HIV /AIDS in the South-East Asia Region

2009

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Regional Office for South-East Asia

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Acronyms

3TC	lamivudine
AIDS	acquired immunodeficiency syndrome
ANC	antenatal care
ART	antiretroviral therapy / treatment
ARV	antiretroviral
AusAID	Australian Agency for International Development
AZT	zidovudine
BED CEIA	HIV-1 subtypes B, E and D IgG-capture immunoassay
BSS	behavioural surveillance survey
CBO	community-based organizations
CIDA	Canadian International Development Agency
d4T	stavudine
DFID	UK Department for International Development
DPR Korea	Democratic People's Republic of Korea
EFV	efavirenz
FSW	female sex worker
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
HBV	hepatitis B virus
HCV	hepatitis C virus
HIV	human immunodeficiency virus
HSV-2	herpes simplex virus-2
IBBS	integrated biological and behavioural surveillance
IDA	International Development Assistance
IDU	injecting drug user
MSM	men who have sex with men
MSW	male sex worker
NACO	National AIDS Control Organization
NFHS	National Family Health Survey
NGO	nongovernmental organization
NVP	nevirapine
PLHIV	people living with HIV
PMTCT	prevention of mother-to-child transmission
SEAR	South-East Asia Region
SIDA	Swedish International Development Cooperation Agency
STD	sexually transmitted disease
STI	sexually transmitted infection
T&C	testing and counselling
TB	tuberculosis
TG	transgender
UNAIDS	the joint United Nations Program on HIV / AIDS
UNGASS	United Nations General Assembly Special Session on HIV / AIDS
UNODC	United Nations Office on Drugs and Crime
USAID	United States Agency for International Development
WHO	World Health Organization

Foreword

Since the first case of AIDS was reported from Thailand, a quarter of a century ago, the epidemic in the South-East Asia Region has grown massively. Today, HIV has been reported from 10 of 11 countries in the Region. Nearly 3.5 million people are currently living with HIV / AIDS in the Region, and the epidemic is still evolving.

HIV policies and programmes should be based on evidence and firmly rooted in the science of epidemiology. This annual report on "HIV / AIDS in the South-East Asia Region 2009", presents the current epidemiological situation as well as recent progress in universal access to HIV prevention, care and treatment, based on data reported by Member countries of the Region.

The report highlights that HIV continues to disproportionately affect marginalized populations. Transmission of HIV is fuelled by risky sexual and injecting practices and high rates of sexually transmitted infections. While remarkable progress has been made in assuring safe blood transfusion services, expanding testing and counselling facilities and to some extent in scaling-up antiretroviral treatment programmes, there are many shortfalls that need urgent attention.

Too few HIV-infected pregnant women are receiving antiretrovirals to prevent HIV transmission to their newborns. Control of sexually transmitted infections remains neglected. Tuberculosis continues to be the commonest life-threatening opportunistic infection associated with HIV. There is much scope for collaboration between HIV programmes and related health services, such as maternal and child services and tuberculosis control programmes. Public health systems will need bolstering to increase their implementation capacity for scaling-up interventions. A large amount of resources have been mobilized from the Global Fund to Fight AIDS, Tuberculosis and Malaria and other partners, yet the current domestic and international funds are insufficient to reach the scale of HIV services required to achieve the Millennium Development Goals by 2015.

HIV is likely to remain a major public health problem for years to come. As the fight against HIV and AIDS continues, renewed political and financial commitment is needed from national governments as well as partners. The World Health Organization, as always, is fully committed to support its Member States in their efforts to realize the vision of universal access to HIV prevention, care and treatment for their people.

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Director, Communicable Diseases
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Executive Summary

Twenty-five years after the first AIDS case was reported in the World Health Organization (WHO) South-East Asia Region, the HIV epidemic remains highly dynamic, posing tremendous challenges to the public health system.

Epidemic Situation in the South-East Asia Region

- An estimated 3.5 million people are living with HIV / AIDS in the Region. Women account for 33% of total people living with HIV. In 2008, 200 000 people were newly infected with HIV and 230 000 died of AIDS related illnesses.
- Five countries account for the majority of HIV infections — India, Indonesia, Myanmar, Nepal and Thailand. No case of HIV has been reported from DPR Korea. Bangladesh, Bhutan, Maldives, Sri Lanka and Timor-Leste together represent less than 1% of total HIV infections in the Region.
- The overall HIV prevalence in the Region is slowly decreasing. However, country-wise differences exist. In parts of India, Myanmar, Nepal, Sri Lanka and Thailand, HIV prevalence is decreasing or stabilizing although pockets of high transmission remain. HIV is rapidly increasing in Indonesia.
- The majority of the HIV infections are transmitted sexually. Injecting drug use is an important route of HIV transmission in several countries. In Thailand, a third of all new infections are among low-risk women from their HIV-infected regular male partners or husbands.
- Overall, HIV prevalence among the adult population is low (0.3%) in the Region, but sex workers and their clients, men who have sex with men and transgender populations as well as injecting drug users are disproportionately affected by HIV. In some areas (Thailand and south India), HIV prevalence has decreased among female sex workers; however, there is evidence of continuing high transmission among injecting drug users and increasing HIV infection among men who have sex with men in large cities.
- Prevalence of sexually transmitted infections is very high particularly among sex workers, men who have sex with men and transgender people.
- A substantial proportion of drug injectors share injection equipment and engage in unprotected sex with female sex workers.
- Consistent condom use with paying partners is reaching optimal levels among sex workers; however, men who have sex with men, transgender populations and injecting drug users have low rates of condom use.
- Men who have sex with men have multiple partners and a large proportion of them are married (to women).
- Approximately, 4.6% of new tuberculosis (TB) patients are co-infected with HIV. The South-East Asia Region accounts for 11% of the global burden of new HIV-positive TB cases.

