolone resistance was assessed in 13 countries in 1998, with quinolone resistant gonococcus (QRNG) found in 11 countries. Fiji and the Solomon Islands are the only countries in which this resistance is not observed. More than 90% of isolates in China and Hong Kong, China are QRNG. The Philippines has a high proportion of high level QRNG (63%), continuing a pattern that has been observed for some time. The Republic of Korea (62%) and Japan (52%) report a high percentage of QRNG. Papua New Guinea, Singapore and Viet Nam show a lower proportion of mixed low and high level QRNG. In other countries (Australia and New Zealand), QRNG generally occurs in imported strains, although some endemic transmission also occurs. Overall, more countries in the Region are recording the presence of QRNG, a higher proportion of QRNG is being recorded each year, and higher minimal inhibitory concentration (MIC) are being found in the existing QRNG.

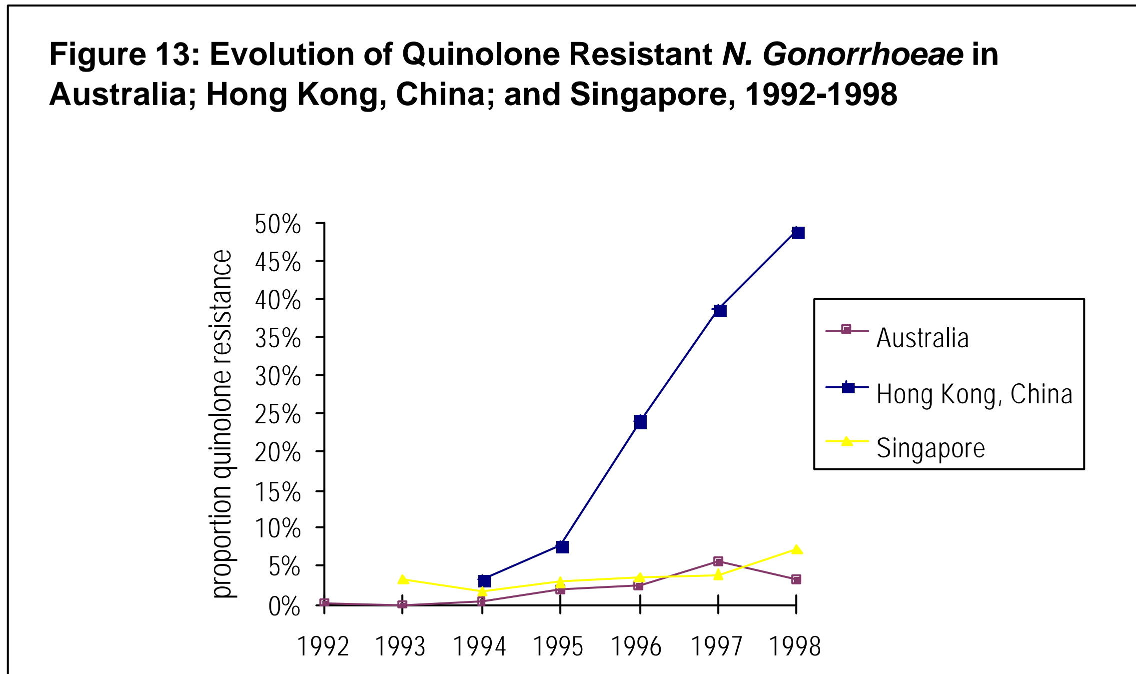


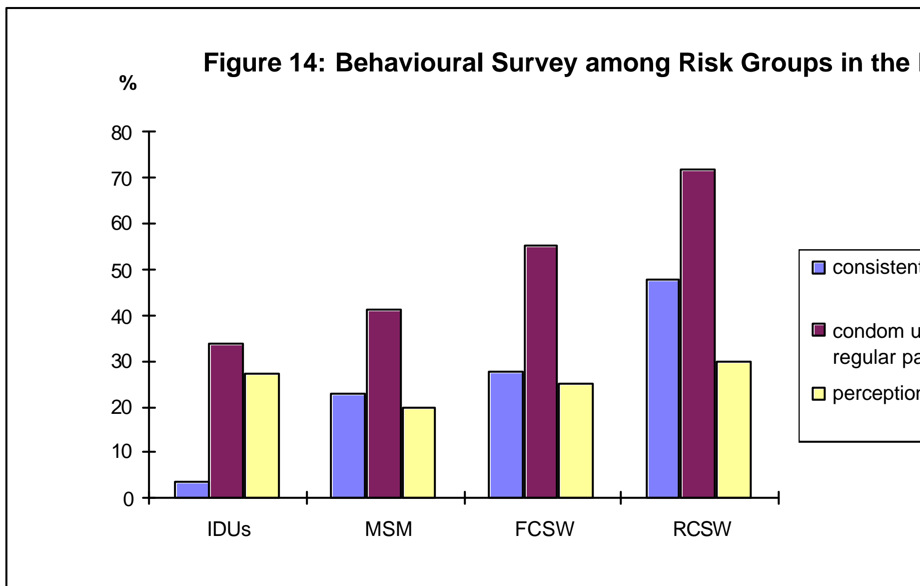
Figure 13: Evolution of Quinolone Resistant *N. Gonorrhoeae* in Australia; Hong Kong, China; and Singapore, 1992-1998

- Spectinomycin resistance is rarely encountered in the Region and occurs only in sporadic cases.

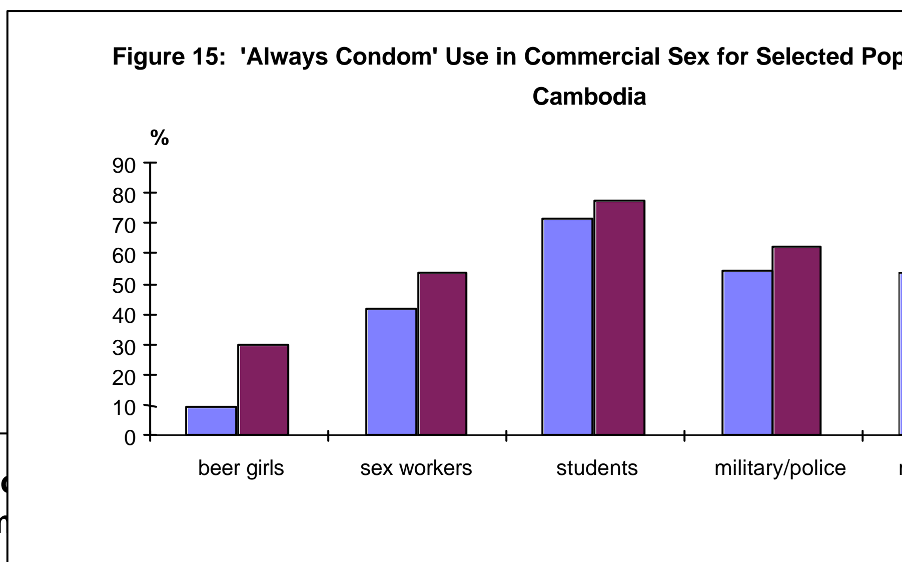
Incremental changes were observed in susceptibility patterns of gonococci in the Region in 1998. However, the observed increases are occurring on top of an already high and somewhat alarming level of resistance. This worsening resistance will continue to limit options for treatment in the countries and areas of the Region.

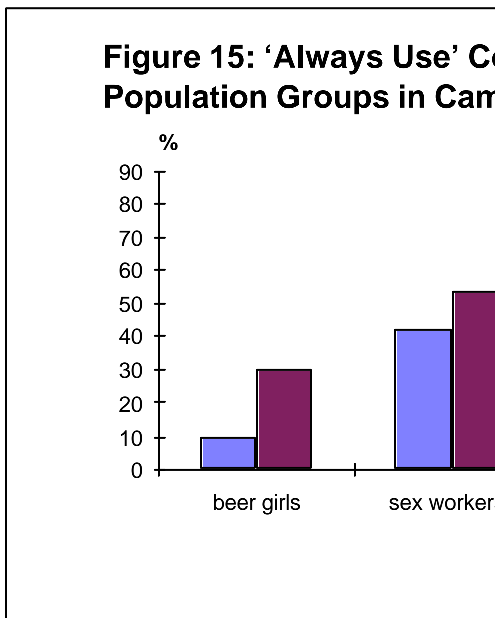
Sexual Behaviour

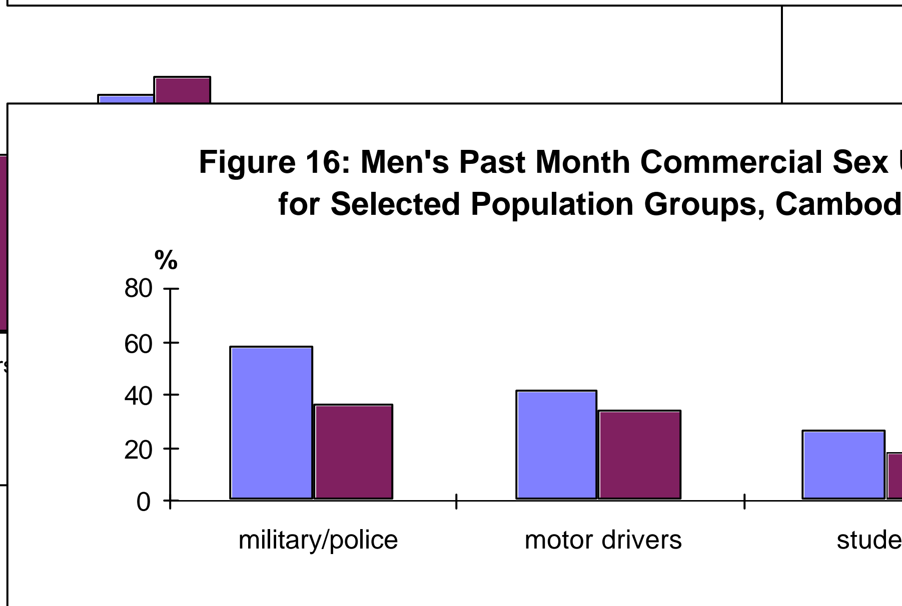
Sentinel surveillance on risk behaviour has been conducted in the Philippines and Cambodia. In the Philippines the surveys among high risk groups have shown low levels of consistent condom use and condom use at the last sex with non-regular partner. The perception of their own risk of AIDS was low (Figure 14).



IDUs: injecting drug users; **MSM:** men who have sex with men; **FCSW**: female commercial s
registered commercial sex workers



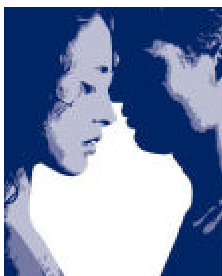




In Cambodia, condom use in high risk groups increased in groups surveyed: beer girls (9.6% in 1997 to 29.7% in 1998), sex workers (42% in 1997 to 53.4% in 1998), students (71.5% in 1997 to 77.4% in 1998) and other groups (Figure 15). There were also decreases in: (a) the proportion of men who reported purchasing commercial sex between 1997 and 1998 (Figure 16); and (b) the proportion of sex workers who had more than three clients in one day (38.3% in 1997 to 22.4% in 1998).

Ad hoc surveys conducted in many countries and areas in the Region show low condom use among risk groups; lifetime condom use was low (40%-50%) among high risk groups in Lao People's Democratic Republic (PDR); 36% of sex workers use condoms in Mongolia; a high percentage of sex workers did not use condoms in China (1998, median 65%, range 5% to 100%).

Sharing equipment among IDUs in China increased from 25% (range, 20% to 100%) in 1997 to 60% (range, 20% to 100%) in 1998.



2. COUNTRY STATUS AND TRENDS

AUSTRALIA

Summary

Australia was among the first countries in the world to report AIDS cases. Retrospective analyses of epidemiological data indicate that HIV incidence peaked in 1984, followed by a rapid decline. This trend has continued in the 1990s, with a decrease in AIDS cases from 954 in 1994 to 273 in 1998. This decline in incidence is projected to continue. Annual reported diagnoses of HIV infection have also declined steadily, from more than 2300 in 1987 to about 720 in 1998. An estimated 10 800 people were living with HIV infection in Australia at the end of 1998.

The number of people living with HIV/AIDS may increase slightly due to the introduction of antiretroviral therapy and associated longer survival. It is estimated that there have been 530 fewer AIDS diagnoses since 1995 than would have been the case in the absence of potent combination therapies that have reduced the rate of progression from asymptomatic HIV infection to AIDS. The proportion of women among reported cases has been gradually increasing, from 0% until 1983 to 13% in 1999. HIV infection in children remains rare.

Overall rates for other STI have declined since the mid-1980s, with particular reduction among high-risk groups such as male homosexuals and FSWs. However, rates of STI among indigenous populations continue to be substantially higher (by a factor of 10 to 100 times) than in the non-indigenous population.

Surveillance Structure

- Newly diagnosed HIV infections and AIDS cases are notifiable in all State/Territory health jurisdictions.

- AIDS Surveillance Definitions by Centers for Disease Control and Prevention (CDC 1987) were used before 1993. Since then, the modified case definition described in ANCA Bulletin 18: Definition of HIV Infection and AIDS-defining Illnesses (Australian National Council on AIDS 1994) has been used. Three AIDS defining illnesses were added to the CDC 1993 revision of the AIDS case definition as part of the current Australian AIDS case definition. However, individuals with an HIV seropositive test result and a CD4+ cell count of less than 200 are not defined as having AIDS unless they have an AIDS defining illness.

- Beginning in 1991, national surveillance for cases of newly diagnosed HIV infection was extended to include data on probable or estimated date of infection.

- Newly acquired HIV infections are identified by the diagnosis of an HIV seroconversion illness or a negative or indeterminate HIV antibody test result during the 12 months prior to HIV diagnosis.

- HIV seroprevalence surveys have been conducted regularly. The population surveyed in 1998 included blood donors, STI clinic clients, needle exchange clients and prison entrants.

- Diagnoses of gonorrhoea and syphilis are notifiable in all States/Territory health authorities, while chlamydia is notifiable in all health jurisdictions except New South Wales. STI may be reported by doctors, laboratories, or both, depending on the jurisdiction. Donovanosis is notifiable in the Northern Territory, Queensland, and Western Australia. Chancroid is notifiable in all State/Territory health jurisdictions, except for South Australia and New South Wales.

HIV/AIDS

Reported cases as of June 1999

"Reported HIV cases" refers both to AIDS cases and HIV antibody positive asymptomatic patients. At the end of June 1999, a total of 19 738 cases of HIV had been reported including 8140 AIDS cases (Table 1).

The annual number of cases of newly diagnosed HIV infection has declined steadily since 1987. AIDS incidence peaked at 954 cases in 1994, then gradually declined to 273 diagnosed cases in 1998. It is recognized that some reports may duplicate previously reported cases. As a consequence, estimates have been made of the extent of duplication, resulting in revised figures.

Table 1: **Reported cases of HIV/AIDS by year of diagnosis in Australia as of June 1999**

	<1985	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	Total
AIDS	54	128	234	385	533	614	675	803	787	844	954	801	654	357	273	44	**8 140**
HIV/AIDS	467	1922	1815	2305	1691	1633	1423	1415	1239	1098	1030	946	927	794	720	313	**19 738**

The vast majority of reported cases of HIV infection and AIDS have been diagnosed in males. Sexual contact between men was the predominant route of HIV transmission.

While the absolute number of women diagnosed with HIV has been stable over time, the relative proportion of women represented has increased steadily (0% in 1983 to 13% in 1999). Exposure to HIV among women occurs predominantly through heterosexual contact.

HIV prevalence rates are low in most population groups surveyed, as illustrated by the following breakdowns:

Table 2: **Distribution of cumulative Reported HIV/AIDS cases by sex and mode of transmission in Australia as of June 1999**

	HIV (%)	**AIDS** (%)
Sex		
Male	94	96
Female	6	4
Mode of transmission		
Homo-/bisexual	66	85
IDU	4	3
Heterosexual	7	5
Blood products	3	3
Mother to infant	<1	<1
Other/unknown	20	3

Active HIV/AIDS surveillance

- Pregnant women (0.005% in 1995-1996)
- Homosexual men < 23 years old living in metropolitan areas (declined from 3% in 1992 to 1.4% in 1997)
- Military entrants (less than 0.1% for 1988-1996)
- Female sex workers (steady at about 0.1% since 1992)

- Prison entrants (0.1% in 1997)

- Individuals attending selected sexual health clinics (0.5% among males, 0.05% among females in 1997).

HIV prevalence was higher among IDU participants in needle exchange programmes (2.1% in 1995 and 1.5% in 1998). The rate was substantially higher among homosexual IDUs (31% in 1997).

These results show that circulation of HIV is limited in the general population. Higher prevalence continues to exist among homosexual, IDUs, sex workers and their clients.

Estimates and projections for the number of people living with HIV are based on analysis of epidemiological data from surveillance of diagnosed HIV cases and from sentinel surveillance in populations known to be at high risk for HIV infection. Projection for future HIV prevalence was obtained using back-projection methods.

The annual number of AIDS diagnoses, after adjusting for reporting delay, reached a peak in 1994 (954 cases), and declined to 273 cases in 1998. AIDS incidence is projected to continue to decline slowly over the next few years. It was estimated that there were 10 800 people living with HIV infection in Australia by the end of 1998, representing a prevalence rate of 0.1% in the adult population aged 15-49 (Table 3 and 4). Estimated HIV prevalence is projected to increase to 11 420 by the year 2000 (Table 3). This can be attributed to the recent introduction of highly active antiretroviral therapy and the prolonged transition period from asymptomatic HIV carrier status to AIDS patient.

Table 3: **Estimates and projections for HIV/AIDS in Australia, 1998 and 2000**

		1998	**2000***
	Population (15-49)	9 600 000	9 700 000
AIDS	Incidence	500	
	Incidence rate in adults (15-49)	0.0065%	
HIV	Prevalence	10 800	11 420
	Prevalence rate in adults (15-49)	0.1%	0.1%

* Projections for AIDS incidence were not made given the need to adjust for the impact of antiretroviral treatment.

