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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CONTENTS

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Status and Trends of STI, HIV and AIDS at the End of the Millennium
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1. Sexually transmitted diseases - epidemiology. 2. HIV infections - epidemiology.
3. Acquired immunodeficiency syndrome - epidemiology.
I. Western Pacific

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ABBREVIATIONS AND ACRONYMS

AIDS	acquired immuno deficiency syndrome
CDC	Centers for Disease Control and Prevention
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
RSW	registered 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)

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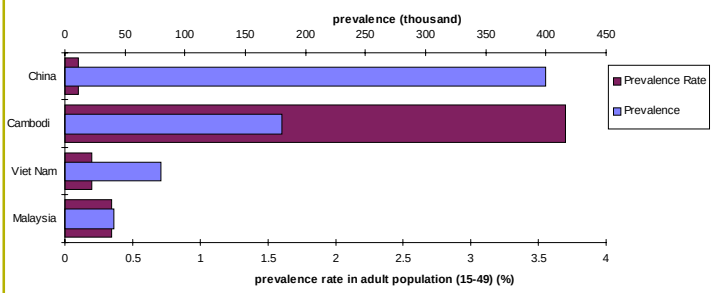
1 REGIONAL OVERVIEW

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 doubled.

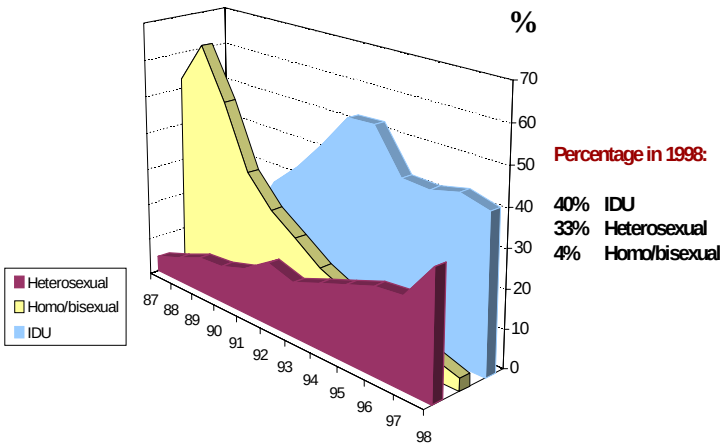
Figure 1: **HIV prevalence and prevalence rate in selected**



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.

gure 3: **Reported number of HIV/AIDS cases in Australia, 1985-1998**

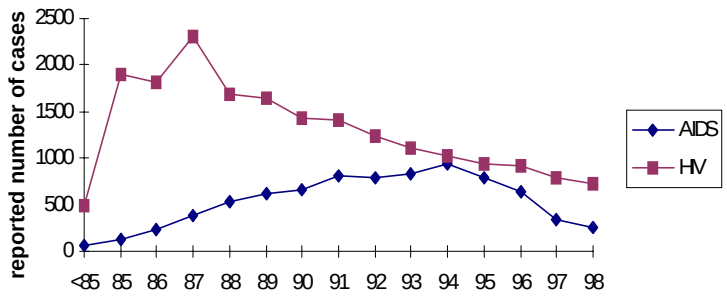
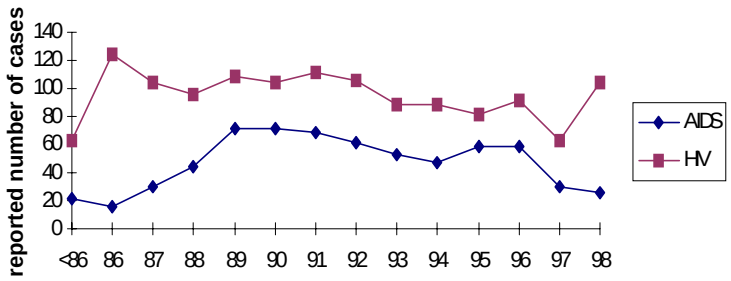


Figure 4: **Reported number of HIV/AIDS cases in New Zealand, 1986-**



- **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 Malaysia, Viet Nam and China**

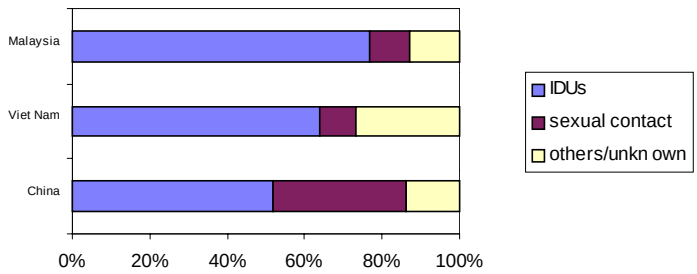
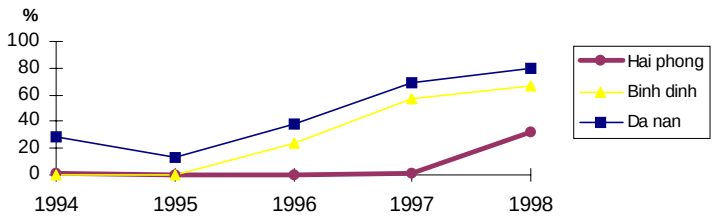


Figure 6: **Trends in HIV prevalence among IDUs in selected areas of Viet Nam, 1994-1998**



u **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.