National Response

- The national HIV strategic plans in most countries accord priority to targeting prevention, care and treatment interventions to high-risk populations; however, coverage of a comprehensive package of HIV interventions for sex workers, men who have sex with men, transgender persons and injecting drug users remains low in all countries.
- Nearly, 9.4 million units of blood were collected in 2007, against a total requirement of 16 million units. About 66% of blood was collected from voluntary non-renumerated donors. Based on country reports, donated blood is universally screened for HIV and other transfusion transmitted infections.
- A large number of facilities provide testing and counselling services resulting in approximately 10 million people being tested across the Region in 2008. Yet, access to testing and counselling services remains low. Overall, 30% of sex workers, 28% of injecting drug users and 23% of men who have sex with men had received an HIV test in the past year.
- A mere 13% of pregnant women have access to HIV testing and counselling. Of the estimated HIV-infected pregnant women, 28% received antiretroviral prophylaxis. Thailand is the only country to achieve a high coverage of prevention of mother-to-child transmission services; nearly all pregnant women receive an HIV test and 95% of infected pregnant women receive antiretroviral prophylaxis.
- There has been an eight-fold increase in treatment over the past five years. Currently, 443 000 (40%) people with advanced HIV infection are receiving antiretroviral treatment. Of those started on treatment, 65–82% are alive and on treatment a year after start of treatment.
- Countries with HIV/TB dual epidemics have made substantial progress in implementing collaborative activities; HIV testing and counselling for TB patients and screening of TB among people living with HIV is expanding. There is modest progress in providing antiretroviral treatment and co-trimoxazole to HIV/TB patients, but activities targeting the reduction of TB infection among HIV patients are limited.
- Surveillance systems are expanding to cover more areas and more population subgroups. Every country (except DPR Korea) has data on biological and/or behavioural indicators. Routine monitoring systems for HIV interventions, however remain weak. There has been little investment in HIV research.
- A large amount of funds have been mobilized from international partners, however, shortfalls still exist in every country for achieving targets for universal access to HIV prevention and treatment.

Key Challenges

- Continuing stigma, weak health systems, limited human resources capacity, high prices of drugs and unsustained finances are main barriers to HIV prevention and control efforts.

Future Priorities

- Rapid scale-up of interventions is required to increase access to prevention, care and treatment services.
- Greater attention is needed on prevention of new infections among populations with the highest rate of transmission — namely sex workers, people who inject drugs and men who have sex with men.
- An enabling environment is a prerequisite for increasing access to HIV services to marginalized populations.
- Investments in health systems and human resources is critical to increase the implementation capacity of the public health system.
- Further collaboration between health service programmes is needed to deliver services more efficiently. Moreover, effective linkages between prevention, care and treatment services are required for HIV programmes.

Role of WHO: Strengthening health sector response to the HIV epidemic

WHO closely works with and supports Member States through a team of public health professionals, focusing on five strategic directions.

1. Enabling people to know their HIV status
2. Maximizing the health sector's contribution to HIV prevention, including sexually transmitted infection control and prevention of mother-to-child transmission interventions
3. Accelerating the scale-up of HIV treatment and care
4. Strengthening and expanding health systems
5. Investing in strategic information to better inform the HIV response.

WHO sets norms and provides guidance on policies, strategies and programmes; builds capacity of national authorities and partners in programme planning, implementation, and monitoring and evaluation; facilitates sharing of information and experiences among countries; promotes research; strengthens collaboration among partners; and, advocates for and mobilizes increased national and international funding for realizing the vision of universal access to HIV prevention, care and treatment.

HIV Epidemiological Situation

The Global HIV Epidemic[1]