Table 4: **HIV/AIDS epidemiological features in Australia (1998 estimates)**

HIV	
Prevalence	10 800
Prevalence rate in adults (15-49)	0.1%
Women among HIV infected population	5%
HIV infection through mode of transmission	
Sexual contact	91%
Injecting drug use	5%
Others	4%
Estimated reporting rate for HIV	>95%
Estimated reporting rate for AIDS	>95%

STI other than HIV

Reported cases

Diagnoses of STI reported to the National Notifiable Diseases Surveillance System show generally moderate incidence rates: gonorrhoea (29/10 000); syphilis (6/10 000); chlamydia (62/10 000) in 1998. There has been a steady decline in the reported rates of STI in some states since the early 1980s. Reported incidence rates among indigenous people are 10-100 times higher than in non-indigenous people.

Active STI surveillance

A survey of women attending a sexual health clinic in 1992 documented a gonorrhoea prevalence rate of 1.0% and a chlamydia prevalence rate of 6.4%. Surveys of STI have shown substantially higher incidence rates in many indigenous communities than in the non-indigenous population.

Estimates for STI

Information is not available.

Gonococcal antimicrobial resistance

Data from GASP indicates an increase in gonococcal resistance. Resistance to penicillin increased from 17% to 28% between 1982 and 1998; resistance to quinolones increased from <0.1 % to 3% in the same period.

STI and HIV Risk Behaviour Surveillance

Behavioural surveys among homosexual men suggest that there has recently been an increase in the proportion of respondents reporting unprotected anal sex with casual sex partners (up to 25%). The proportion of IDUs reporting shared use of equipment in the previous month declined from 29% in 1995 to less than 20% in 1997.

Surveys among first year university students in Sydney since 1988 show that the proportion of respondents with previous sexual experience has remained constant (6%), and that a higher proportion of students report using condoms with casual sexual partners (80%).

BRUNEI DARUSSALAM

Summary

Since the first case of HIV infection was diagnosed in Brunei Darussalam in 1986, HIV prevalence has remained low. A cumulative total of 498 HIV cases, including 12 AIDS cases, had been reported by the end of July 1999. The reported number of HIV/AIDS cases has decreased since 1994.

The large majority of new reported HIV cases occur among immigrant workers. Nearly all reported HIV/AIDS cases are among men (96%) and among heterosexuals. Levels among women have stayed low, with no apparent increase. HIV seroprevalence surveys show low HIV prevalence rates, even among individuals at high-risk for HIV and STI . Reported seroprevalence of syphilis is also low (0.15% - 0.3%).

Surveillance Structure

- The CDC AIDS case definition (1993) is used.
- All HIV and AIDS cases are mandated as reportable by the Ministry of Health.
- Information on other STI is not available.

HIV/AIDS

Reported cases as of 31 July 1999

The first HIV infection in Brunei Darussalam was reported in 1986. By the end of July 1999, a cumulative total of 498 HIV infections had been reported, amongst 18 Bruneians and 480 foreigners.

The cumulative number of long term residents reported as HIV cases remains very low (less than 20). The number of reported AIDS cases is also quite low (Table 1).

Table 1: **Reported cases of HIV/AIDS by year of diagnosis in Brunei Darussalam as of July 1999**

	<1990	90	91	92	93	94	95	96	97	98	99	Total
AIDS	1	1	0	0	1	3	2	2	2	0	0	**12**
HIV/AIDS	3	3	0	1	69	153	80	78	63	34	14	**498**

Most reported cases of HIV infection are among men and heterosexuals (Table 2). The distribution of reported HIV by sex has not changed substantially during the past few years.

Table 2: **Distribution of cumulative reported HIV/AIDS cases by sex and mode of transmission in Brunei Darussalam through July 1999 (including immigrant workers)**

	HIV (%)	**AIDS** (No.)
Sex		
Male	96	12
Female	4	0
Mode of transmission		
Homo-/bisexual	2	1
IDU	<1	0
Heterosexual	87	9
Blood products	<1	2
Mother to infant	<1	0
Other/unknown	10	0

Active HIV/AIDS surveillance

Serologic studies carried out in selected population groups have shown very low HIV prevalence rates. No cases of HIV infection among blood donors were found in 1993, 1994 and 1998, as well as among pregnant women in 1993-1994. All pregnant women are tested for HIV during their antenatal check-ups, and in 1998 only one pregnant woman out of 7933 (0.01%) was found to be HIV positive. Among individuals perceived as being "at risk" (STI patients, foreign workers, other individuals) in 1993-1994, the HIV prevalence rate was 0.3%. However, one survey among prisoners in 1994 reported a relatively high HIV prevalence rate of 2.6%.

Estimates and projections for HIV/AIDS

The number of HIV infections and AIDS cases is so low that estimates or projections would be inappropriate.

STI other than HIV

Reported cases

Information is not available.

Active STI surveillance

Prevalence rates for syphilis among blood donors was 0.3% in 1997 and 0.15% in 1998. Additional data on STI are not available.

Gonococcal antimicrobial resistance

Data from GASP identified penicillin resistance among 40% to 42% of gonococcal isolates during 1992-1993, and quinolone resistance among 10% of gonococcal isolates in 1996.

HIV and STI Risk Behaviour Surveillance

Information is not available.

CAMBODIA

Summary

Rapid increases in HIV transmission have been reported in Cambodia since the first case of HIV infection was notified in 1991. By 1998, an estimated 180 000 adults and 4600 children were living with HIV infection. Prevalence among those ages 15 to 49 years is estimated to be 3.7%. The cumulative reported number of individuals with HIV/AIDS reached 24 028 by the end of June 1999.

HIV is transmitted primarily through sexual contact. The estimated reporting rate of HIV is low (8%). Highest HIV prevalence is observed among FSWs (42.6% in 1998). An estimated one third of HIV/AIDS cases are among women of child bearing age.

STI are highly prevalent and condom use is low among both FSWs and their male customers (36%). Gonococcal antimicrobial resistance is high for both penicillin (79%) and quinolones (53%).

Surveillance Structure

- The expanded WHO AIDS case definition (1994) is used.

- All HIV and AIDS cases are mandated to be reported to the Ministry of Health.

- Reporting of other STI is based on the syndromic approach and laboratory testing is used where available.

- HIV sentinel surveillance began in 1994 in five provinces and was extended to 22 provinces by 1997. However, the sequencing of surveillance surveys and the composition of population groups included have not always been consistent.

- Population groups covered by HIV sentinel surveillance include women of child bearing age (antenatal clinic attendees prior to 1998), military and police personnel, FSWs, patients, and hospital inpatients.

HIV/AIDS

Reported HIV/AIDS cases as of 30 June 1999

HIV infection was first detected through serological screening of blood donors in 1991. Sentinel surveys in 1995 provided the first evidence of a highly disseminated epidemic. A total of 24 028 cases of HIV infection, including 4834 cases of AIDS, had been reported by the end of June 1999. The rapid increase in the numbers of AIDS cases since 1991 is shown in Table 1.

Table 1: **Reported cases of HIV/AIDS by year of diagnosis in Cambodia as ofJune 1999**

	Not known	1991	92	93	94	95	96	97	98	99	Total
AIDS	906	0	0	1	14	91	3	572	1494	1456	**4834**
HIV/AIDS	906	3	91	205	660	2611	45	4674	7646	2691	**24 028**

The predominant mode of transmission is through heterosexual contact, and transmission through homosexual or bisexual contact or intravenous drug use appears minimal (Table 2). During early phases of the epidemic, reported HIV infections were distributed equally among men and women. This profile has changed, as reflected in the fact that about two thirds of reported infections in 1998 were among women.

Both the sex ratio of reported HIV/AIDS cases and data on mode of transmission should be interpreted with caution given data limitations. Data on sex and/or mode of transmission are not reported in about half of HIV cases (Table 2). Of 24 028 reported cases of HIV infection, 1636 were among children believed to have been infected perinatally.

Table 2: **Distribution of cumulative reported HIV/AIDS cases by sex and mode of transmission in Cambodia as of June 1999**

	HIV (%)	**AIDS** (%)
Sex		
Male	28	6
Female	28	1
Unknown	44	93
Mode of transmission		
Homo-/bisexual	0	<1
IDU	<1	0
Heterosexual	50	35
Blood products	0	0
Mother to infant	7	23
Other/unknown	43	42

Active HIV/AIDS surveillance

- Ad hoc studies conducted in selected population groups in 1992 identified high HIV prevalence among FSWs at that early point in the epidemic (10%). However, no cases of HIV infection were found in the police, military, TB patients or pregnant women.

- The HIV sentinel surveillance system, established in 1994 in five provinces, was expanded to 22 provinces by 1997.

- Initially, populations surveyed included direct FSWs, the police, the military, antenatal clinic attendees, and TB patients. However, sample size was too small to obtain meaningful assessment of prevalence in certain groups. In later years, indirect FSWs, men and women of child-bearing age with no known risk, and hospital inpatients were surveyed.

- HIV prevalence rate increased over time in most population subgroups. However, inconsistencies in sample size, study sites, and population groups imply that survey findings are of limited value for trend analysis (Table 3).

- HIV prevalence rate is the highest among FSWs (Table 3).

Table 3: **Prevalence rate of HIV in selected populations in Cambodia, 1992-1998**

	HIV prevalence rate (%)					
	1992	**1994**	**1995**	**1996**	**1997**	**1998**
Married women child bearing age	-	-	0	-	-	2.4
Antenatal clinic attendees	0	-	2.6	1.7	3.2	-
Direct female sex workers	9	39	38	40.9	39.3	42.6
Indirect female sex workers	-	-	25.3	-	-	19.1
Female dancers / bar attendants	-	-	8.1	-	10.2	-
Police	0	-	8	5.5	6	-
Military	0	-	5.9	5.9	7.1	-
TB patients	-	-	-	-	-	5.2
Hospital in patients	-	-	-	-	6	12.2
Blood donors	-	-	-	-	-	4

Estimates and projections for HIV/AIDS

National and international experts held a consensus meeting endorsed by the Government of Cambodia in 1999. They developed working estimates of HIV/AIDS prevalence in 1998 and projections through 2000. The group concluded that widespread HIV transmission had begun in early 1989 and expanded rapidly thereafter. However, they also projected that the rate of spread would reach a peak in 2000.

Table 4: **Estimates and projections for HIV/AIDS in Cambodia,**

	Adults	
	1998	**2000**
Population (15-49) (thousands)	5125	5396
HIV		
Prevalence	180 000	257 500
Prevalence rate	3.7%	5.1%
AIDS		
Incidence	5800	11 000
Incidence rate	0.1%	0.2%

Table 5: **HIV/AIDS epidemiological features in Cambodia (1998 estimates)**

HIV	
Prevalence	180 000
Prevalence rate in adults (15-49)	3.7%
Women among HIV infected population	30%
HIV infection by mode of infection	
Sexual contact	95%
Others	5%
Estimated reporting rate for HIV	8%
Estimated reporting rate for AIDS	11%

An estimated 180 000 adults (15-49) and 4600 children were living with HIV infection in 1998 (Table 4). It is projected that the number of people living with HIV will increase by 40% by 2000, and that about one third of HIV/AIDS cases will be among women. Heterosexual contact remains the predominant mode of transmission (Table 5). The overall reporting rate of HIV/AIDS is low (Table 5)

STI other than HIV

Reported cases

Information is not available.

Active STI surveillance

Surveillance studies conducted in 1996 indicate high rates of STI among FSWs (Table 6).

Estimates for STI

Based on the limited data available on STI prevalence, the annual incidence of gonococcal infections is estimated at 170 000 and of chlamydia infections at 240 000. The prevalence of syphilis seropositivity is estimated at 240 000.

Table 6: **Prevalence rate (%) of selected STI in Cambodia, 1996**

	Chlamydia	Gonorrhea	Syphilis
Women in reproductive health clinics	5.3	5.3	3 to 7
Female sex workers	38.7	10 to 39	4 to 25
Male police/military	2.1	5	6.6

Gonococcal antimicrobial resistance

Data for 1996 from GASP indicate that 79% of gonorrhoea isolates were penicillin-resistant and 53% quinolone-resistant.

HIV and STI Risk Behaviour Surveillance

Behavioural surveillance conducted in 1997 and 1998 showed increased condom use among high-risk groups (Table 7).

Table 7: **'Always use' condoms in commercial sex in Cambodia, by group**

Population group	1997 (%)	1998 (%)
Military/Police	54.2	62.8
FSWs	42.0	53.4
Motor drivers	53.8	61.8
Beer girls	9.6	29.7
Student	71.5	77.4

The same survey suggests that fewer men reported purchasing commercial sex in 1998 than in 1997 (Table 8).

Table 8: **Men's commercial sex use in Cambodia, previous month**

Population group	**1997** (%)	**1998** (%)
Military/Police	58.0	36.1
Motor driver	42.1	33.9
Students	26.7	17.7

There was a decline in the proportion of FSWs who had sex with more than 3 clients per day from 38.3% in 1997 to 22.4% in 1998. However, there was also a significant increase in the percentage of beer promoters who reported exchanging sex for money or gifts in the past year (21.1% in 1997, increasing to 31.1% in 1998). Although these data show positive trends, findings should be considered only as suggestive given that these differences are available only for the two cities within one year interval.

CHINA

Summary

HIV/AIDS was first reported in China in 1985. By March 1999, the cumulative reported number of people with HIV/AIDS reached 13 051, with a total of 419 AIDS cases and 226 AIDS-related deaths. An estimated 400 000 persons were living with HIV in 1998. The prevalence rate among people aged 15 to 49 years is <0.1%. However, only about 5% of estimated HIV/AIDS are reported.

HIV prevalence data indicate a focused, explosive spread of infections among IDUs and no significant spread in the non-IDU population. Although HIV/AIDS cases have been detected in all provinces, HIV transmission is focused primarily among IDUs in certain provinces. For example, the HIV prevalence rate among IDUs was found to range from 44% to 85% in selected communities of drug users in Yunnan and Xinjiang.

The percentage of female prostitutes who do not use condoms changed little over time (median 65%). The percentage of IDUs who report sharing of equipment increased from 25% in 1997 to 60% in 1998. Trichomoniasis and chlamydia infections are the most prevalent STI.

Surveillance Structure

- The CDC AIDS case definition (1993) is used.
- All HIV and AIDS cases are notifiable to the Ministry of Health.
- Other notifiable STI to the Ministry of Health are gonorrhoea, syphilis, non gonococcal urethritis (NGU), venereal warts, chancroids and genital herpes, etc.
- About 100 HIV sentinel surveillance centres were operated in 30 provinces in 1998. The surveyed population included STI patients, female prostitutes, IDUs, truck drivers, blood donors and antenatal clinic attendees.
- Some behavioural data have been collected from IDUs and female prostitutes.

HIV/AIDS

Reported cases as of March 1999

The first cases of HIV were reported in 1985, with a cumulative total of 13 051 reported by March 1999 (Table 1). This included 419 AIDS cases and 226 AIDS-related deaths. Reported cases of HIV have doubled since 1994.

Table 1: **Reported cases of HIV/AIDS by year of diagnosis in China as of March 1999**

	<1989	90	91	92	93	94	95	96	97	98	99	Total
AIDS	3	2	3	5	23	29	52	38	126	136	2	**419**
HIV/AIDS	193	299	216	261	274	531	1567	2649	3343	3306	412	**13 051**

The majority of reported HIV/AIDS cases occurred in the male population, with 71% being among IDUs (Table 2). Mode of transmission is unknown for about one fifth of reported HIV/AIDS cases.

Table 2: **Distribution of cumulative reported HIV/AIDS cases by sex and mode of transmission in China as of March 1999**

	HIV (%)	**AIDS** (%)
Sex		
Male	85	85
Female	14	10
Unknown	1	5
Mode of transmission		
Homo-/bisexual	<1	2
IDU	71	48
Heterosexual	7	26
Blood products	<1	<1
Mother to infant	<1	<1
Other/unknown	22	23

Active HIV/AIDS surveillance

In 1998, close to 100 HIV sentinel sites were operational in 30 provinces. There were 36 sites for STI patients, 22 for female prostitutes, 19 for IDUs, 7 for long distance truck drivers, 12 for blood donors, and one for antenatal clinic attendees.

Explosive increases in HIV prevalence have been noted among IDUs in certain provinces in recent years. HIV infection has been detected in more than half of the 19 sentinel sites for IDUs, with HIV prevalence rates ranging from 0% to 85% in 1998. Very high HIV prevalence rates have been observed among IDUs in Yunnan (1991-1994, 40% to 50%) and Xinjiang (1998, 40% to 85%). However, even among IDUs in such provinces, the rate of HIV infection varies widely from community to community.

HIV prevalence among other population groups studied in Yunnan and Xinjiang remains very low. HIV sentinel surveillance indicates no major spread of HIV in the non-drug using population (Table 3).

Table 3: **Prevalence rate of HIV in the non drug using population in China, 1991 through 1998**

Surveillance population	1991-1994 (%)	1998 (%)
STI clinic attendees	0.01%	0.1%
Female prostitutes	0.02%	0.1%
Antenatal clinic attendees	0%	0.03%
Blood donors	-	0.0%

Estimates and projections for HIV/AIDS

Estimates for HIV prevalence and AIDS incidence were developed in 1997 and revised in 1998 by national experts. HIV appears to have begun its spread in the early 1990s. In 1998, an estimated 400 000 people were living with HIV in the country (prevalence rate of <0.1% in people aged 15 to 49 years) (Table 4) and 6000 people with AIDS.