Figure 7: **HIV sentinel surveillance, Phnom Penh, Cambodia, 1991-1998**

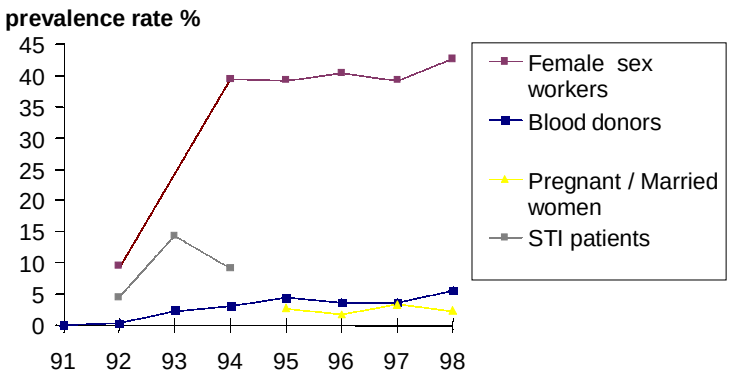
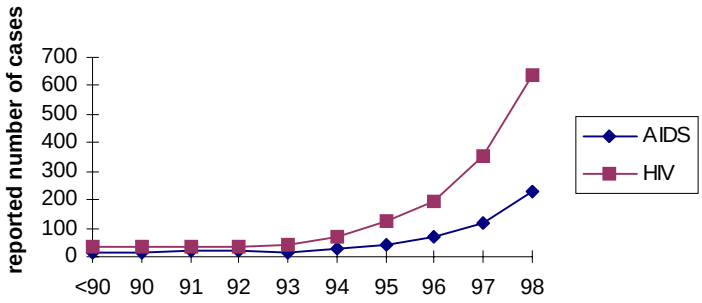


Figure 8: **Reported number of HIV/AIDS cases in Papua New Guinea, 1990-1998**



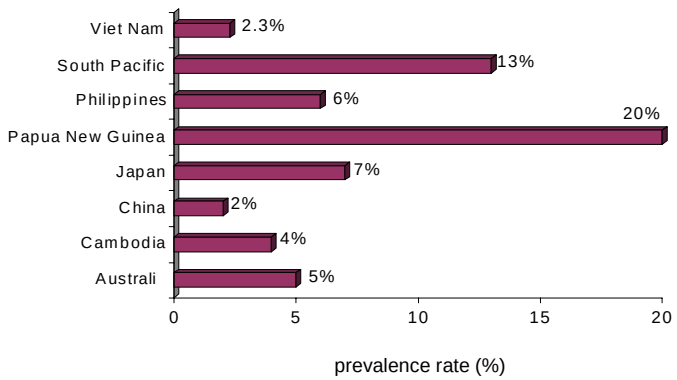
u **Countries with limited HIV transmission** (all other countries). There is so far little indication of rapid increases in infection rates due to sexual contact or injecting drug use.

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.

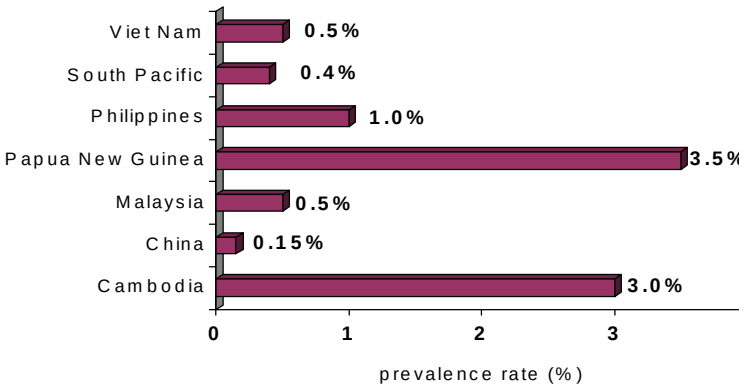
- Chlamydia infections appear to be the most prevalent STI in the Region. Prevalence rates in the general population are estimated to be as high as 20% in Papua New Guinea and 13% in Pacific Island countries (excluding Australia, New Zealand and Papua New Guinea). Estimated prevalence rates of between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

Figure 9: **Estimated chlamydia prevalence rate (%) in the adult population (over 15 years of age), 1990s**