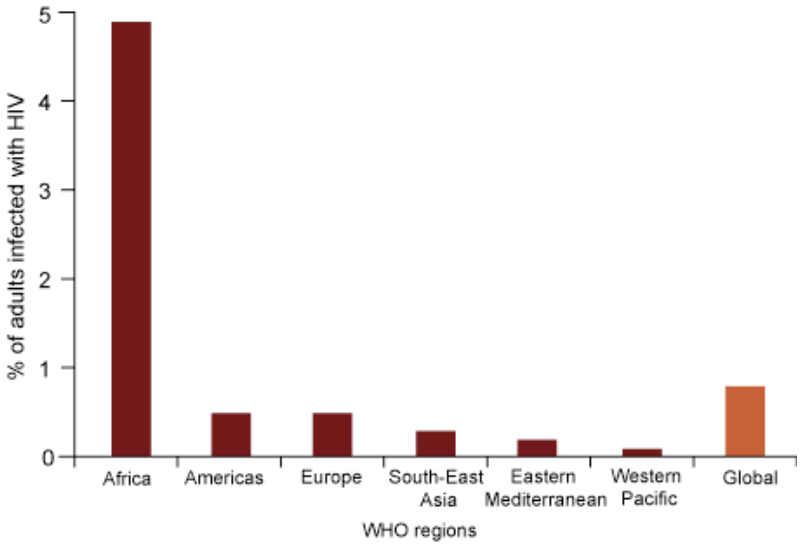
The global HIV epidemic continues to remain a serious public health problem. An estimated 33.4 million (31.1 million–35.8 million) people are currently living with HIV *(1)*. In 2008, an estimated 2.7 million (2.4 million–3.0 million) people were newly infected with HIV. The majority of new infections were in low- and middle-income countries. The global HIV prevalence has remained stable and the number of new HIV infections decreased by approximately 15% from 2001 to 2008. In 2008, an estimated 2 million (1.7 million–2.4 million) people died due to AIDS related illnesses.

Women account for 50% of people living with HIV, although this proportion varies from 27% in the Region of the Americas to 58% in the African Region. An estimated 2.1 million (1.2 million–2.9 million) children under 15 years are currently living with HIV. There were 430 000 (240 000–610 000) new infections and 280 000 (150 000–410 000) AIDS related deaths among children in 2008.

Globally, 0.8% of the adult population is infected with HIV, however, region-wise differentials exist (Figure 1). The epidemic appears to have stabilized in most WHO regions, except eastern Europe and central Asia where HIV prevalence remains on the rise. Sub-Saharan Africa continues to bear the brunt of the global epidemic accounting for two-thirds of all people living with HIV / AIDS and 70% of global AIDS deaths. The epicentre of the global HIV epidemic is in southern Africa, where nine countries have HIV prevalence above 10% and three countries (Swaziland, Botswana, Lesotho)

Figure 1: Estimated adult HIV prevalence, by WHO Region, 2008

Sub-saharan Africa bears the brunt of the HIV epidemic



Source: UNAIDS/WHO 2009. Report on the global AIDS epidemic.
Note: HIV prevalence is provided for adult population aged 15–49 years.

1 This section draws largely from UNAIDS and WHO. *AIDS Epidemic update*, Geneva, World Health Organization, 2009.

have an adult HIV prevalence above 20%. South Africa has the highest number of people living with HIV, worldwide. Heterosexual intercourse remains the primary mode of HIV transmission in sub-Saharan Africa, with extensive ongoing transmission to neonates and breastfed babies.

In eastern Europe and central Asia, Ukraine and the Russian Federation are experiencing severe and growing national epidemics. Ukraine has the highest infection levels reported in all of Europe with adult HIV prevalence higher than 1.6%. Injecting drug use is the primary route of transmission in eastern Europe and central Asia. As most injecting drug users are sexually active — often with non-injecting partners — a major injection-driven epidemic has inevitably fueled a growth in heterosexual acquisition of HIV in the Region.

The Asian epidemic is characterized by wide variations in epidemiological patterns, by geographical areas and subpopulations. Asia's epidemic has long been concentrated in high-risk populations — namely, injecting drug users, sex workers and their clients, and men who have sex with men. However, in many parts of Asia, HIV is steadily expanding into lower-risk populations through transmission to the sexual partners of those most at risk. In China, heterosexual contact has become the predominant mode of HIV transmission. In Thailand and India, women are increasingly being infected by their regular male partners who engage in high-risk behaviours. More details on the epidemic in the South-East Asia Region are provided in the following chapter.

In the middle-east and north Africa, HIV prevalence remains low. Exceptions to this are evident in Djibouti and southern Sudan, where HIV prevalence among pregnant women now exceeds 1%. In this Region, many people are contracting HIV while living abroad, often exposing their "low-risk" sexual partners to infection upon their return to their home country. Transmission within key populations, namely, injecting drug users, men who have sex with men and sex workers is also contributing to ongoing transmission to "low-risk" sexual partners.

The epidemic in Latin America remains stable. Men who have sex with men account for the largest share of infections in Latin America, with a notable burden of infection among injecting drug users, as well as sex workers and their clients. In north America and western and central Europe, national epidemics are concentrated among key vulnerable populations, especially men who have sex with men, injecting drug users and immigrants. Elevated levels of HIV transmission are noted among men who have sex with men in all WHO Regions.

HIV Epidemic in the South-East Asia Region

The WHO South-East Asia Region comprises 11 countries (Bangladesh, Bhutan, DPR Korea, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, Timor-Leste) and is home to a population of 1.76 billion. Tables A1–A3 in Annex 1 provide selected information on the demographic, socio-economic and health infrastructure profiles of each of the WHO South-East Asia Region Member countries.

Magnitude and Trends in HIV infection

The first HIV case was reported in the Region from Thailand in 1984. Twenty five years later, HIV continues to spread in this Region, and remains a serious public health problem.