Table 4: **Estimates and projections for HIV in China, 1998 and 2000**

	1998	2000
Population (15-49) (thousands)	709 468	722 122
HIV prevalence	400 000	600 000
Adults (15-49)	<0.1%	<0.1%
Total population	<0.1%	<0.1%

The 1998 estimates indicate that (a) the sharing of needles among IDUs accounts for more than half of HIV infections; (b) 15% of infections are sexually transmitted; and (c) 12% of HIV infections occur among women (Table 5). The number of reported HIV/AIDS cases suggests a very low reporting rate for HIV/AIDS. Reported HIV/AIDS cases accounted for 3% of estimated HIV cases, while reported AIDS cases accounted for 5% of estimated AIDS cases in 1998 (Table 5).

Table 5: **HIV/AIDS epidemiological features in China (1998 estimates)**

HIV	
Prevalence	400 000
Prevalence rate in adults (15-49)	<0.1%
Women among HIV infected population	12%
HIV by mode of infection	
Sexual contact	15%
Injecting drug use	65%
Others	20%
Estimated reporting rate for HIV	3%
Estimated re	

Reported cases

After a series of major intervention campaigns in 1964, the Chinese Government declared that STI had been eliminated in the country. Over the last decade, however, the number of reported cases of STI has increased consistently. In part, this can be attributed to improved reporting systems.

The incidence of gonorrhoea at sentinel sites was between 73/100 000 and 83/100 000 from 1993 to 1998, while syphilis incidence increased from 1.4/100 000 to 31.1/100 000 during that same period. Reported cases of congenital syphilis at sentinel sites increased from 2 in 1993 to 73 in 1998.

Active STI surveillance

Mass screening for STI among the female population took place in rural and urban areas of Yunnan 1990-1996. Prevalence rates ranged from 0.3% to 0.9% for gonorrhoea, from 7.4% to 16.2% for trichomoniasis, and from 9.8% to 38.9% for candidiasis. Another study of the same population in 1996 reported a chlamydia prevalence rate of 5.5%. In Nanjing, chlamydia prevalence rate in a population of STI clinic patients was found to be 10% in 1993.

Estimates for STI

Estimates for STI were developed by WPRO based on results of various prevalence surveys (Table 6).

Table 6: **Estimated prevalence of selected STI in China, 1996**

	Gonorrhoea	**Chlamydia**
Prevalence	1 365 000	18 202 000
Prevalence rates		
Adults 15-49	0.2%	2%
Total population	0.1%	1.5%

Gonococcal antimicrobial resistance

Gonococcal resistance to antibiotics is high, although no particular pattern or trend in resistance was apparent from 1992 to 1998. During that period, the percentage of gonorrhoea strains resistant to penicillin varied from 44% to 84%. Resistance to quinolones was identified in 52% to 81% of gonococcal strains.

HIV and STI Risk Behavioural Surveillance

Limited information on behaviour related to HIV/STI transmission has been available since 1995. There is wide variation in prevalence of high-risk behaviour, both between provinces and among communities in the same province. The percentage of female prostitutes who do not use condoms is high (1998, median 65%, range 5% to 100%). The percentage of drug users who are IDUs varied little from 1995 through 1998 (median 25%, range 5% to 90%). Among IDUs, the percentage who shared needles increased from 25% (range from 20% to 100%) in 1997 to 60% (ranging from 20% to 100%) in 1998.

HONG KONG, CHINA

Summary

Since the first HIV/AIDS cases were reported in 1984, there has been a slow increase in reported cases in Hong Kong, China. At the end of June 1999, 1255 cases (including 409 AIDS cases) had been reported. The best estimate of HIV prevalence as of early 1999 was about 2000-3000. Although there is a steady increase in the number of HIV cases, the prevalence rate is estimated to be <0.1% in the adult population. The majority of reported cases occurred among men (84%). Mode of transmission was largely through either heterosexual contact (56%) or homo-bisexual contact (26%).

STI are reported only from social hygiene clinics (SHC), with data showing an increase in reported STI over time. Periodic surveys of private medical practitioners are conducted to complement passive STI surveillance. However, it appears that only about 20% of all STI are taken care of by public doctors. Gonococcal antimicrobial resistance has increased. Data on HIV/STI risk behaviour are available through monitoring of STI patients, methadone clinic attendees and prison inmates.

Surveillance Structure

- The modified 1993 CDC definition is used for the diagnosis of AIDS.

- The reported HIV/AIDS statistics are updated quarterly based on the data reported from medical practitioners and laboratories through voluntary reporting to the Department of Health. In addition, seroprevalence monitoring of selected groups and unlinked anonymous screening are conducted to supplement the surveillance data. Population groups surveyed included STI clinic patients, blood donors, and drug users.

- Reporting systems for curable STI exist only in the public health sector. STI in the private sector have been estimated periodically (every 5 years) through surveys of private medical practitioners.

- HIV sentinel surveillance was established in 1994 and continues to be conducted every year.

HIV/AIDS

Reported cases as of June 1999

The first case was reported in 1984, and reported cases have gradually increased. By the end of June 1999, 1255 cases including 409 AIDS cases and 196 HIV/AIDS-related deaths had been reported (Table 1). Of these, 84% occurred among men. Heterosexual HIV transmission was identified for 56% of reported cases (Table 2). The percentage of reported HIV infections due to heterosexual contact increased over the last 8 years.

Table 1: **Reported cases of HIV/AIDS by year of diagnosis in Hong Kong, China as of June 1999**

	1984	**85**	**86**	**87**	**88**	**89**	**90**	**91**	**92**	**93**	**94**	**95**	**96**	**97**	**98**	**99**	**Total**
AIDS	0	3	0	6	7	17	13	14	14	19	37	45	70	64	63	37	**409**
HIV/AIDS	7	46	20	33	28	38	34	60	71	79	104	122	134	181	189	109	**1255**

Table 2: **Distribution of cumulative reported HIV/AIDS cases by sex and mode of transmission in Hong Kong, China as of June 1999**

	HIV (%)	**AIDS** (%)
Sex		
Male	84	89
Female	16	11
Mode of transmission		
Homo-/bisexual	26	28
IDU	2	2
Heterosexual	56	60
Blood products	5	4
Mother to infant	<1	1
Other/unknown	10	5

Active HIV/AIDS surveillance

Population groups surveyed for HIV include STI clinic patients, blood donors, and drug users (Table 3). Although serological studies show slight a increase between 1994 and 1996 in some target groups, HIV prevalence remains low.

Unlinked anonymous screening among TB patients found an HIV prevalence rate of 0.22% in 1995 and 0.40% in 1996. Unlinked anonymous screening among women delivering babies in hospitals showed an increase from zero in 1994 to 0.03% in 1996.

Table 3: **HIV seroprevalence rate (%) in selected populations in Hong Kong, China**

	1985	1994	1996	1998
Blood donors	0.003	0.004	0.003	0.003
STI patients	0.06	0.1	0.07	0.06
Drug abusers*	0	0.05	0.03	0.21

* methadone clinic attendees

Estimates and projections for HIV/AIDS

In 1994, the cumulative number of HIV infections was estimated at 3000 (prevalence rate at <0.1% among general population aged 15-49 years). The best estimate of HIV prevalence as of early 1999 remains at about two to three thousand. Up to June 1999, the cumulative reported number of HIV cases constituted about 38% to 57% of the estimated cumulative HIV numbers.

Table 4: **HIV/AIDS epidemiological features in Hong Kong, China (1999 estimates)**

Prevalence	2000 to 3000
Prevalence rate in adults (15-49)*	<0.1%
Women among HIV infected population	40%
Sexual contact	80%
Injecting drug use	15%
Others	5%
Estimated reporting rate for HIV	38%-57%
Estimated reporting rate for AIDS	38%

* Estimated population aged 15 to 49 years in Hong Kong, China in 1998 was 3 388 600.

STI other than HIV

Reported cases of STI from Government social hygiene clinics

Data on reported STI indicate an increase from 1989 to 1996 in the number of all STI, with the exception of gonorrhea (Table 5).

Table 5: **Trends in number of STI reported in Hong Kong, China Government social hygiene clinics**

	Year		
	1989	**1994**	**1996**
Syphilis	382	384	1053
Gonorrhoea	3075	2521	2775
NGU	2330	3431	7247
NSGI	1745	2759	5549
Herpes genitals	834	766	1343
Genital wart	2007	2418	3641
Other	2118	2569	5157
Total STI	**12491**	**14848**	**26765**

Active STI surveillance

A survey on Herpes Simplex Virus 2 (HSV2) seroprevalence among risk groups conducted in 1995 showed prevalence rate of 17-18% in the general population, 12.8% among antenatal clinic attendees, and 77.5% among FSWs.

Estimates for STI

In early 1997, a survey of medical practitioners involved suggested that about 80% of STI patients were managed in the private sector and 20% in the public sector.

Gonococcal antimicrobial resistance

Data from the GASP showed that the percentage of gonococcal isolates resistant to penicillin ranged from 66% to 78% from 1992 to 1998. Resistance to quinolones increased from 3% to 49% over the same period.

HIV and STI Risk Behaviour Surveillance

Information is not available.

JAPAN

Summary

Japan continues to report HIV prevalence rates below 1% for most population groups, except among female sex workers of foreign nationality (2.7%) during 1987-1999. A total of 6102 HIV/AIDS cases had been reported as of 27 June 1999. The reporting rate for HIV infection is believed to be high (74%). In 1998, there were an estimated 7300 HIV-infected persons living in the country (prevalence rate <0.1% among adults aged 15 to 49 years).

Most reported cases during the early phases of the epidemic were due to blood transfusions. However, in 1999, about 70% of diagnosed HIV infections appear to have been acquired through sexual contact. Reported HIV/AIDS cases include more men (76%) than women (24%). STI prevalence surveys show high prevalence rates of chlamydia among SWs (55% to 58%) and in the general population (6% to 22%). Behavioural data show low condom use, both in the general population and among SWs (6% to 25%).

Surveillance Structure

- The expanded WHO AIDS case definition (1994) is used.
- All HIV and AIDS cases are notifiable to the Ministry of Health and Welfare.
- STI are monitored through reports from 900 sites (600 until 1998) and ad-hoc prevalence studies.
- HIV prevalence surveys have been conducted in certain populations and sites at varying intervals.

HIV/AIDS

The first case of AIDS was reported in 1985. By June 27, 1999, 6102 HIV infections, including 2066 AIDS cases and 1130 HIV/AIDS related deaths, had been reported. The reported number of HIV cases has increased each year (Table 1).

Table 1: **Reported cases of HIV/AIDS in Japan as of June 27, 1999**

	Not known	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	Total
AIDS	631*	6	5	14	14	21	31	38	51	86	136	169	235	250	231	148	**2066**
HIV/AIDS	1434*	0	11	69	23	101	97	238	493	363	434	543	610	647	653	386	**6102**

* All are haemophiliacs infected by transfusion of blood products before 1985, for which reported year is unknown.

The number of reported HIV/AIDS cases includes more males (76%) than females (24%) (Table 2). Most of the cases diagnosed prior to 1985, the year in which blood safety measures were implemented, were attributable to contaminated blood products administered to haemophiliac patients. After February 1988, HIV/AIDS cases among haemophiliac patients were no long reportable, and thus are not included in reported cases since then. Among recently reported HIV/AIDS cases, heterosexual contact is the most common mode of transmission (Table 2). For 20% of cases, mode of transmission remains unknown.

Table 2: **Distribution of cumulative reported HIV/AIDS cases by sex and mode of transmission in Japan as of June 27, 1999**

	HIV (%)	**AIDS** (%)
Sex		
Male	76	90
Female	24	10
Mode of transmission		
Homo-/bisexual	19	16
IDU	<1	<1
Heterosexual	35	31
Blood products	24	31
Mother to infant	<1	<1
Other/unknown	20	20

Active HIV/AIDS surveillance

The Epidemiology Study Group on HIV has conducted surveys among both high-risk (FSWs, IDUs, homosexual men, STI patients) and low risk groups (antenatal patients). Data on HIV are derived from such surveys, as well as from reported cases and data from blood screening programmes.

HIV prevalence has been consistently below 1% in groups surveyed, with the exception of FSWs of foreign nationality (2.7% during 1991-1996). No infections were identified in FSWs of Japanese nationality. In 1987-1991, HIV prevalence was 0.05% among STI clinic patients in Tokyo. No HIV infections have been identified in this population since that time, neither in Tokyo nor in the country as a whole.

Between 1986 and 1998, HIV seroprevalence among blood donors was <0.001% countrywide. The highest rate of infection (0.002%) was observed in metropolitan areas (1997). Only one HIV case was reported among 179 462 antenatal attendees screened at 89 health facilities in 1998. A survey on HIV seroprelance among MSM in one area showed the prevalence rate of <1% between 1986 and 1994. Another study conducted in metropolitan area in 1996 among MSM with high-risk sexual behaviour indicated a prevalence rate as high as 10%. HIV prevalence rate among IDUs has been <0.05% between 1988 and 1996.

Estimates and projections for HIV/AIDS

Estimates and projections of HIV in Japan were revised in 1999 by the Ministry of Health and Welfare Panel (Table 3). Estimates suggest that, by the end of 1998, 8000 persons were living with HIV (prevalence of <0.01% in people aged 15-49 years). It is projected that the number of people living with HIV will double by the year 2003 (Table 3).

Table 3: **Estimates and projections for HIV in Japan by 1998 and 2003***

	1998	**2003***
Population (15-49) (thousands)	60 809	56 865
HIV Prevalence	7300	15 400
HIV Prevalence rate in adults (15-49)	<0.1%	<0.1%

*Projections of AIDS incidence were not made as it requires adjustment for the impact of antiretroviral treatment.

Based on 1998 estimates, sexual contact has been the dominant mode of transmission (92%, see Table 4). An estimated one third of HIV infections are among women (Table 4).

Table 4: **Selected HIV/AIDS epidemiological features in Japan (1998 estimates)**

HIV	
Prevalence	8000
Prevalence rate in adults (15-49)	<0.1%
Women among HIV infected population	33%
HIV infection by mode of transmission	
Sexual contact	92%
Injecting drug use	<1%
Others	7%
Estimated reporting rate for HIV	74%
Estimated reporting rate for AIDS	83%

*Includes homosexual and heterosexual contact

STI other than HIV

Reported cases

Reported data from 600 reporting sites are available for chlamydia, gonorrhoea, trichomonas, genital herpes, and venereal warts. No data on syphilis are available. The majority of reported STI are curable, and chlamydia is the most commonly reported curable STI (Table 5).

Table 5: **Reported STI from 600 sites in Japan in people aged 15 years or older 1993 through 1997**

	Total	Rate/100 000			
Year	Number	All STI	Chlamydia	Gonorrhoea	Trichomonas
1993	32 981	32	9.7	6.5	3.8
1994	32 588	31	13.8	6.0	3.7
1995	31 994	30	13.1	6.4	3.2
1996	33 369	32	13.7	7.5	2.6
1997	34 868	33	14.9	8.1	2.2

Active STI surveillance

Although periodic surveillance of STI has not been established, some information is available from ad hoc studies (Table 6). Variations in prevalence of STI within population groups may be attributed to methodological issues (e.g., inconsistencies in site selection, populations, sample size and laboratory tests). However, these data provide an overview of the burden of STI in Japan.

The seroprevalence of herpes simplex virus type 2 (HSV2) varies substantially by population group. Studies have shown prevalence rates of zero percent among female blood donors, 2% among male blood donors, 3-18% among pregnant women, 23% among male STI patients, 24% among MSM, and 72-91% among FSWs.

Table 6: **Prevalence rate of selected curable STI in selected populations in Japan**

Population	Syphilis	Gonorrhoea	Chlamydia
	% (year)	% (year)	% (year)
Pregnant women	--	--	18.2 (1984) 5.6 (1994)
Blood donors	0 (1992)	--	
Married women	--	--	22.1 (1986) 6.3 (1986-89)
Sex workers	16.2 (1992) 0.5 (1993)	17.4 (1992) 8.7 (1993)	58.9 (1990) 55.3 (1993)

Estimates for STI

Estimated chlamydia prevalence in 1996 was 7 380 000 (7% among adults aged 15 years and older).

Gonococcal antimicrobial resistance

During 1992-1998, the percentage of gonococcal isolates resistant to penicillin varied from 3.5% and 26%, and from 2.6% and 41% for quinolones.

HIV and STI Risk Behaviour Surveillance

A survey conducted in 1996 only 25% of respondents always used condoms during casual sexual encounters during the previous four weeks. Findings also showed that 13% of respondents with steady partners (including spouse) had sex with other partners during the previous year (mean of 2.4 non-steady partners). Among FSWs in Fukuoka, percentage always using condoms increased from 6.3% in 1990-1991 to 25.3% in 1992-1993.

REPUBLIC OF KOREA

Summary

The Republic of Korea has a low HIV prevalence rate. By the end of June 1999, a cumulative total of 964 HIV cases including 145 AIDS cases had been reported. An estimated 3400 HIV-infected individuals were living in the country in 1998 (prevalence of <0.1% among people aged 15 to 49 years). The great majority (93%) of HIV infections are estimated to be sexually transmitted, with 13% occurring among women. National seroprevalence surveys have identified only sporadic cases of HIV infection.

The seroprevalence of syphilis is also very low (0.07% among blood donors). Gonococcal antimicrobial resistance is high; in 1997, penicillin resistance was 91% and quinolone resistance 20%. Behavioural surveys in 1996 found that 48% of SWs reported using condoms during all sexual contacts .

Surveillance Structure

- The European AIDS Case definition (1993) is used.
- All HIV infection and AIDS cases are notifiable to the Ministry of Health
- Other reportable STI are syphilis, gonorrhoea, non-gonococcal urethritis, chancroid, granuloma inguinale, and lymphogranuloma venereum.

HIV/AIDS

The first case of HIV infection was reported in the Republic of Korea in 1985 and the first AIDS case in 1987. Reported cases of HIV/AIDS have gradually increased (Table 1). By the end of June 1999, a total of 964 HIV infections, including 145 AIDS cases, had been reported.