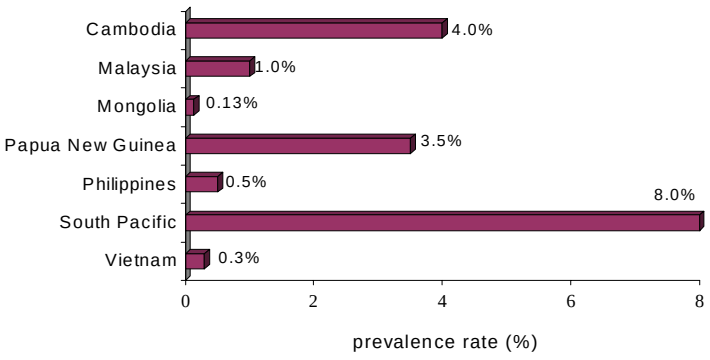
- The highest estimated prevalence rates for gonorrhoea (3% or greater) are found in Cambodia and Papua New Guinea. In other countries, estimated rates are below 1% (Figure 10).

Figure 10: **Estimated gonorrhoea prevalence rate (%) in the adult population (over 15 years of age), 1990s**



- 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%.

Figure 11: **Estimated syphilis prevalence rate (%) in the adult population (over 15 years of age), 1990s**

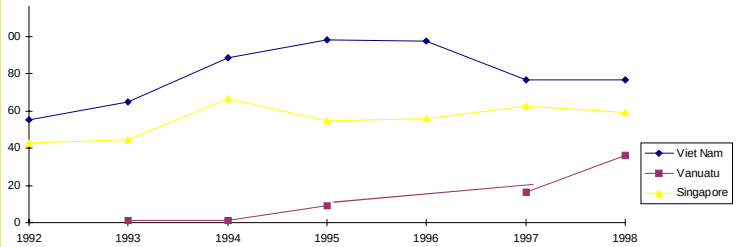


Gonococcal Susceptibility to Antimicrobials

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.

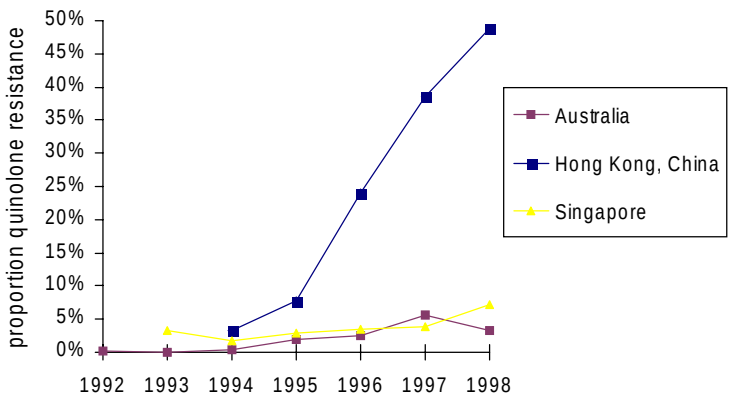
- Resistance to the penicillins is widespread. The highest rates of penicillin resistance are reported from the Republic of Korea (90%); the Philippines (82%); Viet Nam (76%); Mongolia (70%); Hong Kong, China (69%); China (62%); and Singapore (59%). These percentages represent the total of all forms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

Figure 12: ***N. gonorrhoeae*** **penicillin resistance in selected countries 1992-1998**



u 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**



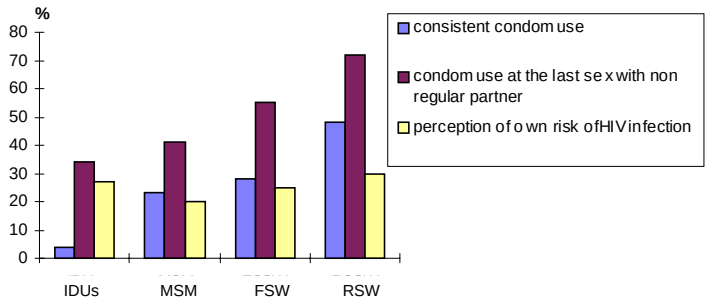
u Spectinomycin resistance is rarely encountered in the Region and occurs only in sporadic cases.

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).

Figure 14: **Behavioural survey among high risk groups in the Philippines, 1998**



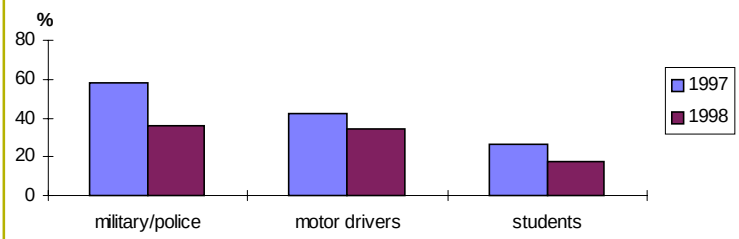
IDUs: injecting drug users; **MSM:** men who have sex with men

FSW: female sex workers; **RSW:** registered 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).

Figure 15: **'Always use' condom in commercial sex for selected population groups in Cambodia**

Figure 16: **Men's past month commercial sex use for selected population groups in Cambodia**



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.