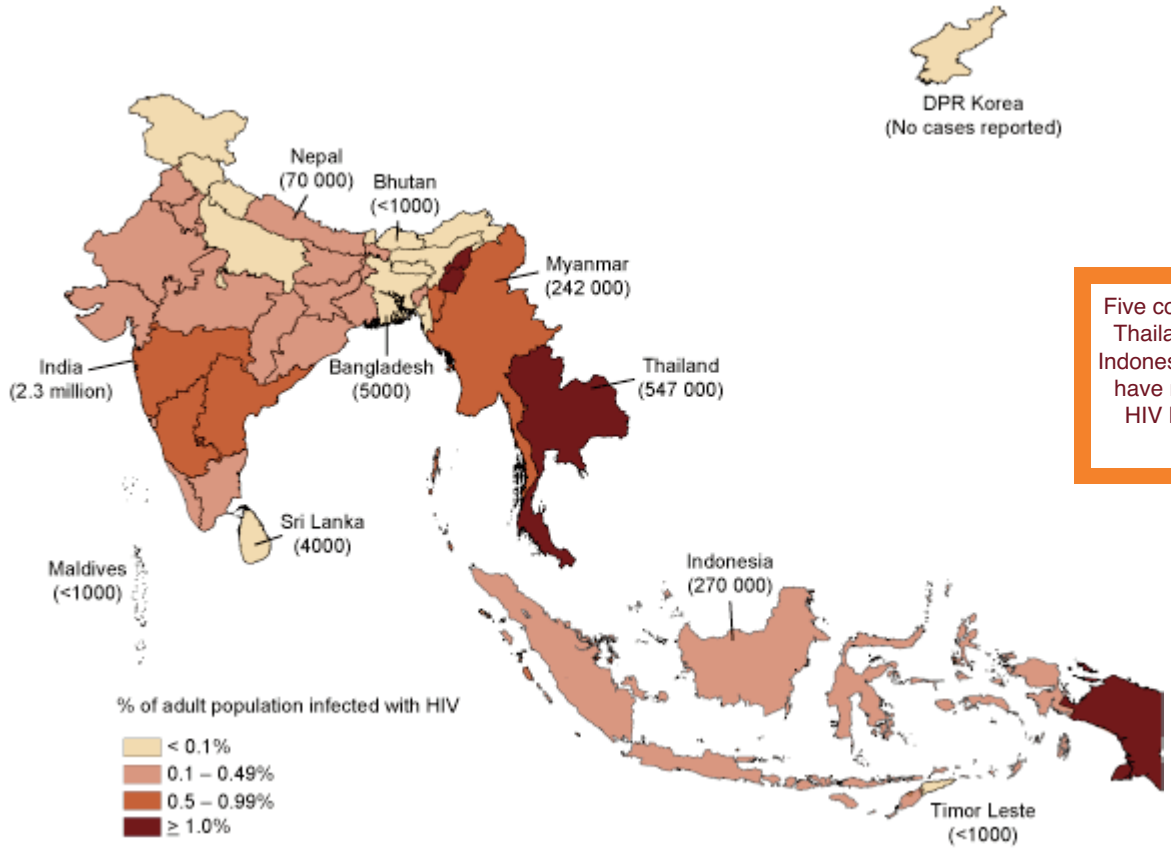
The overall adult HIV prevalence in south and south-east Asia (0.3%) is relatively much lower than that in sub-Saharan Africa (4.9%). However, due to the large population in the South-East Asia Region, even a low HIV prevalence means that a large number of people are infected. The Region has the third highest HIV burden in the world after sub-Saharan Africa and the Americas, accounting for 10% of all people living with HIV. Nearly 3.5 million (2.8 million–3.8 million) people are currently living with HIV in the South-East Asia Region. During 2008, an estimated 200 000 (160 000–240 000) people were newly infected with HIV and 230 000 (180 000–270 000) died due to AIDS related illnesses. Data on incidence and mortality for each country is currently unavailable.

The magnitude of HIV infection differs greatly between countries in the Region. Five countries account for majority of the burden — India, Indonesia, Myanmar, Nepal and Thailand. No case has been reported from DPR Korea. The remaining five countries, Bangladesh, Bhutan, Maldives, Sri Lanka and Timor-Leste, together represent less than 1% of the total HIV burden in the Region. The prevalence of HIV among the adult population ranges from below 0.1% in Maldives to 1.4% in Thailand (Figure 2). The estimated number of new infections dropped by 17%, from 240 000 in 2001 to 200 000 in 2008, indicating that the HIV epidemic is declining in the South-East Asia Region.

Overall, the estimated number of people living with HIV (both male and female) are decreasing in the Region (Figure 3). However, country-wise differentials exist (Figure 4). Among the high burden countries, Thailand, India and Myanmar, have declining epidemics; HIV prevalence has stabilized in Nepal; however, in Indonesia, the HIV epidemic is rapidly increasing.

Within countries, HIV prevalence is higher in urban than in rural areas. A large household survey of six states of India found that HIV prevalence was 40% higher in urban than rural areas (61% higher in urban than rural areas for women and 28% for men) *(2)*. Of the 96 new HIV cases reported in 2008 in Sri Lanka, 61% were from the capital city Colombo alone. Similarly, in Bangladesh, HIV is mostly prevalent in the capital city Dhaka and other commercial or port cities.