Table 1: **Reported cases of HIV/AIDS by year of diagnosis in the Republic of Korea as of June 1999**

	<90	90	91	92	93	94	95	96	97	98	99
AIDS	5	2	1	2	6	11	14	22	33	35	14
HIV/AIDS	73	54	42	76	78	90	108	102	124	129	88

The majority of reported HIV/AIDS cases have occurred among males (87% for HIV, 91% for AIDS) and heterosexuals (62% for HIV and 74% for AIDS) (Table 2). The second highest number of HIV infections were reported among homo-/bisexuals (22% for HIV, 9% for AIDS). No infections occurred among IDUs.

Table 2: **Distribution of cumulative reported HIV/AIDS cases by sex and mode of transmission in the Republic of Korea through June 1999**

	HIV (%)	**AIDS** (%)
Sex		
Male	87	91
Female	13	9
Mode of transmission		
Homo-/bisexual	22	9
IDUs	0	0
Heterosexual	62	74
Blood products	4	0
Mother to infant	<1	3
Other/unknown	12	15

Active HIV/AIDS surveillance

General population surveys have been conducted since the late 1980s, and the number of HIV infections detected has remained quite low (prevalence rate of 0.002% in 1996, 0.003% in 1998). HIV prevalence rate among SWs varied from 0.015% to 0.039% in 1993-1995. HIV prevalence rates among seafarers were between 0.007% and 0.071% (Centre for AIDS Research of the Ministry of Health and Welfare). HIV prevalence rate among blood donors was 0.001% in 1993-1995.

Estimates and projections for HIV/AIDS

Estimates for HIV prevalence and AIDS incidence developed in 1996 by national and international experts and endorsed by the government are shown in Table 3. An estimated 3400 HIV infected persons were living in the country in 1998. This number will continue to grow at a slow rate, and is projected to reach 3880 by 2000 (Table 3). An estimated 13% of HIV infections occurred in women (Table 4).

Table 3: **Estimates and projections for HIV/AIDS in the Republic of Korea, 1998 and 2000**

	1998	**2000***
Population (15-49) (thousands)	27 001	27 442
AIDS		
Incidence	160	--
Incidence rate in adults (15-49)	<0.1%	--
HIV		
Prevalence	3400	3880
Prevalence rate in adults (15-49)	<0.1%	<0.1%

*Projections of AIDS incidence were not made because it would have required adjustment for the impact of antiretroviral treatment.

Table 4: **Selected HIV/AIDS epidemiological features in the Republic of Korea (1998 estimates)**

HIV	
Prevalence	3400
Prevalence rate in adults (15-49)	<0.1%
Women among HIV infected population	13%
HIV infection by mode of transmission	
Sexual contact	93%
Injecting drug use	<1%
Others	7%
Estimated reporting rate for HIV	21%
Estimated reporting rate for AIDS	29%

STI other than HIV

Reported cases

The number of STI reported by all Health Centers, which regularly screen registered high-risk groups (including sex workers), was between 51 905 and 38 220 in 1991-1998. Prevalence rates of syphilis and gonorrhoea among registered women in 1998 were 0.39% and 1.11%, respectively.

Active STI surveillance

Periodic active surveillance of STI has not been established yet.

Estimates for STI

National estimates for syphilis were developed based on prevalence data from syphilis screening among blood donors. In 1998, the estimated number of people with syphilis was 32 500 (representing a prevalence rate in the total population of 0.07%).

Gonococcal antimicrobial resistance

Data from the GASP show that, from 1992 through 1998, 80 to 91% of gonococcal isolates were resistant to penicillin and 16 to 20% were resistant to quinolones. No trends were noted in gonococcal antimicrobial resistance.

HIV and STI Risk Behaviour Surveillance

Results of ad hoc studies among 4635 FSWs conducted during 1995-1996 indicate that 31% were less than 20 years old and that 58% worked in urban areas. Many of these FSWs reported using drugs and most had a history of STI. One study of 610 Seoul FSWs found that 48% reported using condoms most of the time and 84% knew that condoms could prevent HIV transmission.

LAO PEOPLE'S DEMOCRATIC REPUBLIC

Summary

Lao People's Democratic Republic (Lao PDR) remains a low HIV prevalence country. The first HIV case was detected in 1990. By the end of December 1998, a total of 367 HIV/AIDS cases had been reported.

The majority of people with HIV infections lived in areas close to the border with Thailand and China, including the capital city of Vientiane. An estimated 1200 people had been infected with HIV in 1998 (prevalence of <0.1% in people aged 15 to 49 years). The majority of reported HIV/AIDS cases were among heterosexuals (96%). Estimates suggest that men and women are equally affected by HV. It is estimated only about one fifth of the HIV are actually reported.

Serological surveys indicate very low HIV prevalence rates in most population subgroups (<1%), and HIV has not been detected at all in some subgroups. Few data on STI are available, and behavioural surveillance is not routinely conducted. Ad hoc surveys among men at high-risk for HIV/STI infection show that only 40% reported lifetime condom use.

Surveillance Structure

- The expanded WHO AIDS case definition (1994) for AIDS is used.

- All HIV and AIDS cases are notifiable to the Ministry of Health.

- STI are not included in the list of notifiable diseases.

- HIV Sentinel surveillance is not yet in place. Available data on HIV prevalence are from blood donors and ad hoc surveys. During 1995-1996, these surveys covered bar workers, military personnel, truck drivers, and refugees. In 1996, surveyed populations included hospital patients, volunteers, students, pregnant women, and citizens returning from overseas. However, sample sizes in most subgroups are too small to draw conclusions about HIV prevalence.

HIV/AIDS

The first case of HIV was diagnosed in 1990. By the end of December 1998, 367 HIV infections had been reported; this included 105 AIDS cases and 45 HIV/AIDS deaths (Table 1). The majority of reported HIV/AIDS cases (96%) were among heterosexuals (Table 2). The majority of HIV infections have been found in areas close to the border with Thailand and China, including the capital city of Vientiane.

Table 1: **Reported cases of HIV/AIDS by year of diagnosis in Lao PDR as of December 1998**

	1990	91	92	93	94	95	96	97	98	Total
AIDS	0	1	0	5	4	4	16	48	27	**105**
HIV/AIDS	1	8	11	18	17	31	71	108	102	**367**

Table 2: **Distribution of cumulative reported HIV/AIDS cases by sex and mode of transmission in Lao PDR as of December 1998**

	HIV (%)	**AIDS** (%)
Sex		
Male	53	50
Female	32	31
Unknown	15	19
Mode of transmission		
Homo-/bisexual	0	0
IDU	<1	0
Heterosexual	96	96
Blood products	0	0
Mother to infant	3	4
Other/unknown	0	0

Active HIV/AIDS surveillance

only sporadic cases of HIV infection. In 1993, HIV seroprevalence ranged from 0.17% (one case) to 1.16% (3 cases) among FSWs in two sentinel sites. In 1994, 4 HIV infections were detected among refugees and returnees from Thailand and China.

Recent seroprevalence data do not indicate any significant spread of HIV infection in the general population (Table 3). No cases were found among the military, police, students or pregnant women during the early 1990s, and no infections were detected in blood donors until 1994. Lao PDR citizens returning from other countries appear to have the higher HIV prevalence (Table 3).

Table 3: **HIV seroprevalence in selected population subgroups in Lao PDR, 1995 through 1998**

	Number of HIV cases / sample size			
	1995	**1996**	**1997**	**1998**
Blood donors	12 / 3564	3 / 4349	1 / 10444	2 / 2171
Bar workers	0 / 303	1 / 421	2 / 137	0 / 21
Military	0 / 266	0 / 38	0 / 1	1 / 14
Refugees	1 / 120	-------	--------	--------
Hospital patients	12 / 170	28 / 308	81 / 729	48 / 513
Students	-------	2 / 246	0 / 103	1 / 132
Returning citizens	1 / 6	0 / 1	16 / 336	20 / 467
Employed people	0 / 3	0 / 61	0 / 119	2 / 141
Volunteers	2 / 337	9 / 543	5 / 234	13 / 314
Prisoners	-------	0 / 20	2 / 12	4 / 10
Long distance drivers	-------	-------	0 / 1	1 / 8
Labourers	-------	-------	0 / 1	2 / 38
Villagers	-------	0 / 45	-------	8 / 96
Pregnant women	1 / 4	2 / 502	0 / 80	0 / 15
Other	2 / 2	26 / 54	1 / 11	0 / 142

Estimates and projections for HIV/AIDS

An estimated 1200 HIV infected persons were living in Lao PDR in 1998 (prevalence of <0.1% in people aged 15 to 49 years). Half of the HIV infections are believed to occur among women, and heterosexual contact is the dominant mode of transmission (Table 4). Underreporting of HIV/AIDS remains high, and the reported number of HIV accounts for only 20% of estimated cases.

Table 4: **HIV/AIDS epidemiological features of HIV/AIDS in Lao PDR (1998 estimates**

HIV	
Prevalence	1200
Prevalence rate in adults (15-49)*	<0.1%
Women among HIV infected population	50%
HIV infection by mode of transmission	
Sexual contact	95%
Injecting drug use	3%
Others	2%
Estimated reporting rate for HIV	20%
Estimated reporting rate for AIDS	60%

* Estimated population aged 15 to 49 years in 1998 was 2 335 600.

STI other than HIV

Reported cases

Information is not available .

Active STI surveillance

Limited data on STI prevalence are available. A prevalence rate for reactive syphilis of 1-2% was found during syphilis screening at the National Institute for Hygiene and Epidemiology in 1996. Some surveillance of syphilis among pregnant women, bar workers and truck drivers/boat operators was carried out in Khammouane and Champassack provinces in 1997. Syphilis was found in 0.4% and 1% of pregnant women, 0.6% and 2.9% of bar workers and 1.7% and 6.3% of truck drivers/boat.

Estimates for STI

Insufficient information does not allow for estimates to be made.

Gonococcal antimicrobial resistance

Information is not available.

HIV and STI Risk Behaviour Surveillance

Behavioural information is not routinely collected. Ad hoc surveys conducted in 1992 suggest that 40% of the "urban high-risk population of men" reported lifetime sexual contact with men, and 10% reported multiple sex partners during the previous year. Lifetime condom use was only 40- 50%.

MACAO

Summary

Although HIV infection was first identified in 1986 in Macao, its spread has been very limited. At the end of June 1999, a total of only 197 HIV infections, including 17 AIDS cases, had been reported. The reported number of HIV/AIDS cases has decreased since 1994. Few HIV infections have been found in most population groups surveyed, with the exception of SWs and those engaged in the entertainment industry (1998 prevalence of 0.8% and 5.8% respectively). A large proportion of reported HIV cases have occurred among women through heterosexual contact (62%), while men are more represented in reported AIDS cases. Data on HIV spread among IDUs are not available, but this would not appear to be a major concern. Data on STI prevalence and HIV risk behaviour are unavailable.

Surveillance Structure

- The 1994 WHO AIDS case definition (1994) is used.
- All HIV infections and AIDS cases are notifiable to the Sanitary Authority (Medical and Health Department).
- STI are included in routine disease reporting forms.
- HIV serosurveillance was established in 1987 and expanded in 1992.

HIV/AIDS

Reported cases as of June 1999

The first case of HIV infection was diagnosed in 1986. By the end of June 1999, a total of 197 HIV infections, including 17 AIDS cases and nine HIV/AIDS related deaths, had been reported (Table 1). The number of reported HIV/AIDS cases has been stable since 1994. The increase in reported HIV/AIDS cases in 1993-1994 is attributable to active surveillance among entertainment industry workers initiated at the end of 1992 by the Public Health Laboratory.

A large proportion of reported HIV cases have occurred among heterosexual women through heterosexual contact (62%), most of whom are SWs while men make up over three-quarters of reported AIDS cases. This different pattern may be attributable to selection bias of serosurveillance target groups or to higher case detection rates among women than men.

Table 1: **Reported cases of HIV/AIDS by year of diagnosis in Macao through June 1999**

	<1990	90	91	92	93	94	95	96	97	98	99	Total
AIDS	1	0	1	2	2	2	0	1	2	4	2	17
HIV/AIDS	2	1	4	13	40	33	29	21	19	31	4	197

The majority of reported HIV infections are among heterosexual women, most of whom are SWs (Table 2).

Table 2: **Distribution of cumulative reported HIV/AIDS cases by sex and mode of transmission in Macao as of June 1999**

	HIV - No. (%)	**AIDS** – No.
Sex		
Male	61 (31)	13
Female	135 (69)	4
Unknown	1 (<1)	0
Mode of transmission		
Homo-/bisexual	22 (11)	4
IDU	6 (3)	3
Heterosexual	140 (71)	8
Blood products	1 (<1)	0
Mother to infant	1 (<1)	1
Other/unknown	27 (14)	1

- Routine screening of selected population groups began in 1987 and was expanded in 1992.

- Serological surveys identified positive cases sporadically in patients referred from hospitals and health centres (0/59 in 1996, 1/88 in 1997 and 3/7748 in 1998).

- Among entertainment industry workers surveyed, no positive cases were found in 1996. In 1998, 9 of 1 169 (0.8%) SWs and 8 of 139 (5.8%) entertainment industry workers tested HIV-positive.

- No HIV infections have been found in tests done among TB patients and other non-hospital populations (including blood donors and security force recruits).

- In 1998, very few cases were detected among prisoners (1/466, 0.2%) and hospital outpatients tested for infections other than HIV (3/7748, 0.04%).

Estimates for HIV/AIDS

No estimates have been developed for overall rates of HIV infection in Macao's general adult population. It is believed that transmission is low and occurs largely among SWs and their clients.

STI other than HIV

Reported cases of STI

Although STI are nationally reportable, fewer than 10% of cases appear to be reported. In 1996, only one syphilis case (0.32 per 100 000 people aged 15 years or older) and five gonorrhea cases (1.6 per 100 000 people aged 15 years or older) were reported.

Active STI surveillance

No STI surveillance has been implemented.

Estimates for STI

No estimates have been developed

Gonococcal antimicrobial resistance

Information is not available.

HIV and STI Risk Behaviour Surveillance

Although drug dependence is considered to be a problem in Macao, no estimates of the number of drug users are available. About 98% of drug users use heroin, and of these 82% are IDUs.

MALAYSIA

Summary

Since the first HIV infection was identified in Malaysia in 1986, 30 593 HIV/AIDS cases have been reported (as of 30 June 1999). The reported number of people with HIV/AIDS is believed to represent about two thirds of actual cases.

Among population subgroups screened for HIV, prevalence is highest among IDUs. Estimated prevalence rate in 1998 for this group was 18%, with a probable range from 15% to 20%. An estimated 80% of all drug users in Malaysia are IDUs, and nearly all IDUs are men. In 1998, only 6% of reported HIV infections were among women; after adjusting for female SWs and underreporting of STI, however, the estimate for HIV infected women is slightly higher (9%). In the general population, HIV transmission appears to have stabilized and there is no evidence of widespread transmission of HIV infection.

Although most gonorrhoea is penicillin-resistant (59%-74%), resistance to quinolones has not been detected. Behavioural surveillance data have not been included in HIV/STI surveillance in Malaysia.

Surveillance Structure

- The Expanded WHO AIDS case definition (1994) is used.

- HIV and AIDS cases are notifiable and are reported directly to the AIDS/STD Section at the state level, then subsequently reported to national level. Only registered medical practitioners are required to report notifiable diseases.

- Chancroid, gonorrhoea and syphilis are notifiable and are reported through the Information and Documentation Units in each state, with the data then passed on to the national level.

- Routine surveillance for drug users admitted to drug rehabilitation centres, blood donors, and high risk prisoners began in 1986.

- Anonymous, unlinked HIV sentinel seroprevalence surveillance was formally established in 1994 among women attending antenatal clinics, IDUs, blood donors, STI patients, and with TB patients. However, sentinel surveillance has been phased out because these population subgroups are now routinely tested for HIV.

- Routine surveillance has not been conducted among SWs.

- Some prevalence surveys have been completed among fishermen.

HIV/AIDS

Reported HIV/AIDS cases as of June 1999

Since HIV/AIDS cases were first reported in 1986, reported HIV/AIDS cases have increased steadily (Table 1). Most reported cases are identified through screening. Overall, 96% of the reported 30 593 HIV infections have been in men. IDUs accounted for 7% of all reported HIV cases (Table 2).

Table 1: **Reported cases of HIV/AIDS by year of diagnosis in Malaysia as of June 1999**

	<1989	89	90	91	92	93	94	95	96	97	98	99	Total
AIDS	2	2	18	60	73	71	105	233	347	568	875	540	**2894**
HIV/ AIDS	14	200	778	1794	2512	2507	3393	4198	4597	3924	4624	2052	**30593**

Table 2: **Distribution of cumulative reported HIV/AIDS cases by sex and mode of transmission in Malaysia as of June 1999**

	HIV (%)	**AIDS** (%)
Sex		
Male	96	94
Female	4	6
Mode of transmission		
Homo-/bisexual	1	2
IDU	77	58
Heterosexual	9	21
Blood products	<1	<1
Mother to infant	<1	1
Other/unknown	13	17

- HIV infection among IDUs increased from 0.1% in 1988 to 20% in 1994. One 1992 study in the northern State of Kelantan reported an even higher HIV prevalence rate (30%). Recent studies suggest that HIV prevalence rate among IDUs nationally has stabilized in the range of 15%-20%.

- HIV prevalence increased rapidly among SWs during 1992-1993. Although prevalence rates among SWs in the 5%-10% range were reported in 1996, prevalence appears to have decreased or stabilized in the last 3 years.

- HIV prevalence among blood donors and pregnant women remains below 1%.