Figure 2: Estimated HIV burden in the South-East Asia Region, 2007



Note: Numbers in parentheses indicate estimated number of people living with HIV/AIDS.
Source: Reports of HIV estimates, national AIDS programmes.

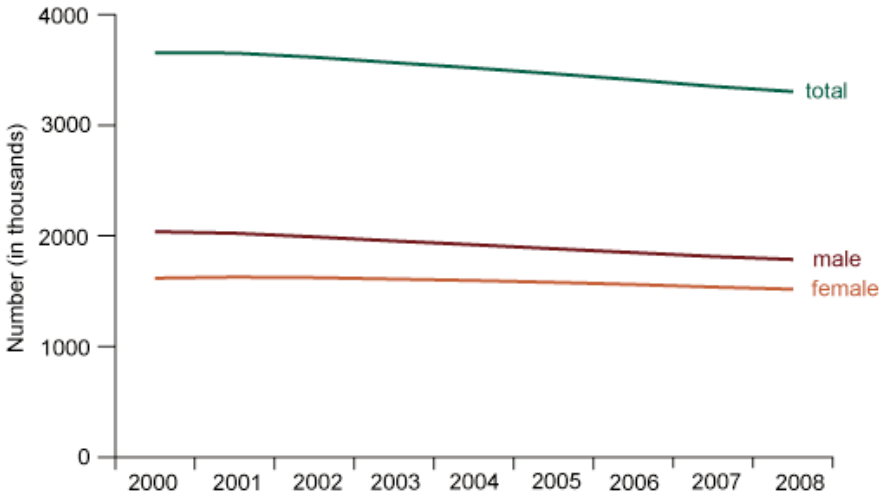
Five countries—India, Thailand, Myanmar, Indonesia and Nepal—have majority of the HIV burden in the Region

HIV Among Women

An estimated 1 000 000 (840 000–1 200 000) women (aged 15 years and above) are currently living with HIV in the South-East Asia Region. The proportion of women in the Region (33%) is lower than the global average (50%). In all countries in the Region except Bhutan, female to male ratio is less than 1; in Bhutan, 50% of the HIV infections are among women. Over time, the female to male ratio among reported HIV and AIDS cases has increased as males who engage in high-risk behaviours are increasingly infecting their female partners. In Thailand, the proportion of women among all reported AIDS cases has increased from 14% in 1990 to 39% in 2008; a third of all new infections in Thailand are now occurring among low-risk women from their husbands or regular partners. In Indonesia, 17% of new infections are among low-risk women from their infecting injecting and sexual high-risk male partners. Gender inequality, male dominance, stigma, low literacy and barriers to health care services are some of the key issues responsible for higher vulnerability of women to HIV.

Figure 3: Estimated number of people living with HIV, by sex, South-East Asia Region, 2000–2008

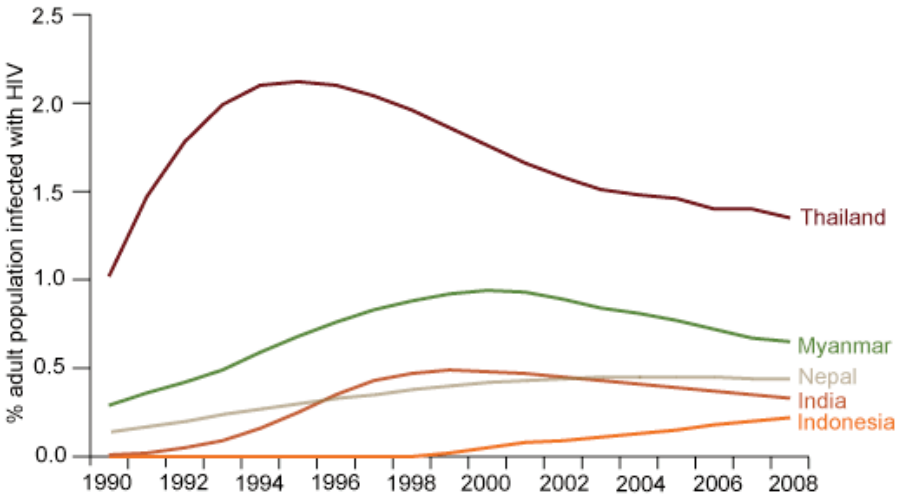
The overall HIV epidemic is showing a slow downward trend



Source: Estimates generated by Spectrum model using surveillance data reported by national AIDS programmes.

Figure 4: HIV prevalence in adult populations, South-East Asia Region,1990–2008

HIV prevalence has declined or stabilized in some countries; but is rapidly increasing in Indonesia



Source: HIV prevalence for each country was generated by Spectrum model using surveillance data reported by national AIDS programmes.

HIV Among Children

In 2008, an estimated 130 000 (70 000–190 000) children were living with HIV in the Region. An estimated 14 000 (6600–23 000) new infections occurred among children and 9200 (1300–1700) children died due to AIDS related illnesses in 2008.

HIV/TB Co-infection

Globally, there were an estimated 1.37 million incident HIV-positive TB cases in 2007; WHO South-East Asia Region accounts for 11% of this burden *(3)*. Five countries in the Region with the highest HIV burden also have a very high TB burden (Table 1). The incidence rate of HIV-positive TB cases was the highest in Thailand, followed by Myanmar, India, Indonesia and Nepal. India accounted for three-fourths of the new HIV-positive TB cases in the Region. The incidence of HIV-positive TB cases was below 1 per 100 000 population in Bangladesh, Maldives, Sri Lanka and Timor-Leste.

Overall, HIV prevalence among TB cases is 4.6%, but it varies from below 0.1% in Timor-Leste to 17% in Thailand. Regular HIV surveillance among TB patients has been conducted in TB patients in Myanmar since 2006. In 2008, across 10 sites where surveillance was carried out, HIV prevalence varied from 4.7% to 29% *(4)*. Over three years, no significant increase in HIV prevalence was noted. In a survey of 15 districts across eight states of India in 2006–2007 HIV prevalence varied widely from 1% in Koch Bihar in West Bengal to 14% in Guntur District in Andhra Pradesh *(5)*. HIV infection was 1.3 times more likely among male TB patients than among female patients. Relative to smear-positive TB, HIV infection was 1.4 times more likely among smear-negative patients and 1.3 times more likely among extrapulmonary patients. In four higher-prevalence districts, which had been previously surveyed in 2005–2006, no significant change in HIV prevalence was noted.

Table 1: HIV/TB Burden, South-East Asia Region, 2007

Country	HIV prevalence		Prevalence of all forms of TB		HIV prevalence among new TB cases	Incidence of HIV-positive TB cases	
	Estimated people living with HIV	Adults HIV-positive	Number	Rate per 100 000 population		Number	Rate per 100 000 population
Bangladesh	5 000	<0.1%	353 103	223	0	995	<1
Bhutan	<1 000	<0.1%	1 620	246	NA	28	4
DPR Korea	NA	–	81 944	344	–	–	-
India	2 310 000	0.34%	1 961 825	168	5.3%	103 068	9
Indonesia	270 000	0.17%	528 063	228	3%	15 996	7
Maldives	<1 000	<0.1%	143	47	0.8%	1	<1
Myanmar	242 000	0.67%	83 403	171	11%	9 114	19
Nepal	70 000	0.49%	48 766	173	2.4%	1 175	4
Sri Lanka	4000	<0.1%	11 676	60	0.1%	9	<1
Thailand	547 000	1.4%	90 878	141	17%	15 481	24
Timor-Leste	<1 000	<0.1%	3 718	322	<0.1%	0	<1
Total	**3 500 000**	**0.3%**	**3 165 000**	**181**	**4.6%**	**146 000**	**8**

Source: Country reports, national AIDS programmes; Source for TB data: Global TB Report 2009.
PLHIV = people living with HIV; TB = tuberculosis; NA = not available.
Note: total figures are rounded off.

Modes of Transmission

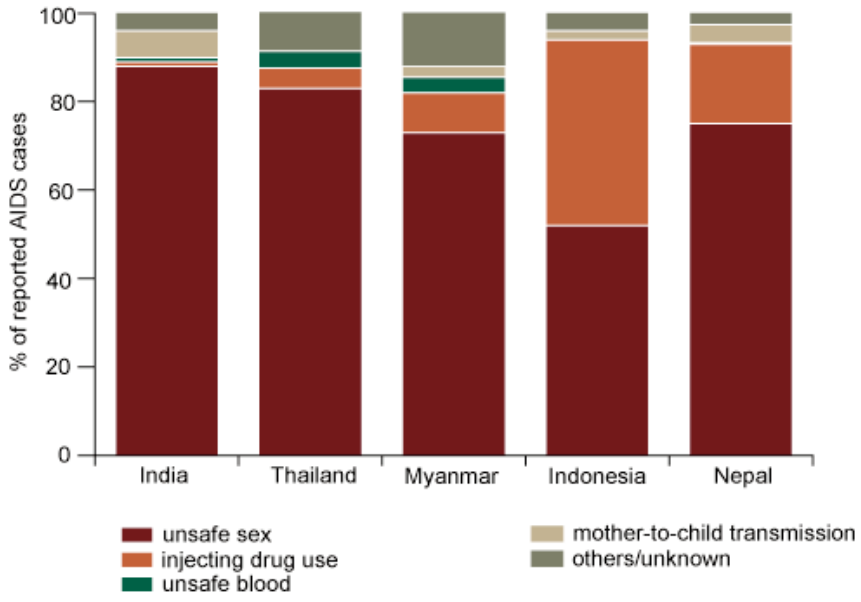
Unsafe sex and injecting drug use are the main drivers of the epidemic in the South-East Asia Region (Figure 5). Sexual transmission accounts for 87% of reported HIV / AIDS cases in India, 83% in Thailand, 75% in Nepal and 73% in Myanmar.