Table 3: **HIV seroprevalence in selected population subgroups in Malaysia, 1998**

	HIV prevalence (%)		
Population	**Average**	**Low***	
IDUs	18.00	15.00	2
TB patients	6.00	4.00	
SWs	3.00	1.50	
STD patients	2.00	1.00	
Blood donors	0.01	0.003	
Blood dependent	1.00	0.00	
Pregnant women	0.32	0.19	

*Based on low or high reported rates; these are not confidence limits, with the exception of the estimates for pregnant women

Estimates and projections for HIV/AIDS

Estimates for HIV prevalence and AIDS incidence for 1998 and projections through 2003 were developed by national experts in collaboration with the WHO/WPRO in 1999. This profile, which was endorsed by the Government, traced the rapid spread of HIV in the late 1980s and the expansion of the epidemic through the early 1990s. Experts concluded that the epidemic has reached its peak.

About 41 000 adults are believed to be living with HIV in Malaysia in 1998 (0.36% prevalence among people aged 15 to 49 years) (Table 4). HIV transmission appears to have stabilized and incidence may decrease in coming years (Table 4). However, prevalence will continue to increase for a few more years.

Table 4: **Estimates and projections for HIV/AIDS in Malaysia, 1998 and 2003**

	1998	2003
Population (15-49) (thousands)	11 300	-
AIDS incidence in adults (15-49)	1200	4400
HIV prevalence	41 000	71 500
HIV prevalence rate in adults (15-49)	0.36	

Because estimated HIV/AIDS cases include adjustments for female SWs and underreporting of STI, the estimate for HIV infected women is slightly higher (9%) than the reported rate of 6% in 1998 (Table 5).

Table 5: **HIV/AIDS epidemiological features of HIV/AIDS in Malaysia (1998 estimates)**

HIV	
Prevalence	41 000
Prevalence rate in adults (15-49)	0.36%
Women among HIV infected population	9%
HIV infection by mode of transmission	
Sexual contact	11%
Injecting drug use	88%
Others	<1%
Estimated reporting rate for HIV	64%
Estimated reporting rate for AIDS	73%

STI other than HIV

Reported cases

The reported rate of syphilis decreased from 7.4/100 000 in 1986 to 6/100 000 in 1997, but increased to 11/100 000 in 1998. Reported cases of syphilis were equally distributed among men and women. Reported rates of gonorrhoea decreased from 8/100 000 in 1986 to 6/100 000 in 1998; more cases of gonorrhoea were reported among men than women. Reported rates of chancroid increased from 0.03/100 000 in 1986 to 0.08/100 000 in 1998. One recent study comparing reported STI to the number of STI treated by private practitioners concluded that reported STI may represent only about 7% of all STI diagnosed and treated in the country.

Active STI surveillance

STI have not been included in the HIV sentinel surveillance system. A 1994 survey in Kuala Lumpur showed high prevalence rates among SWs (gonorrhoea, 14.3%; syphilis, 13.6%, chlamydia, 26.5%). Another study in Kuala Lumpur in 1989 showed prevalence rate for syphilis of 1% among pregnant women. All pregnant women are tested for syphilis during their first prenatal visits, with testing coverage approaching 100%. However, prevalence data on syphilis among pregnant women are not available.

Estimates for STI

Information is not available.

Gonococcal antimicrobial resistance

Results from the GASP indicate that prevalence of penicillin resistant gonorrhoea varied from 59% and 69% during the 1992-1997 period. Quinolone resistance, however, has not been detected.

HIV and STI Risk Behaviour Surveillance

Data on behavioural risk factors for HIV/STI are not systematically collected, although recently completed surveys among fishermen and IDUs include behavioural components. An estimated 80% of all drug users in Malaysia are IDUs. A 1994 study of women attending STI clinics revealed that 42% reported engaging in commercial sex work, 58% had 100 or more sex partners in the past month, and only 5% had partners who used condoms most of the time. Among men attending STI clinics, 78% reported sex with SWs and 74% never used condoms.

MONGOLIA

Summary

Mongolia has remained nearly free from HIV over the past 2 decades, as evidenced by the fact that only 2 cases have been reported to date. The first case was diagnosed in a male homosexual in 1992, while the second case was detected through screening of SWs in 1998. No HIV infections have been detected in other population groups in which HIV seroprevalence surveys are regularly conducted (i.e., blood donors, people attending STI clinics or prenatal clinics, and SWs).

Syphilis prevalence in 1997 was low among blood donors (1.9%), pregnant women (0.5%), and male truck drivers (0.2%). One study of SWs found that 58% had at least one STI. A study of risk behaviour among 436 SWs in 1999 found that only 36% reported using condoms in every instance of sexual intercourse; only 9% of clients were reported to have initiated condom usage.

Surveillance Structure

- The 1994 expanded WHO AIDS case definition (1994) is used.
- All HIV and AIDS cases are reportable to the Ministry of Health.
- Other reportable STI are syphilis, gonorrhoea and trichomoniasis.
- HIV routine surveillance is carried out among SWs, STI clinic attendees, prenatal clinic attendees, and blood donors.

HIV/AIDS

Reported cases as of August 1999

There have been only 2 cases reported as of August 1999. The first case was diagnosed in a male homosexual in 1992 who acquired HIV abroad and died of AIDS in 1999. The second case was detected through screening of SWs in 1998.

Active HIV/AIDS surveillance

HIV surveillance activities and testing started in 1987, with an average of 50 000 - 70 000 tests being conducted annually. HIV testing has been done annually for blood donors, high-risk groups (e.g., STI clinic attendees, SWs, homosexuals) and voluntary clients. In 1998, only 1 of 101 SWs tested was HIV positive. No other positive tests have been reported in other sentinel surveillance populations.

Estimates and projections for HIV/AIDS

No estimates or projections for HIV/AIDS in Mongolia have been developed.

STI other than HIV

Reported cases

A total of 358 300 members of the general population were examined for STI in 1998. Findings showed a 3-fold increase in reported syphilis cases and 16% increase in reported gonorrhoea cases compared to 1993 prevalence. This increase may be attributed to the reintroduction of active screening of the sexually active population aged 15-45 years in 1996 and 1997 after an interruption between 1990 and 1995. Reported cases of STI in Mongolia are shown in Table 1.

Table 1: **Reported cases of STI in Mongolia, 1993, 1997 and 1998**

STI	**1993 Number**	**1997 Number** (rate per 10 000)	**1998 Number** (rate per 10 000)
Syphilis	400	1291 (5.4)	1329 (5.6)
Gonorrhoea	3010	2934 (12.3)	3486 (14.6)
Trichomoniasis	n/a	10 706 (44.7)	5353 (22.4)

- Surveys conducted in 1993 among truck drivers yielded prevalence rates of between 0.04% and 0.19% for syphilis, 0.4% for trichomoniasis, and 0.3% for gonorrhoea.

- A 6-fold increase in the prevalence of syphilis was observed in a five-year period among blood donors (from 0.19% in 1992 to 1.19% in 1997).

- Nationwide routine screening for pregnant women (average of 23 000 women tested annually) showed an increase in the syphilis prevalence rate from 0.1% in 1993 to 0.5% in 1997.

- Highest STI prevalence rates are observed among SWs. One survey conducted in the capital city in 1993 revealed that 58% of SWs had had at least one STI. Observed prevalence rates were 12.9% for syphilis, 14.8% for trichomoniasis, and between 6.4% and 14.3% for gonorrhoea.

- Results of a prevalence survey among 260 persons attending STI clinic in Ulan Bataar in 1997 showed prevalence rates among men of 31.1% for gonorrhoea, 8.1% for chlamydia, and 8.6% for syphilis. For women, prevalence rates were 10.3% for gonorrhoea, 9.9% for chlamydia, and 6.0% for syphilis. Trichomonasis was the most common STI, with an observed prevalence rate of 67% among women.

Estimates for STI

Estimated prevalence rates for curable STI at the national level have been developed by WPRO. These estimates are based on prevalence survey data in selected population groups.

Table 2: **Estimated prevalence of STI in Mongolia, 1996**

1996	Gonorrhoea	Syphilis	Chlamydia	Tricho
Prevalence* (No. of cases)	4600	8000	n/a	
Prevalence rate in adult population (15-49)	0.1%	0.16%	n/a	

* Population 15 and above

Gonococcal antimicrobial resistance

No data are available.

HIV and STI Risk Behaviour Surveillance

No systematic behavioural surveillance has been carried out in Mongolia. Adolescent's reproductive health survey in 1995 showed that average age at first sexual intercourse is 16.8 years for men and 17.2 for years for women. About 6% of teenage women have been pregnant. A study of STI patients in Ulaan Baatar conducted in 1996 indicated that excessive alcohol intake was the primary risk factor for STI.

Results of one recent (1998) survey covering 436 SWs showed that 60% are between the ages of 20 and 29 years old and that 76% reside in Ulaan Baatar. Of the FSWs surveyed, 27 had had an STI in the 3 months prior to the study. More than half (55%) of the SWs knew that condoms prevented HIV and other STI. Nevertheless, only 36% reported condom use for every sexual intercourse and only 9% reported that their clients initiated condom usage.

NEW ZEALAND

Summary

The first AIDS cases in New Zealand were reported in 1983. The incidence of AIDS increased progressively until 1989, but has decreased since 1991. As of the end of June 1999, 1371 HIV infections (including 681 AIDS cases and 532 HIV/AIDS related deaths) had been reported. Reporting of AIDS in New Zealand appears to be nearly complete.

The majority of reported HIV infections occur among men (88%). The largest representation is among MSM infected through homo-/bisexual contacts (54%). While the percentage of reported HIV cases attributable to heterosexual transmission increased from 0% in 1985 to 44% in 1998, most such cases were acquired outside the country. Many refugees from high prevalence geographic areas contributed to the increase in reported cases of HIV in 1998.

The number of STI reported remains low. Gonococcal antimicrobial resistance is lower than most countries in the region (up to 15% for penicillin, <2% for quinolones). The percentage of people who report use of condoms is low, both among men (23%) and women (19%)

Surveillance Structure

- The CDC AIDS case definition (1993) is used (excluding CD4 count of less than 200).
- AIDS cases are notifiable to the Ministry of Health.
- Although new HIV cases are not formally notifiable, they are reported by the two laboratories performing confirmatory tests.
- Curable STI are not notifiable.

HIV/AIDS

Reported cases as of June 1999

Since the first case of AIDS was reported in 1983, 1371 HIV infections including 681 AIDS cases have been reported. Reported AIDS cases have decreased since 1992 (Table 1).

Although the number of annual HIV/AIDS decreased between 1991 and 1997, an increase occurred in 1998. This may be attributed to a large number of refugees from certain high prevalence areas. The decline in AIDS incidence since 1990 is related to an earlier decrease in HIV incidence among homo-/bisexual men.

Table 1: **Reported cases of HIV/AIDS by year of diagnosis in New Zealand as of June 30 1999**

n	<86	86	87	88	89	90	91	92	93	94	95	96	97	98	99	Total
HIV	21	16	30	44	71	71	69	62	53	47	60	59	31	26	9	**681**
HIV/ AIDS	63	125	105	96	108	104	111	106	88	88	82	93	63	105	34	**1371**

The majority of diagnosed HIV infections and AIDS cases have occurred among MSM through homo-/bisexual contacts (Table 2). Twenty four per cent of data on mode of transmission for HIV infections were missing for some of the early years of surveillance. Since the first heterosexually acquired HIV case was reported in 1986, the proportion of diagnosed HIV infections from heterosexual contact increased steadily, reaching 30% by 1998. Most of these infections were acquired outside New Zealand. The increase in observed HIV infections in 1998 was associated with a large number of refugees from high prevalence areas.

Table 2: **Distribution of cumulative reported HIV/AIDS cases by sex and mode of transmission in New Zealand as of June 1999**

	HIV (%)	**AIDS** (%)
Sex		
Male	88	95
Female	11	5
Unknown	1	0
Mode of transmission		
Homo-/bisexual	54	80
IDU	15	9
Heterosexual	4	4
Blood products	3	2
Mother to infant	<1	<1
Other/unknown	24	4

HIV serological surveillance suggests generally low HIV prevalence rates in New Zealand.

- Anonymous, unlinked seroprevalence studies of STI clinic patients were carried out in 2 centres in 1992-1993 and 4 centres 1996-1997. Moderate prevalence rates have been found among MSM and low rates among heterosexual men and women (Table 3).

Table 3: **HIV/AIDS seroprevalence rates in unlinked, anonymous studies among sexual health clinic attendees of New Zealand**

	1991-1992 Auckland and Christchurch			**1996-1997 Auckland, Hamilton, Wellington & Christchurch**			**Auckland and Christchurch**		
	No.	**per 1000**	**95% CI**	**No.**	**per 1000**	**95% CI**	**No.**	**per 1000**	**95% CI**
Heterosexual men	6/4486	1.3	0.5-2.9	3/3816	0.8	0.2-2.4	3/2972	1.0	0.2-3.0
MSM	13/295	44.1	23.5-75.4	5/266	18.8	6.2-43.3	5/161	31.1	10.2-71.0
Heterosexual women	4/3660	1.1	0.3-2.8	2/2930	0.7	0.1-2.5	2/2138	0.9	0.06-3.4

- Voluntary, anonymous prevalence studies in 1992 and 1997 used saliva testing among IDUs participating in needle exchange programmes (Table 4). Prevalence rate was found to be 0.3% in both years. Prevalence rate among IDUs enrolled in sexual health clinic studies was also found to be less than 1%.

Table 4: **HIV prevalence rates among needle exchange programme attendees in New Zealand (1992 and 1997)**

	1992			**1997**		
	No.	**%**	**95% CI**	**No.**	**%**	**95% CI**
IDUs	2/591	0.3	0.04-1.2	4/1193	0.3	0.09-0.9

- An unlinked anonymous prevalence study of SWs attending sexual health clinics in 1996-1997 showed prevalence rate less than 1%.

Estimates and projections for HIV/AIDS

A comprehensive profile of the present and future epidemiological situation was developed by a group of international experts in 1998; their estimates and other analyses were subsequently endorsed by New Zealand's government. An estimated 1200 persons were living with HIV infection (prevalence in people aged 15-49 years, <0.1%) (Table 5). It is believed that the prevalence of HIV infection will rise slightly, not due to the immigration of HIV infected people, but due to new infections occurring in New Zealand, and the prolonged transition period from asymptomatic HIV infection to AIDS attributable to the recent introduction of highly active antiretroviral therapy.

Table 5: **Estimates and projections for HIV/AIDS in New Zealand adults (15 years or older) and total population in 1998 and 2000**

	1998	**2000***
Population (15-49) (thousands)	1941	1959
AIDS	35	-
Incidence		
Incidence rate in adults (15-49)	<0.1%	-
HIV	1200	1250
Prevalence		
Prevalence rate in adults (15-49)	<0.1%	<0.1%

*Projections of AIDS incidence were not made given the need to adjust for the impact of antiretroviral treatment.

Sexual contact accounts for 95% of all HIV infections. The proportion of cases occurring in women remains low (an estimated 15%, Table 6).

Table 6: **HIV/AIDS epidemiological features of HIV/AIDS in New Zealand (1998 estimates)**

HIV	
Prevalence	1200
Prevalence rate in adults (15-49)	<0.1%
Women among HIV infected population	15%
HIV infection by mode of transmission	
Sexual contact	95%
Injecting drug use	3%
Others	2%
Estimated reporting rate for HIV	>95%
Estimated reporting rate for AIDS	>90%

STI other than HIV

Reported cases

STI cases are not reported.

Active STI surveillance

Some data on prevalence of STI are available from ad hoc studies. One survey of patients attending family planning clinics in 1987 reported prevalence of 15.8% for chlamydia. In 1990, a sample of women with pelvic inflammatory disease showed chlamydia prevalence of 40%. In a cohort of young people, 7.5% of males and 16% of females reported having had an STI (1993).

Estimates for STI

Sufficient survey data are not available to develop national prevalence estimates for STI.

Gonococcal antimicrobial resistance

Data from indicate that, during 1992 through 1997, the percentage of gonococcal strains resistant to penicillin ranged from 9 to 15%. Resistance for quinolones was less than 2%.

HIV and STI Risk Behaviour Surveillance

Results of a 1995 national survey showed that 32% of men and 20% of women aged 20 to 24 years reported two or more sexual partners in the previous 12 months. Recent condom use rates were 23% for men and 19% for women.

PAPUA NEW GUINEA

Summary

HIV prevalence in Papua New Guinea remains at a relatively low level compared to other countries in the Region. The first cases were reported in 1987, with HIV prevalence increasing annually throughout the early 1990s. In March 1999, cumulative reported HIV infections reached 1741, including 618 people with AIDS. More than 4400 adults and 300 children were estimated to be living with HIV in 1998, representing a prevalence rate among adults of 0.19%. About one fifth of all cases are reported.

Reported cases are equally distributed among men and women, and infection appears to be concentrated in the capital city of Port Moresby. Although the mode of transmission is unknown for a significant proportion of cases, 90% of cases for which the mode is known resulted from heterosexual contact. Prevalence remains low among blood donors (0.015%, 1997) and pregnant women (0.37%, 1998). Higher HIV prevalence rates were reported among patients with other STI (1995, Port Moresby, 1.7%), FSWs (1998, Port Moresby, 16.7%; Lae 3.1%), and TB patients (1998, Port Moresby, 7.7%).

Systematic STI surveillance has not been established. However, prevalence rates as high as 58% have been observed among rural men and women in the highlands. The most common STI were trichomoniasis (46%) and chlamydia (26%). Available data on STI/HIV risk behaviour indicate very low levels of condom use (7%).

Disease Surveillance Structure

- The expanded WHO AIDS case definition (1994) is used.

- All HIV and AIDS cases are notifiable to the Ministry of Health.

- Reported cases of HIV refer to both AIDS cases and HIV antibody positive asymptomatic patients.

- Notifiable STI are gonorrhoea, NGU, syphilis, trichomoniasis, donovanosis, venereal warts, and genital herpes.

- HIV sentinel surveillance has been initiated among antenatal clinic attendees, SWs, STI patients, and military personnel.

HIV/AIDS

The first cases of HIV/AIDS were reported in 1987, followed by a broad spread of the virus during the early 1990s. At the end of March 1999, there had been 1741 reported HIV infections, including 618 AIDS cases.

Table 1 - Papua New Guinea: Reported HIV/AIDS Cases by Year of Diagnosis (as of March 1999)

	<1990	**90**	**91**	**92**	**93**	**94**	**95**	**96**	**97**	**98**	**99**	**Total**
AIDS	17	17	21	19	12	26	44	69	120	232	41	**618**
HIV/ AIDS	35	35	36	32	40	69	124	192	351	635	192	**1741**

Although the mode of transmission is unknown for two thirds of reported cases, the equal sex distribution suggests that most transmission is by heterosexual contact (Table 2).

Table 2: Distribution of cumulative reported HIV/AIDS cases by sex and mode of transmission in Papua New Guinea as of March 1999

	HIV (%)	**AIDS** (%)
Sex		
Male	50	51
Female	45	46
Unknown	5	3
Mode of transmission		
Homo-/bisexual	<1	1
IDUs	0	0
Heterosexual	26	70
Blood products	2	6
Mother to infant	<1	0
Other/unknown	71	23

Estimates and projections for HIV/AIDS

- HIV prevalence among FSWs was 16.7% in Port Moresby and 13.1% in Lae in 1998.
- Surveys of STI clinic attendees in Port Moresby show a rapid increase in HIV prevalence (from 0.25% to 0.65% in 1995 to 6% in 1998).

- Among STI clinic attendees in rural areas, HIV prevalence was found to be 0.15% in 1992 and 1.7% in 1995.

- Among TB patients, 7.7% of those tested in 1996 were HIV positive.

- HIV prevalence among antenatal patients in Port Moresby increased from 0.06% in 1994 to 0.23% in 1996 to 0.37% in 1998.

- A national-level survey involving 6656 tests was conducted during April and May 1997. Findings showed a prevalence rate of 0.015% among blood donors. Of the 5091 tests done in clinical settings, 78 (1.53%) were positive for HIV.

Estimates and projections for HIV/AIDS

Working estimates of 4000 people living with HIV in 1997 and 4400 in 1998. were made in 1998 Projections are that cases will exceed 5500 by 2000 (Table 3).

Table 3: **Estimates and projections for HIV/AIDS in Papua New Guinea, 1998 to 2003**

	1998	**1999**	**2000**	**2003**
Population (15-49) (thousands)	2316	2369	2422	2942
AIDS incidence	420	450	480	540
HIV prevalence	4400	4700	4900	5500
HIV prevalence rate in adults (15-49)	0.2	0.2	0.2	0.2

Based on 1998 estimates, heterosexual contact is the primary mode of HIV transmission (Table 4). Reporting of HIV cases remains incomplete, and reported HIV cases are believed to make up about 22% of total estimated HIV/AIDS cases.

Table 4: **Selected epidemiological features of HIV/AIDS in Papua New Guinea (1998 estimates)**

HIV	
Prevalence	4400
Prevalence rate in adults (15-49)	0.2%
Women among HIV infected population	48%
HIV infection by mode of transmission	
Sexual contact	95%
Injecting drug use	<1% (*)
Others	<5%
Estimated reporting rate for HIV	22%
Estimated reporting rate for AIDS	28%

* No cases of IDUs with HIV/AIDS have been reported

STI other than HIV

Reported cases

No information is available.

Active STI surveillance

A survey in Port Moresby in 1992 among women attending antenatal clinics found a prevalence of 3.4% for syphilis and 17.7% for chlamydia. A 1995 study conducted among adult men and women in rural settings (Lowa Asaro census divisions, Eastern Highlands Province) found very high prevalence of chlamydia (26.4%) and trichomoniasis (46.5%). Prevalence for syphilis (3.9%) and gonorrhoea (1.5%) were lower. However, 59% of the women surveyed had at least one STI.

Results from prevalence surveys in selected populations provided a basis for national level STI estimates (Table 5).

Table 5: **Estimated prevalence of STI in Papua New Guinea, 1996**

1996	Gonorrhoea	Syphilis	Chlamydia
Rates in adults*	3.5%	3.5%	20%
Prevalence	93 000	93 000	533 000

* Population 15-49 years

Estimates for STI

Data from the GASP from 1992 through 1998 indicated no specific trends. The percentage of gonococcal isolates resistant to penicillin varied between 3.4% and 12.5% and for quinolones from 1.2% to 6.5%.

Behavioural Surveillance

Gonococcal antimicrobial resistance

No systematic surveillance on HIV/STI risk behaviour has been carried out in Papua New Guinea. In a survey of 192 randomly selected women of reproductive age in 1995, 9% had had more than one sexual partner in the previous year, 16% had been diagnosed with an STI in the previous 3 months, and only 7% reported ever using condoms. A survey of 300 STI clinic attendees in the highlands found that only 9% of patients were familiar with the role of condoms in HIV/STI prevention.

PHILIPPINES

Summary

The Philippines remains a low HIV prevalence country. Since the first cases of HIV/AIDS were reported in 1984, 1259 HIV infections including 404 AIDS cases and 199 HIV/AIDS-related deaths had been reported as of July 1999. An estimated 29 000 people were believed to be living with HIV in 1998 (prevalence <0.1% in people aged 15 to 49 years). The estimated reporting rate of HIV infection is low (5%). HIV in the Philippines is predominantly sexually transmitted (90%). The number of HIV/AIDS cases is not expected to increase substantially over the next few years.

There is a high prevalence of STI among SWs, with the prevalence rate of selected STI reaching more than 40% (predominantly chlamydial infections). Prevalence rate of STI among women attending antenatal clinics was <1% for STI other than chlamydia (5.6%). Gonococcal resistance to penicillin, tetracycline, and ciprofloxacin is high. Nearly all gonorrhea isolates (95%) were resistant to penicillin in 1997 and 63% were resistant to quinolones in 1998. Behavioural surveillance data in 1997 and 1998 indicated high prevalence of HIV/STI risk behaviour. Sharing of needles was reported by 77% of IDUs and unprotected sex was reported by 92% of MSM and 96% of IDUs.

Surveillance Structure

- The CDC AIDS case definition (1993) is used.
- All HIV and AIDS cases are notifiable to the Department of Health.
- Information on notifiable STI is only partial.
- HIV sentinel surveillance is carried out in 10 major cities. Populations surveyed include registered and freelance FSWs, MSM, IDUs, and men who attend STI clinics.
- Surveillance of STI and HIV risk behaviour has been conducted since 1997.

HIV/AIDS

Reported HIV/AIDS cases as of July 1999

The first cases of HIV and AIDS were reported in 1984. By the end of July 1999, a cumulative total of 1259 HIV infections had been reported; this included 404 AIDS cases and 198 HIV/AIDS related deaths. Reported HIV/AIDS cases have been slowly increasing each year (Table 1).

Table 1: **Reported cases of HIV/AIDS by year of diagnosis in the Philippines as of July 1999**

	<1989	**90**	**91**	**92**	**93**	**94**	**95**	**96**	**97**	**98**	**99**	**Total**
AIDS	53	19	13	19	36	56	52	51	23	41	41	**404**
HIV/ AIDS	153	68	79	69	100	119	117	156	117	190	91	**1259**

The majority (59%) of reported HIV infections have occurred in men (Table 2) and have been primarily sexually transmitted (80%). Heterosexual contact was reported in more than half of cases (58%). The proportion of HIV among IDUs remains small (Table 2).

Table 2: **Distribution of cumulative reported HIV/AIDS cases by sex and mode of transmission in the Philippines as of July 1999**

	HIV (%)	**AIDS** (%)
Sex		
Male	59	63
Female	40	37
Unknown	1	0
Mode of transmission		
Homo-/bisexual	22	35
IDU	<1	<1
Heterosexual	58	55
Blood products	1	2
Mother to infant	1	2
Other/unknown	17	5

Active HIV/AIDS surveillance

HIV serological surveys have been performed in 10 sentinel sites throughout the country since 1993; data were collected every 6 months until 1997 and annually since 1998. Only sporadic cases of HIV (<0.3%) have been detected among registered FSWs, IDUs, MSM, and men who attend STI clinics. There has been no evidence of a significant increase in HIV seroprevalence over time and no significant differences in population groups studied in 1998. In 1998, only 3 of 2075 registered FSWs, 1 of 2068 freelance FSWs, none of 532 MSM and none of 120 IDUs tested HIV-positive.

HIV prevalence data from testing and counseling services showed no significant increase in prevalence between 1991 and 1998. HIV testing and counseling services increased the number of HIV tests from 350 959 (prevalence of 0.002%) in 1991 to 687 150 in 1997 (prevalence of 0.002%).

Estimates and Projections for HIV/AIDS

In order to develop estimates and projections for HIV/AIDS in the Philippines, a consensus meeting of national and international experts was convened in 1998. These experts adapted earlier estimates of HIV and AIDS from a consensus meeting that had been held in 1996. The sentinel serosurveillance data showed that HIV prevalence remains low in the country, and revising the 1996 estimates and projections was deemed unwarranted.

Table 3: **Estimates for HIV/AIDS in the Philippines, 1998**

	1998
Population (15-49) (thousands)	36 501
HIV	
Prevalence	29 000
Prevalence rate in adults (15-49)	<0.1%
AIDS	
Prevalence	650
Prevalence rate in adults (15-49)	<0.1%

There were an estimated 29 000 persons living with HIV in the Philippines in 1998 (prevalence, rate of <0.1%, adults aged 15-49 years) (Table 3). The reporting rate for HIV infections is believed to be low (Table 4). An estimated 90% of HIV infections are sexually transmitted.

Table 4: **Selected epidemiological features of HIV/AIDS in the Philippines (1998 estimates)**

HIV	
Prevalence	29 000
Prevalence rate in adults (15-49)	<0.1%
Women among HIV infected population	30%
HIV infection by mode of transmission	
Sexual contact	90%
Injecting drug use	<5%
Others	5%
Estimated reporting rate for HIV	5%
Estimated reporting rate for AIDS	40%

STI other than HIV

Reported cases

There are 128 Social Hygiene Clinics (SHC) which regularly screen registered SWs for STI every one to four weeks. The number of STI cases detected by SHCs in 1993-1997 ranged from 30 000 to 51 000; cases included syphilis, gonorrhoea and non-gonococcal urethritis. The prevalence of syphilis was between 0.4% and 1.66%, and of gonorrhoea between 5% and 17%.

Active STI surveillance

Syphilis seroprevalence was added to national HIV surveillance in 1994. Prevalence was higher among MSM (3% to 7%), freelance FSWs (4% to 6%). Lower prevalence rates were observed among male STI patients (2% to 4%) registered FSWs (1% to 4%), and male SWs (1% to 3%). . High prevalence rates have been reported among FSWs in Cebu (22.2% for gonorrhoea, 22.7% for chlamydia, 6.7% for syphilis, 30.9% for trichomoniasis) and Manila (10.6% for gonorrhoea, 17.3% for chlamydia, 2.8% for syphilis, 6.7% for trichomoniasis). Prevalence rates among women attending antenatal clinics were 1% for gonorrhoea, 5.6% for chlamydia, 0.5% for syphilis, and 1% for trichomoniasis.

In a study of FSWs in Manila currently being completed in 1999, a third of registered FSWs without self-identified STI symptoms have been found to have an STI (primarly chlamydia, gonorrhoea, or both infections).

Table 5: **Estimated prevalence of selected STI in the Philippines, 1998**

	Gonorrhoea	**Syphilis**	**Chlamydia**	**Trichomoniasis**
Prevalence	428 000	214 000	2 560 000	428 000
Prevalence rate in adults (15-49)	1%	<1%	6%	1%

* Population 15 and above

Estimates for STI

Estimated prevalence rates for selected STI in the general adult population were extrapolated based on various point prevalence estimates (Table 5). Chlamydia is the most prevalent STI.

Gonococcal antimicrobial resistance

Gonococcal resistance for most drugs has been found to be high in the past few years (penicillin, 69 to 100%; tetracycline, 45%; ciprofloxacin, 82%, quinolones, 50 to 95%).

STI and HIV Risk Behaviour Surveillance

The first behavioural sentinel surveillance survey (1997) found a high prevalence of sharing needles among IDUs (77%). Condom use among all population groups studied was low (IDUs, 4%; MSM, 23%; FSW, 28%; RSW, 48%), as was condom use at last sexual contact with non-regular partner (IDUs, 34%; MSM, 41%; FSW, 55%; RSW, 72%). More than half of all persons in high-risk groups reported knowledge of at least three ways to prevent HIV transmission. Knowledge was lowest among IDUs (50%) and highest among MSM (68%). Self-perception of their own personal risk of AIDS was low (IDUs 27%; MSM 20%; FSW 25%; RSW 30%).

SINGAPORE

Summary

Singapore has a low HIV prevalence. Since the first case of HIV infection was reported in 1985, annual reported cases have increased steadily (from 2 in 1985 to 199 in 1998). The cumulative total of 930 HIV infections at the end of December 1998 included 484 AIDS cases and 288 HIV/AIDS-related deaths.

Eighty-nine percent of reported HIV/AIDS cases have occurred among men, and two thirds of cases have been heterosexual. Before 1991, the majority of reported HIV infections were among homo-bisexual men (70%). However, the proportion of heterosexuals in reported HIV/AIDS cases has increased in recent years (from 29% in 1990 to 78% in 1998). HIV transmission among IDUs remains limited. Seroprevalence surveys show that the HIV prevalence among blood donors has been low (0.007 in 1993; 0.008% in 1998). No HIV positive case was detected during seroprevalence surveys among prenatal clinic attendees since 1995. However, slight increases in HIV prevalence have been noted among STI patients (from 0.5% in 1994 to 0.7% in 1998) and TB patients (from 0.7% in 1996 to 1.3% in 1998).

Prevalence rates for curable STI have been low in existing studies (<1% for syphilis and gonorrhoea, 2% for chlamydia). Overall incidence of reported STI has declined over time. Gonococcal antimicrobial resistance increased between 1992 and 1998, both to penicillin (35% to 56%) and quinolones (0.35% to 7.2%). The prevalence of condom use is high among MSM (82 to 86%) and SWs (75%).

Surveillance Structure

- The CDC AIDS case definition is used.
- All HIV and AIDS cases are notifiable to the Ministry of Health
- Other STI notifiable to the Ministry of Health are chancroid, gonorrhoea, NGU, syphilis and genital ulcers.
- HIV seroprevalence surveys conducted since 1989 have covered blood donors, antenatal clinic attendees, and patients with STI or TB.

HIV/AIDS

Reported cases as of December 1998

The first case of HIV was reported in 1985. By the end of December 1998, the cumulative total of 930 reported HIV infections included 484 AIDS cases and 288 HIV/AIDS-related deaths. The number of reported cases increased each year (Table 1).

Table 1: **Reported cases of HIV/AIDS by year of diagnosis in Singapore as of December 1998**

	<1990	**90**	**91**	**92**	**93**	**94**	**95**	**96**	**97**	**98**	**Total**
AIDS	15	8	12	18	22	48	56	92	88	125	**484**
HIV/AIDS	44	17	42	55	64	86	111	139	173	199	**930**

The majority (89%) of reported cases were in men. Heterosexual contact was reported in two thirds of reported cases and homo-bisexual contact in about one quarter (Table 2). Before 1991, the majority of HIV infections occurred in MSM through homo-/bisexual contact (70%). In the past 9 years, the percentage of reported HIV infections attributed to heterosexual contact has increased substantially (from 29% in 1990 to 78% in 1998).

Table 2: **Distribution of cumulative reported HIV/AIDS cases by sex and mode of transmission in Singapore as of December 1998**

	HIV (%)	**AIDS** (%)
Sex		
Male	89	92
Female	11	8
Mode of transmission		
Homo-/bisexual	25	25
IDU	2	2
Heterosexual	68	69
Blood products	1	1
Mother to infant	1	1
Other/unknown	3	2

Serological surveillance has been implemented in various population groups since 1989. HIV seroprevalence remains low, although slight increases in HIV seroprevalence have been noted among patients with STI and TB.

- Screening of SWs attending public STI clinics showed HIV prevalence rates of 0.07% in 1993, 0.06% in 1994, 0.05% in 1995, and 0.09% in 1996.

- Among STI clinic patients (N = >500 per year), HIV prevalence increased from 0.5% in 1994 to 0.7% in 1998.

- Among TB patients (N = 300 per year), HIV prevalence remained at zero until 1995, then increased from 0.7% in 1996 to 1.3% in 1998.

- A total of 500 to 700 women attending antenatal clinics were screened from 1993 through 1998. Only one woman in 1995 tested HIV positive (0.14%).

- Among blood donors (N = >7000 annually), HIV prevalence has stayed consistently low (0.007% in 1993, 0.008% in 1998).

Estimates and projections for HIV/AIDS

The number of people living with HIV in 1998 was estimated at 3800 (prevalence rate of 0.2% in people aged 15 to 49 years). Heterosexual contact has been the predominant mode of transmission (Table 3).

Table 3: **Selected epidemiological features of HIV/AIDS in Singapore (1998 estimates)**

HIV	
Prevalence	3800
Prevalence rate in adults (15-49)	0.2%
Women among HIV infected population	20%
HIV by mode of transmission	
Sexual contact	95%
Injecting drug use	<1%
Others	5%
Estimated reporting rate for HIV	22%
Estimated reporting rate for AIDS	64%

STI other than HIV

Reported cases

Over the past 15 years, incidence of reported STI has steadily declined. Overall reported rates for all STI decreased from 946/100 000 in 1980 to 162/ 100 000 in 1998. In 1999, disease-specific reported incidence rates were 47/100 000 for gonorrhoea, 33/100 000 for syphilis, and 29/100 000 for NGU. The prevalence rate of syphilis among blood donors decreased from 0.24% in 1994 to 0.13% in 1998.

Active STI surveillance

Screening of SWs attending the public STI clinic has shown a decline in gonorrhoea and chlamydia prevalence. Prevalence rates were 0.5% for gonorrhoea and 2.0% for chlamydia in 1996. Among blood donors in 1992 and 1993, syphilis prevalence rate was 0.2%.