HIV epidemics in the Region are diverse and evolving over time. In the early phase of the epidemic in Thailand, injecting drug use and commercial sex work contributed to the largest proportion of new infections (Figure 6). With effective control of HIV among sex workers, the proportion of new HIV infections in female sex workers and clients has reduced; however, HIV has increased among men who have sex with men and accounted for 28% of all new infections in 2008 *(6)*. Moreover, HIV has spread from infected males to their female sexual partners; thus a third of new infections are among low-risk women in Thailand. In Indonesia, there are two diverse epidemics; *in Papua*, there is a heterosexual epidemic with HIV prevalence above 1% in the general population, and *in the rest of Indonesia*, the epidemic that began among injecting drug users has spread through the sexual networks of injecting drug users to sex workers and their clients. According to recent estimates, 40% of all new infections in Indonesia were among injecting drug users and 22% were among female sex workers *(7)*.

In Manipur in north-east India, what started primarily as an injecting drug use epidemic in the 1990s evolved into a mixed epidemic involving other high-risk populations and also spread to the general population. According to surveillance

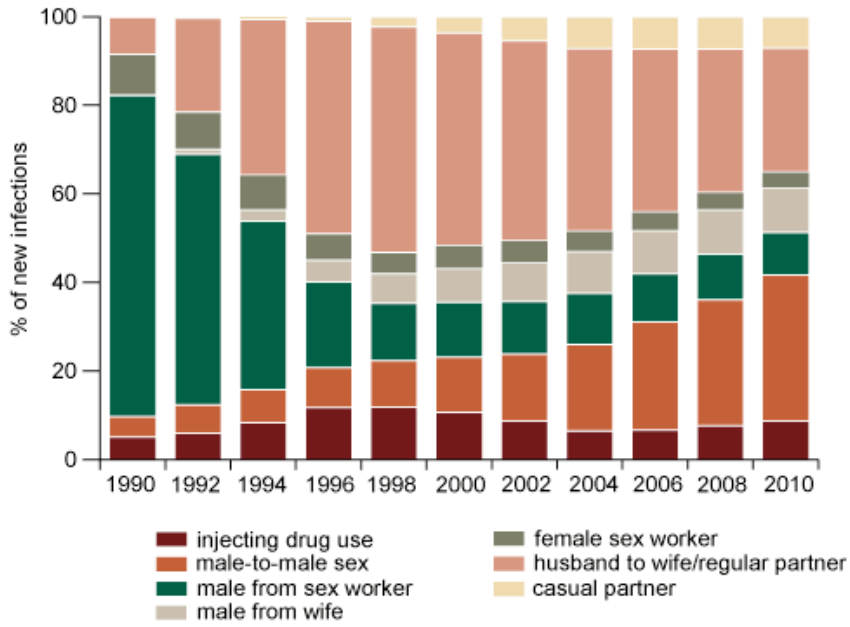
Figure 5: Distribution of reported HIV/AIDS cases by mode of transmission, South-East Asia Region, 2008

Unsafe sex and injecting drug use are the key drivers of the HIV epidemic



Source: HIV/AIDS case reports 2008, national AIDS programmes.

Figure 6: Estimated new HIV infections by mode of transmission,Thailand, 1990–2010



Increasing infections among MSM

Source: Asia Epidemic Model, HIV/AIDS projections; Ministry of Public Health, Thailand, 2008.
MSM = men who have sex with men.

conducted in 2007, while 18% of injecting drug users were still infected, 13% of female sex workers and 16% of men who have sex with men were also found to be HIV positive. Among antenatal clinic attendees, HIV prevalence was 1.3%. Thus, HIV has apparently spread from injecting drug users to their commercial and regular sexual partners and on to the general population.

Populations at High Risk of HIV Transmission

Also referred to as "at-risk groups", "most-at-risk populations" or "high-risk populations', members of this population are at increased risk of passing HIV on to others, or of contracting HIV from others. They are often important in establishing, accelerating or sustaining the HIV epidemic. In the South-East Asia Region, populations at increased risk include:

- sex workers
- clients of sex workers (including mobile populations)
- men who have sex with men and transgender persons
- injection drug users
- prisoners

Female Sex Workers

Sex work has been defined as the provision of sexual services in exchange of money, goods or other benefits. In the South-East Asia Region, sex work is usually classified

as "direct" (open, formal), or "indirect" (hidden, informal). Direct female sex workers have little or no source of income outside of sex work. Indirect sex workers are those who may have another source of income or do not engage in sex work full time. Sex workers are at a high risk for both acquiring HIV and sexually transmitted infections from their clients and for transmitting them to their clients and non-paying partners.

Population size

The number of female sex workers estimated by national AIDS programmes of each country are provided in Annex 1, Table A4. In Asia, the proportion of female sex workers among adult females (15–49 years) varies from 0.2% to 2.6% depending on the country *(8)*. There is much variation in the size of the female sex worker population within countries — for example, in Indonesia, the proportion of female sex workers varies from 0.04% in Sumatra Barat to 1.5% in Papua and 1.6% in Riau *(8)*. In India, the proportion of female sex workers is highest in the southern states of Manipur (1.45%), Nagaland (0.82%) in the north-east; Tamil Nadu (0.59%), Karnataka (0.53%), Andhra Pradesh (0.52%) in the south; and Maharashtra (0.66%) in the west *(9)*. The lowest proportion of female sex workers was found in Kerala (0.08%). In general, the proportion and number of female sex workers is higher in areas with a high demand for sexual services, such as big cities, other major urban areas, port cities, mining sites and border areas.