Estimates for STI

Estimates for the prevalence of STI at country level have been developed by WPRO based on STI surveys in selected population groups (Table 4).

Table 4: **Estimated prevalence of selected STI in Singapore, 1997**

	Gonorrhoea	Syphilis	Chlamydia
Prevalence rate in adults (15-49)	0.2%	0.18%	0.23%
Prevalence	4200	3700	4700

Gonococcal antimicrobial resistance

Data from the GASP from 1992 through 1998 indicated increased gonococcal antimicrobial resistance to both penicillin (35% to 56%) and quinolones (0.3% to 7.2%).

HIV and STI Risk Behavioural Surveillance

Surveys on STI/HIV risk behaviour are not routinely conducted in Singapore. An ad hoc survey in 1997 among MSM indicated that 18% did not use condoms with regular partners and 14% did not use condoms with casual partners. Seventy five to 83% of persons arrested for a controlled drug between 1996 and 1998 were heroin users (Table 5).

A 1992 survey of FSWs indicated that 75% used condoms.

Table 5: **Breakdown of persons arrested for consumption of a controlled drug in Singapore, 1996-1998**

Year	Total number	Heroin consumption	Percentage
1996	5744	4431	77
1997	4752	3549	75
1998	4502	3727	83

SOUTH PACIFIC

Summary

Data from the following 20 Pacific Island countries and territories were colleted and analyzed for this report: American Samoa, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Micronesia, Nauru, New Caledonia, Niue, Northern Mariana Islands, Palau, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, and Wallis and Futuna.

Only sporadic HIV/AIDS cases have been reported in the South Pacific, which suggests that HIV seroprevalence remains low. As of September 1999, 612 HIV infections (including 223 AIDS cases) had been reported to the WHO Regional Office for Western Pacific. Three territories (French Polynesia, Guam and New Caledonia) have accounted for 80% of reported HIV infections and 81% of AIDS cases. The majority of reported cases occurred among men, with sexual contact being the most frequently reported mode of transmission. The proportion of heterosexual cases has increased over the last few years. Surveys conducted in some countries and territories show that curable STI are common.

Surveillance Structure

- The case definition used for AIDS surveillance varies by country and territory.

- HIV and AIDS cases are notifiable to the Health Authorities in all countries and territories.

- Other notifiable STI also vary by country and territory.

HIV/AIDS

Reported cases as of September 1999

A total of 612 HIV infections, including 223 AIDS cases, had been reported to WPRO as of September 1999 (Table 1). Five countries/territories (American Samoa, Cook Islands, Niue, Tokelau, Vanuatu) have not as yet reported any HIV infections.

Table 1: **Reported cases of HIV/AIDS by year of diagnosis in the South Pacific as of September 1999**

	<1985 or unknown	**85**	**86**	**87**	**88**	**89**	**90**	**91**	**92**	**93**	**94**	**95**	**96**	**97**	**98**	**99**	**Total**
AIDS	6	1	7	9	12	13	20	22	7	25	31	13	21	16	13	7	**223**
HIV/AIDS	5	2	29	37	37	39	49	55	37	47	50	51	54	50	47	23	**612**

* Some countries/territories have not reported to WPRO for 1997, 1998, and/or 1999. Thus, data from 1997 to 1999 do not include all countries/territories in the South Pacific.

Most cases occurred in male, although sex remained unknown for large proportion of cases (Table 2). Homo-/bisexual and heterosexual contacts were the most frequently reported modes of transmission (Table 2). However, data should be interpreted with caution given the high number of unspecified cases for sex and mode of transmission.

Table 2: **Distribution of cumulative reported HIV/AIDS cases by sex and mode of transmission in the South Pacific through September1999**

	HIV (%)	**AIDS** (%)
Sex		
Male	62	50
Female	18	9
Unknown	20	41
Mode of transmission		
Homo-/bisexual	31	30
IDU	7	6
Heterosexual	23	20
Blood products	3	3
Mother to infant	2	2
Other/unknown	34	39

Active HIV/AIDS surveillance

Few HIV seroprevalence studies have been conducted in the South Pacific. Limited data have been collected in some countries among populations of blood donors, pregnant women, STI clinic patients, and immigrant groups. Most such studies have identified few if any HIV infections.

A survey conducted in French Polynesia in 1991 reported an HIV prevalence rate of 1.4% among FSWs and 3.8% among homosexuals. However, the sample size was small and results should be interpreted with caution.

Estimates and projections for HIV/AIDS

Data are insufficient to allow estimates on magnitude of HIV infections in the general adult population in the South Pacific.

STI other than HIV

Reported cases

In New Caledonia, reported cases of syphilis, chlamydia, and gonorrhoea decreased from 1990 to 1997 (Table 3).

Table 3: **Reported number of STI cases in New Caledonia, 1990-1997**

	1990	1991	1992	1993	1994	1995	1996	1997
Syphilis	276	272	246	211	195	175	60	49
Gonorrhoea	350	265	212	161	178	142	80	100
Chlamydia	528	442	348	312	317	198	157	149

Reported gonorrhoea cases decreased in Guam (from 395 in 1990 to 131 in 1994), North Mariana Islands (from 125 in 1990 to 49 in 1994), and Tonga (from 46 in 1988 to 14 in 1989). In the Marshall Islands, there were 109 gonorrhoea cases in 1993 (1.9/1000) and 35 in 1994 (0.62/1000).

Only a few syphilis cases were reported in Guam (2-4 during 1990 to 1994). Fewer than 10 cases were reported in North Mariana Islands (1991-1993) and no cases were reported in Palau or Vanuatu (1990-1994).

Reported STI cases are increasing in the Solomon Islands. There were 901 gonorrhoea cases and 104 syphilis cases in 1993; these numbers increased to 974 and 224, respectively, in 1994.

Active STI surveillance

An STI survey assessed prevalence among pregnant women in Suva, Fiji in 1985-1986 and again in 1997. Findings showed decreases in STI (8.9% to 8.2% for syphilis, 2.3% to 0.5% for gonorrhoea, 45% to 19.5% for chlamydia). Recent studies of pregnant women found chlamydia prevalence rates of 12% in Cook Islands and 33% in Marshall Islands. Another study in French Polynesia in 1991 found a chlamydia prevalence rate of 67.9% among homosexuals and 60.8% among FSWs. The same study reported a syphilis prevalence rate of 16.7% among homosexuals and 60.8% among FSWs.

Estimates for STI

Estimates for prevalence of STI in the South Pacific have been developed by the WHO Office for Western Pacific Region. These figures are based on available STI surveys

Table 4: **Estimated prevalence of selected STI in the South Pacific, 1996**

	Gonorrhoea	**Syphilis**	**Chlamydia**	**Trichomoniasis**
Prevalence rate in adults (*)	0.4%	8%	13%	11%
Prevalence	9000	180 000	290 000	248 000

(*) Population 15 and above

Gonococcal antimicrobial resistance

Penicillin resistance data are available for Fiji, New Caledonia, Solomon Islands, Tonga, and Vanuatu. Resistance in 1998 was relatively high in Solomon Islands (35.9%), but low in other areas (0%-9%). Quinolone resistance in 1998 was 0% in Fiji, 7.5% in New Caledonia, and 0% in Solomon Islands. These were the only areas for which resistance data were available.

HIV and STI Risk Behaviour Surveillance

Sexual behaviour and social norms vary considerably in these diverse countries and territories. Although there are no organized sex industries, SWs are present. One study of 3500 people between the ages of 16 and 25 years in New Caledonia found that 68% of respondents had had at least one sexual experience (74% of males, 63% of females). Findings also showed that 3% had been involved in sex work either as a client or as a SW (5% for males, 1% for females); 25% had had more than 2 sexual partners during the previous year. Among those who had had sexual intercourse at least once, 65% used condoms at least once. Among those with regular partners, 60% had used condoms at least once, but this was true for only 38% of subjects with no regular sexual partner.

VIET NAM

Summary

After the first HIV case was reported in Viet Nam in 1990, the number of reported HIV infections and AIDS cases grew rapidly in all provinces. The total had reached 14 509 by August 1999. An estimated 86 500 people were living with HIV/AIDS in 1998.

HIV prevalence is highest among IDUs (17%). Although data on HIV/STI risk behaviour are not included in routine HIV surveillance, studies of IDUs indicate that 28% share equipments. Sexual transmission of HIV has increased among FSWs (prevalence rate increased from 0.6% in 1994 to 3.0% in 1998). While the majority of reported HIV infections occur among IDUs (64%), estimates of HIV/AIDS indicate that the majority of HIV infections are sexually transmitted (77%).

Available data from point prevalence studies suggest that there is a major burden of STI, and particularly syphilis, among SWs. There is a lower, but still significant, STI prevalence among women, including pregnant women. Gonococcal resistance to penicillin is high (77%) and quinolone resistance is emerging (3.3% to 8.1%).

Surveillance Structure

- The expanded WHO AIDS case definition (1994) is used.
- All HIV and AIDS cases are notifiable to the Ministry of Health through the National Institute of Hygiene and Epidemiology.
- Sentinel surveillance for HIV infection was established in 1994 in four provinces, and was expanded to include 20 provinces in 1996.
- The HIV sentinel surveillance population includes antenatal clinic attendees, FSWs and massage girls, military recruits, IDUs, and patients with TB and STI.

- For other STI, 61 provincial Dermatology and Venereology centres report STI based on clinical criteria to the National Institute of STDs and Dermatology. However, most patients with STI seek care from private practitioners, and the reported number of STI would appear to constitute only about 10% to 20% of all STI diagnosed.

- STI prevalence surveys were conducted during 1995-1996 among FSWs and women attending mother and child health clinics in two cities.

HIV/AIDS

Reported cases as of August 1999

The first HIV infection was reported in 1990. By 7 August 1999, 14 509 HIV/AIDS cases and 2736 AIDS cases had been reported (Table 1). HIV infections were reported in all provinces. Annual increases in the number of reported cases has been moderate for AIDS and HIV infection cases.

Table 1: **Reported cases of HIV/AIDS by year of diagnosis in Viet Nam as of August 1999**

	Not known	<1992	92	93	94	95	96	97	98	99	Total
AIDS	279	0	0	106	116	201	380	400	935	319	**2736**
HIV/AIDS	103	1	11	1148	1340	1405	1660	2654	4271	1916	**14 509**

A total of 85% of reported HIV/AIDS cases were among men. This reflects the fact that the majority of cases were among IDUs (Table 2), nearly all of whom are male. Reported proportion of mother-to-child transmission is less than 1%. For about a quarter of HIV, mode of transmission is not reported.

Table 2: **Distribution of cumulative reported HIV/AIDS cases by sex and mode of transmission in Viet Nam as of August 1999**

	HIV (%)	**AIDS** (%)
Sex		
Male	85	60
Female	14	12
Unknown	1	28
Mode of transmission		
Homo-/bisexual	0	0
IDUs	64	47
Heterosexual	9	15
Blood products	0	0
Mother to infant	<1	<1
Other/unknown	27	37

Active HIV/AIDS surveillance

- HIV prevalence rates in most sentinel HIV populations showed substantial increases between 1994 and 1998. However, there has been considerable variation in HIV prevalence rates by surveillance site (Table 3).

- HIV prevalence rates among pregnant women and military recruits suggest a limited spread of HIV in the general population (Table 3).

- HIV prevalence rates were consistently high among IDUs from the southern regions of the country in 1994 (15%-20%). HIV prevalence rates reached 50% in some communities of IDUs investigated in 1998. This suggests a developing and sustained HIV epidemic among IDUs in the southern regions.

Table 3: **HIV seroprevalence (%) in selected population subgroups in Viet Nam, 1994 and 1998**

	HIV prevalence (%)	
Survey population	**1994** **Average** (range)	**1998** **Average** (range)
Pregnant women	0.01 (0 to 0.1)	0.08 (0 to 0.96)
Military recruits	0	0.15 (0 to 1.9)
IDUs	18.25 (0 to 33.7)	17.0 (0 to 85.0)
FSWs	0.59 (0 to 2.8)	2.44 (0 to 14.6)
Blood transfusion/products	0.03	0.08
Male STD patients	0.46 (0 to 1.0)	0.94 (0 to 6.0)
TB patients	0.56 (0 to 1.1)	0.98 (0 to 11.8)

Estimates and projections for HIV/AIDS

Estimates for HIV prevalence and AIDS incidence were developed during a consensus meeting of national and international experts in 1998; these estimates were endorsed by the government. Specifically, HIV/AIDS estimates for 1997 and projections through 2000 were prepared based on HIV prevalence surveys. This analysis identified an extensive spread of HIV beginning in 1993, and projected that HIV transmission would continue to increase after 1997.

Table 4: **Estimates and projections for HIV/AIDS in Viet Nam, 1997 and 2000**

	1997	**2000**
Population (15-49) (thousands)	39 908	43 493
HIV		
Prevalence	66 700	135 000
IDUs	11 200	20 700
Heterosexual (15-49 years)		
- Northern region	9900	20 200
- Central region	12 800	26 300
- Southern region	32 800	67 800
AIDS		
Incidence	1700	5000
IDUs	300	800
AIDS deaths (overall)	2100	11 700

The estimated cumulative number of people with HIV/AIDS in 1997 was about 75 000, and an estimated 66 700 people were living with HIV (Table 4). By 2000, the estimated number of people living with HIV may reach 135 000. Although reported HIV infections have occurred predominantly among men and IDUs, nearly half of all HIV infections appear to be in women. The majority of HIV infections are transmitted through sexual contact (77%) (Table 5). About 80% of HIV infections and three quarters of AIDS cases are not reported.

Table 5: **HIV/AIDS epidemiological features of HIV/AIDS in Viet Nam (1997 estimates)**

HIV	
Prevalence	66 700
Prevalence rate in adults (15-49)	0.2%
Women among HIV infected population	44%
HIV infection by mode of transmission	
Sexual contact	77%
Injecting drug use	20%
Others	3%
Estimated reporting rate for HIV	12%
Estimated reporting rate for AIDS	24%

STI other than HIV

Reported cases

The reported number of STI in Viet Nam increased by two thirds from 1995 (about 44 000) to 1997 (about 71 000). It is unclear, however, how much of this increase is attributable to improvements in case detection or reporting.

Active STI surveillance

- STI prevalence surveys in the 1990s showed a high prevalence of STI among FSWs.
- Syphilis appears to be the most prevalent STI.

Table 6: **Range of prevelance of STI in selected populations in selected cities during the 1990s**

	Syphilis (%)	Gonorrhoea (%)	Chlamydia (%)	Trichomonas (%)
Pregnant women	1.5* to 1.7	--	--	--
MCH clinic attendees	0.2* to 2.5	0.3* to 0.7	2.2* to 2.5	--
FSW	30-40* to 50-60	2.6 to 30	--	30 to 50
Female hotel workers*	3.3	0.6.	--	0.6

* Hanoi. Other rates are from Ho Chi Minh City or other locations

Estimates for STI

National prevalence estimates for STI other than HIV were developed based on point prevalence surveys or data from the literature during 1990 through 1997.

Table 7: **Estimated prevalence for selected STI in Viet Nam in 1997**

	Gonorrhoea	Syphilis	Chlamydia
General population			
Prevalence	130 000	130 000	650 000
Prevalence rate (%) in population 15-49	0.5	0.5	2.5
Sex workers			
Prevalence	20 000	70 000	10 000
Prevalence rate (%) among SWs	10	35	5

Gonococcal antimicrobial resistance

Data from GASP indicate that penicillin-resistant gonorrhoea increased from 55% in 1992 to 77% in 1998. Quinolone resistance ranged between 3.3% to 8.1%.

HIV and STI Risk Behaviour Surveillance

Risk behaviour surveillance is not included in the HIV sentinel surveillance system. A study of 968 FSWs in 1995-1996 found that only 0.5% used drugs. A study of 105 drug users found that 96% used opium and that 28% shared needles.

3. REGIONAL TABLES

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Table 1: Epidemiological features of the HIV epidemic

Country	Current trend of HIV epidemic	HIV incidence	HIV prevalence	Main mode of transmission	Population groups most affected
Australia **New Zealand**	stabilizing or declining	low and decreasing	low and stable	homosexual	male homosexuals
Cambodia	increasing rapidly	moderate and increasing	already high	heterosexual	individuals with high and moderate risk heterosexual behaviour
Malaysia	stabilizing	decreasing	still low	injecting drug use	Principally IDUs but increasing among individuals with high risk sexual behaviour
China	increasing	moderate and increasing	still low but increasing	injecting drug use	Principally IDUs but increasing among individuals with high-risk sexual behaviour
Viet Nam	increasing	moderate and increasing	still low but increasing	heterosexual	Individuals with high-risk sexual behaviour and IDUs
Papua New Guinea	increasing	low but increasing	low	heterosexual	Individuals with high and moderate risk sexual behaviour

* Uncertain either because high-risk behaviours exist, high rates of STI exist, populations are mobile, or information is insufficient to formulate a projection.

Table 2: **AIDS case definition in selected countries of the Western Pacific, 1998**

AIDS case definition	Country
1985 WHO Definition (Bangui)	Cook Islands Niue Samoa
1985 WHO Definition (Bangui) with HIV antibody positive	Vanuatu
1994 Expanded WHO Definition (Abidjan)	A. Samoa Cambodia Japan Lao PDR Macao Malaysia Mongolia Papua New Guinea Solomon Islands Viet Nam
1993 CDC Definition	Australia (*) Brunei Darussalam(*) China Hong Kong, China (*) New Zealand (*) Philippines Singapore
1993 European Definition	Republic of Korea

(*) modified

NOTE: The AIDS case definition in use for the following countries is not currently available: Federated States of Micronesia, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, Palau, Tokelau, Tonga, Tuvalu and Wallis and Futuna

Table 3: **Estimated reporting rates of HIV/AIDS in selected countries**

Country	Reporting year	Estimated reporting rate for HIV	Estimated reporting rate for AIDS
Australia	1998	>95%	>95%
Brunei Darussalam	1994	76%	>80%
Cambodia	1998	8%	11%
China	1998	3%	5%
Hong Kong, China	1998	48%	38%
Japan	1998	74%	83%
Republic of Korea	1998	21%	29%
Lao PDR	1998	20%	60%
Malaysia	1998	64%	82%
New Zealand	1998	>95%	>95%
Papua New Guinea	1998	22%	28%
Philippines	1998	5%	40%
Viet Nam	1997	12%	24%

Table 4: Reported HIV/AIDS cases by year of report

Country/Area		pre-1989 or unknown	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Cumulative total	Date cumulative to
Australia	AIDS	1334	614	675	803	787	844	954	801	654	357	273	44	8140	30 Jun 99
	HIV	8200	1633	1423	1415	1239	1098	1030	946	927	794	720	313	19 738	
Brunei Darussalam	AIDS	0	0	2	0	0	1	3	2	2	2	0	0	12	31 Jul 99
	HIV	3	0	3	0	1	69	153	80	78	63	34	14	498	
Cambodia	AIDS	906	0	0	0	0	1	14	91	300	572	1494	1456	4834	30 Jun 99
	HIV	906	0	0	3	91	205	660	2611	4541	4674	7646	2691	24 028	
China	AIDS	3	0	2	3	5	23	29	52	38	126	136	2	419	31 Mar 99
	HIV	22	171	299	216	261	274	531	1567	2649	3343	3306	412	13 051	
Fiji	AIDS	0	1	2	1	1	1	2	0	0	0	0		8	11 Aug 98
	HIV	0	4	3	3	4	3	6	8	4	4	4		43	
French Polynesia	AIDS	9	5	9	7	3	8	3	6	4	0			54	31 Oct 97
	HIV	57	17	22	19	8	12	9	13	7	10			174	
Guam	AIDS	5	1	2	4	2	5	11	2	10	5	7	6	60	31 Jul 99
	HIV	13	1	12	13	11	10	9	12	15	10	15	8	129	
Hong Kong, China	AIDS	16	17	13	14	14	19	37	45	70	64	63	37	409	30 Jun 99
	HIV	134	38	34	60	71	79	104	122	134	181	189	109	1255	
Japan	AIDS	670	21	31	38	51	86	136	169	235	250	231	148	2066	27 Jun 99
	HIV	1537	101	97	238	493	363	434	543	610	647	653	386	6102	
Kiribati	AIDS	2	0	0	0	0	0	0	0	0	2	2	0	6	31 Jul 99
	HIV	0	0	0	2	0	0	0	1	11	4	2	3	23	
Republic of Korea	AIDS	4	1	2	1	2	6	11	14	22	33	35	14	145	30 Jun 99
	HIV	36	37	54	42	76	78	90	108	102	124	129	88	964	
Lao PDR	AIDS	0	0	0	1	0	5	4	4	16	48	27		105	31 Dec 98
	HIV	0	0	1	8	11	18	17	31	71	108	102		367	
Macao	AIDS	0	1	0	1	2	2	2	0	1	2	4	2	17	30 Jun 99
	HIV	1	1	1	4	13	40	33	29	21	19	31	4	197	
Malaysia	AIDS	2	2	18	60	73	71	105	233	347	568	875	540	2894	30 Jun 99
	HIV	14	200	778	1794	2512	2507	3393	4198	4597	3924	4624	2052	30 593	
Marshall Islands	AIDS	2	0	0	0	0	0	0	0	0	0	0		2	31 Dec 97
	HIV	6	0	0	0	0	1	1	0	1	0	0		9	

		pre-1989 or unknown	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Cumulative total	Date cumulative to
Micronesia	AIDS	0	1	1	0	0	0	0	0	0	0	0		2	28 Feb 98
	HIV	0	1	1	0	0	0	0	0	0	0	0		2	
Mongolia	AIDS	0	0	0	0	0	0	0	0	0	0	0	1	1	4 Aug 99
	HIV	0	0	0	0	1	0	0	0	0	0	1	0	2	
Nauru	AIDS	0	0	0	0	0	0	0	0	0	0	0		0	20 Oct 97
	HIV	0	0	0	0	0	0	0	1	0	0	0		1	
New Caledonia	AIDS	13	4	5	9	1	8	9	4	2	8	3	1	67	12 Jul 99
	HIV	28	13	9	16	11	18	21	14	8	20	20	11	189	
New Zealand	AIDS	123	71	71	69	62	53	47	60	59	31	26	9	681	30 Jun 99
	HIV	389	108	104	111	106	88	88	82	93	63	105	34	1371	
N. Mariana Is.	AIDS	3	0	0	1	0	0	2	0	1	1	0		8	14 Apr 98
	HIV	5	1	1	2	0	1	1	0	0	1	3		15	
Palau	AIDS	0	0	0	0	0	1	0	0	0	0	0		1	28 Feb 98
	HIV	0	0	0	0	0	1	0	0	0	0	0		1	
Papua New Guinea	AIDS	11	6	17	21	19	12	26	44	69	120	232	41	618	31 Mar 99
	HIV	18	17	35	36	32	40	69	124	192	351	635	192	1741	
Philippines	AIDS	45	8	19	13	19	36	56	52	51	23	41	41	404	31 Jul 99
	HIV	114	39	68	79	69	100	119	117	156	117	190	91	1259	
Samoa	AIDS	0	0	1	0	0	0	2	1	2	0	0	0	6	31 Jul 99
	HIV	0	0	1	0	0	0	2	1	5	0	0	1	10	
Singapore	AIDS	10	5	8	12	18	22	48	56	92	88	125		484	31 Dec 98
	HIV	34	10	17	42	55	64	86	111	139	173	199		930	
Solomon Islands	AIDS	0	0	0	0	0	0	0	0	0	0	0	0	0	3 Aug 97
	HIV	0	0	0	0	0	0	0	1	0	0	1	0	2	
Tonga	AIDS	1	1	0	0	0	1	2	0	2	0	1	0	8	9 Mar 99
	HIV	1	2	0	0	2	0	1	0	3	0	2	0	11	
Tuvalu	AIDS	0	0	0	0	0	0	0	0	0	0	0		0	8 Oct 97
	HIV	0	0	0	0	0	0	0	0	0	1	0		1	
Viet Nam	AIDS	279	0	0	0	0	106	116	201	380	400	935	319	2 736	07 Aug 99
	HIV	103	0	1	0	11	1148	1340	1405	1660	2654	4271	1916	14 509	
Wallis & Futuna	AIDS	0	0	0	0	0	1	0	0	0	0	0		1	01 Jan 98
	HIV	0	0	0	0	1	1	0	0	0	0	0		2	

Table 5: **Estimated/projected HIV prevalence in selected countries, adults and children, 1990-2000**

Country	Start of HIV spread	Estimated HIV			Projected HIV
		1990	1995	1998	2000
Australia	1981	1200	11 150	10 800	11 420
Cambodia	1990	60	73 000	185 000	265 000
China		?	?	400 000	600 000
Hong Kong, China	1987	580	2300	2500	2500
Japan	1981	1650	4900	8000	11000
Republic of Korea	1990	80	2000	3400	3880
Malaysia	1991	-	15 700	41 000	58 000
New Zealand	1982	1300	1200	1200	1250
Papua New Guinea	1986	2000	3700	4800	5300
Philippines	1990	-	12 500	2900	?
Singapore	1988	180	1840	3800	5700
Viet Nam	1990	2000	34 000	86 500	135 000
TOTAL	1981-1991	+/-20 000	>150 000	>740 000	>1 million

Table 6: **Estimated HIV prevalence in selected countries, adult population age 15-49, 1998**

Country/Area	**HIV prevalence adults** (15-49)	**HIV prevalence rate adults** (15-49)	**% women among HIV positive**	**Mode of Transmission**		
				Sexual contact	**Injecting drug use**	**Others**
Australia	10 800	0.1%	5%	91%	5%	4%
Brunei Darussalam (1994)	300	0.2%	10%	97%	<1%	3%
Cambodia	180 000	3.7%	30%	95%	<1%	5%
China	400 000	<0.1%	12%	15%	50%	35%
Hong Kong, China	2500	<0.1%	40%	80%	15%	5%
Japan	8000	<0.1%	33%	92%	<1%	<7%
Republic of Korea	3400	<0.1%	13%	93%	<1%	7%
Lao PDR	1200	<0.1%	50%	95%	3%	2%
Malaysia	41 000	0.4%	9%	11%	88%	1%
New Zealand	1200	<0.1%	15%	95%	3%	2%
Papua New Guinea	4400	0.2%	48%	95%	<1%	<5%
Philippines	29 000	<0.1%	30%	90%	<5%	5%
Singapore	3800	0.2%	20%	95%	<1%	5%
Viet Nam	86 000	0.2%	44%	77%	20%	3%
TOTAL	**772 100**					

Table 7: Estimates and projections for AIDS incidence, adults and children

Country		Estimates		Projections	
		1995	1998	2000	2003
Australia	Yearly	820	500	-	-
	Cumulative	6812	-	-	-
Cambodia	Yearly	1500	7100	13 200	23 700
	Cumulative	2410	17 000	40 250	100 850
China	Yearly	-	-	-	-
	Cumulative	-	-	-	-
Hong Kong, China	Yearly	107	-	-	-
	Cumulative	314	-	-	-
Japan	Yearly	160	1000	-	-
	Cumulative	1340	-	-	-
Republic of Korea	Yearly	50	-	-	-
	Cumulative	100	-	-	-
Malaysia	Yearly	150	1130	2350	4430
	Cumulative	220	2370	6420	17 600
New Zealand	Yearly	60	35	-	-
	Cumulative	531	-	-	-
Papua New Guinea	Yearly	370	500	570	650
	Cumulative	1510	3860	4000	5800
Philippines	Yearly	200	980	-	-
	Cumulative	310	2340	-	-
Singapore	Yearly	30	-	-	-
	Cumulative	60	-	-	-
Viet Nam	Yearly	310	2700	5000	-
	Cumulative	360	5700	1400	-
TOTAL	**Yearly**	**>3700**	**>12 000**	**>21 000**	**>28 000**
	Cumulative	**>14 000**	**>30 000**	**>65 000**	**>124 000**

Table 8: **Estimated prevalence and prevalence rate for selected STI, 1998**

Country	Gonorrhoea		Syphilis		Chlamydia		Trichomoniasis	
Australia	n/a		n/a		709 000	(5%)	59 000	(<1%)
Brunei Darussalam	n/a		1400	(<1%)	n/a		n/a	
Cambodia	177 000	(3%)	236 000	(4%)	236 000	(4%)	n/a	
China	1 365 000	(<1%)	n/a		18 202 000	(2%)	n/a	
Hong Kong, China	2342	(<1%)	600	(<1%)	3745	(<1%)	460	(<1%)
Japan	n/a		n/a		7 380 000	(7%)	n/a	
Republic of Korea	n/a		52 500	(<1%)	n/a		n/a	
Malaysia	64 000	(<1%)	128 000	(1%)	n/a		n/a	
Mongolia	4600	(<1%)	8000	(<1%)	n/a		6200	(<1%)
Pacific Islands	9000	(<1%)	180 000	(8%)	290 000	(13%)	248 000	(11%)
Papua New Guinea	93 000	(4%)	93 000	(4%)	533 000	(20%)	n/a	
Philippines	428 000	(1%)	214 000	(<1%)	2 560 000	(6%)	428 000	(1%)
Singapore	4200	(<1%)	3800	(<1%)	4700	(<1%)	n/a	
Viet Nam	239 000	(<1%)	143 000	(<1%)	1 000 000	(2%)	n/a	

1. All rates are calculated per population over age 15. A more detailed description of the data used to calculate these estimates can be obtained from the Regional Office of the Western Pacific (see contact information on the back page of this report).
2. These are working estimates based on available information, and could be plus or minus 1%.

n/a indicates data not available

Table 9: **Summary of GASP reports for penicillin and quinolone resistent *N. gonorrhoeae*, 1992-1998**

Country/Area	Total penicillin resistant[1] %							Quinolone sensitivity and resistance[1] % Less sensitive						% Resistant					
	92	93	94	95	96	97	98	93	94	95	96	97	98	93	94	95	96	97	98
Australia	16.9	17.1	18.4	15.8	15.6	19.2	27.5	2.7	1.4	1.6	2	1.6	2.0	0.001	0.4	1.9	2.6	5.6	3.2
Brunei Darussalam	40.0	42	n/p	n/p	78	n/a	n/a	6.6	n/p	n/p	n/a	n/a	n/a	0	n/p	n/p	10	n/a	n/a
Cambodia	n/p	n/p	n/p	n/p	79*	n/p	n/p	n/p	n/p	n/p	n/a	n/p	n/p	n/p	n/p	n/p	53	n/p	n/p
China	62.1	44	53.8	84	82.1	55	62.6	n/a	n/a	80.7	69.4	51.5	36.4	n/a	n/a	15.5	13.5	28.5	54.2
Fiji	10.5	11.5	10.6	5	4.5	8	8.8	0	0.1	0	0	0	n/a	0	0	0	0	0	n/a
Hong Kong, China	66.6	73.5	77.9	77.6	70.4	66.4	69.0	n/a	55.9	57.5	55.2	42.1	44.0	n/a	3.3	7.7	24	38.6	48.8
Japan	7.9	20.4	11	25.8	5.5	3.5	8.4	46.8	38	17.6	n/a	20	50.0	0	0	29.4	n/a	41.2	2.6
Republic of Korea	80	90.1	87.5	90.5	90	91.3	89.6	12	25	15.6	38	46.8	51.5	0	0	0	15.6	20.4	11.2
Malaysia	60	64.1	69	73.8	58.7	n/a	n/a	0.1	1.4	1.9	0	0	n/a	0	0	0	0	0	n/a
Mongolia	n/p	n/p	n/p	n/p	n/p	n/a	70	n/p	n/p	n/p	n/p	n/a	n/a	n/p	n/p	n/p	n/p	n/a	n/a
New Caledonia	0	0	0	15.8	6	6	9	0	6.2	31.6	11.7	18	3.0	0	0	0	0	0	7.5
New Zealand	10.1	16.4	15.5	15.2	8.9	14.5	10.6	1.1	2.4	2.3	3	5.8	1.4	0	1.6	0.3	0.7	1.9	1.2
Papua New Guinea	n/a	12.5	8.7	3.4	9.3	n/a	37	12.5	0	0	0	n/a	0.5	0	5	1.2	6.5	n/a	3.2
Philippines	83.7	n/a	100	68.8	78	95.4	82	n/a	0	0	0	0	1.2	n/a	95	68.8	66	50	63
Singapore	43	44.6	66.4	54.5	55.7	62.3	59.0	2.8	11.2	8.1	6.5	4.8	4.4	0.33	1.8	2.9	3.5	3.8	7.2
Solomon Islands	n/a	46.6	20	25	n/a	n/a	0	0	0	0	n/a	n/a	0	0	0	0	n/a	n/a	0
Tonga	n/a	n/a	55.6	52	44.3	44	10.8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Vanuatu	n/a	1.4	1	9.1	n/a	16.4	35.9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Viet Nam	55	64.6	88.7	97.9	97.5*	76.9	76.6	2.6	4.6	8.2	5.6	3.3	9.4	0	6.9	5.5	5.6	3.3	8.1

1 Either plasmid-mediated or chromosomally-mediated penicillin resistance. n/a - data not available

Table 10: Population groups surveyed for HIV and types of HIV surveillance in selected countries, 1998

Population target	Routine screening	Sentinel surveillance	Ad hoc surveys
Sex workers	Singapore, Macao, Republic of Korea	Cambodia, China, Macao, Mongolia, Philippines, Viet Nam, Papua New Guinea	Australia, Japan, Malaysia, New Zealand, Lao PDR
STD clinic patients	Malaysia,	China; Hong Kong, China, Philippines; Singapore; Viet Nam; Papua New Guinea; Mongolia	Australia, Japan, New Zealand
IDU	Malaysia*	Viet Nam, China, Philippines	Australia; China; Hong Kong, China; Japan; Macao
MSM		Philippines	Australia (*), Japan, Malaysia, New Zealand
Pregnant women	Brunei Darussalam, Malaysia	Cambodia, China, Hong Kong, Mongolia, Singapore, Viet Nam, Papua New Guinea	Australia; Hong Kong, China; Lao PDR
Police and Defence Forces	Malaysia	Cambodia, China, Macao, Viet Nam	Australia, Lao PDR
Prisoners	Australia, Malaysia, Republic of Korea	Macao	Brunei Darussalam; Hong Kong, China; Lao PDR
Students		Lao PDR	Malaysia, Lao PDR
Blood donors	All countries		
TB patients	Macao, Malaysia, Singapore	Cambodia, Viet Nam	Hong Kong, China; Papua New Guinea
Drug rehabilitation programs	Australia, Malaysia		New Zealand
Hospitals/clinics			Papua New Guinea
HIV testing services	Philippines		
Seafarers			Republic of Korea
Truck drivers		China	
Foreign workers	Brunei Darussalam		

* Ongoing cohort studies as well.

Table 11: **Behavioural surveillance**

Population target	Ad hoc survey	Sentinel surveillance
Sex workers	Cambodia , China, Japan, Singapore, Viet Nam	Philippines (1997, 1998) Cambodia (1997, 1998)
STI clinic patients	Malaysia, Mongolia, Papua New Guinea	
IDU	China, Malaysia , Singapore, Viet Nam	Philippines (1997, 1998)
MSM		Philippines (1997, 1998)
Police and defence forces	Cambodia	Cambodia (1997, 1998)
Women 15-49	Papua New Guinea	
General population	Japan, Mongolia, New Zealand, Viet Nam	
Women factory workers		Cambodia (1997, 1998)
Motor taxi drivers		Cambodia (1997, 1998)

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