Risk behaviours

Data on risk behaviours is based on national behavioural surveys conducted during 2006–2009.

Duration of sex work: In the national behavioural surveillance survey, 50% of Thai female sex workers reported selling sex for two years or less *(10)*. In surveys in Mandalay and Yangon, female sex workers reported that they had been engaged in sex work for three and five years, respectively *(11)*. The surveyed female sex workers in Nepal had been working on an average for 40 months *(12)*. Assuming, that the survey population represents sex workers at the mid-point of their line of work, the turnover period for a sex worker varies from 4–10 years in the South-East Asia Region.

Number and type of partners: Female sex workers in Bangladesh reported the highest number of commercial sex partners with 36% reporting more than 20 clients in the past week *(13)*. The mean number of clients was the highest among hotel-based sex workers (19.1–63.8) followed by brothel-based sex workers (19.4) and street-based workers (8.1–15.0). In other countries, the mean number of partners over a week was low — 9.7 in India *(14)*, 5.8 in Nepal and 5–10 in Myanmar *(10–12)*. The mean number of paying clients on the last working day was 2–3.4 in Sri Lanka *(15)*, 2 in Thailand, 1.9 in Nepal and 1.7–2.9 in Myanmar. In addition to paying clients, a majority of sex workers have sex with non-commercial/regular partners. The proportion of female sex workers having non-paying clients in the past month varied across the Region,

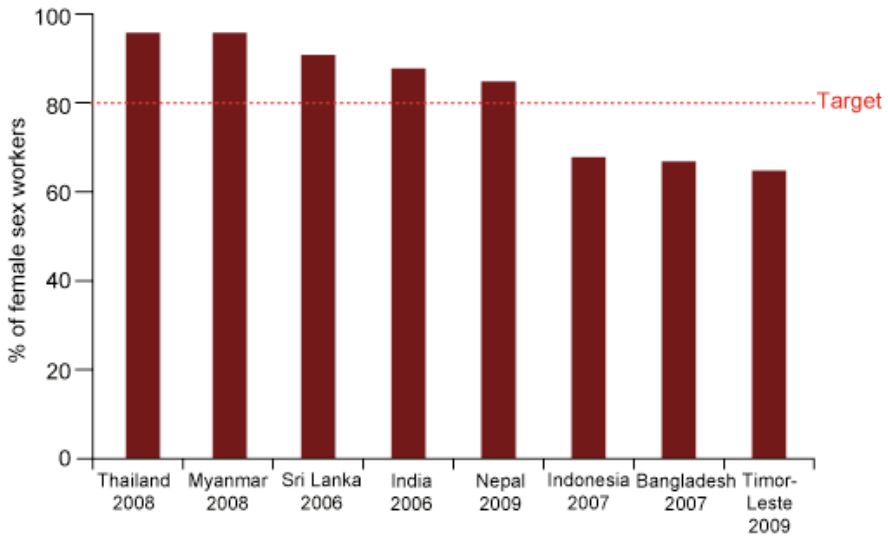
but was generally high: 30–62% in Bangladesh, 46–63% Myanmar, 49% Nepal and 49% Thailand *(10–13)*.

Drug use: Except in Malé, Maldives where nearly a third of female sex workers reported ever injecting drugs, the frequency of injecting drugs among female sex workers was low: below 5% in Bangladesh and Indonesia; below 1% in Myanmar and Sri Lanka. In Indonesia, a higher proportion of indirect sex workers used methamphetamine than direct sex workers (2–32% versus 0–4%) *(16)*.

Condom use: Eighty percent or more sex workers reported using condoms with paying partners at last sex in India, Myanmar, Nepal, Sri Lanka and Thailand (Figure 7). Consistent condom use over a one-to-twelve month period was however, lower. For example, in India, 88% of female sex workers reported using a condom at last sex, but 73% used it consistently in the past month *(14)*.

Moreover, in all countries, condom use with regular partners is substantially lower than with commercial partners. For example, 94% of Thai female sex workers used condoms consistently with commercial clients in the past month, whereas with regular partners (husband and live-in partner), less than half (41%) reported condom use *(10)*. Similarly, in India, condom use with paying and non-paying partners was 73% and 37%, respectively *(14)*. In Nepal, 70% of female sex workers used condoms all the time in the past year with clients; barely 9% used a condom with a non-paying partner *(12)*.

Figure 7: Percentage of sex workers reporting condom use with their most recent client, South-East Asia Region



Source: Reports of behavioural surveys, national AIDS programmes. Sample size was adequate as per national protocols.

Reported condom use by sex workers is high in most countries

In Bangladesh and Indonesia, rates of condom use have been increasing over the years, but still fall short of the desired 80% target. Condom use is very low in Timor-Leste and Maldives. In Timor-Leste, 16% of female sex workers reported using condoms consistently in the past year, while in Malé and Addu (Maldives), this proportion was less than 20% *(17,18)*.

Data on female condom use is available only from Bangladesh. Across seven cities, while 20–73% of surveyed sex workers could recognize a female condom, only 4–25% had ever used a female condom; half of those who used a female condom did not like it *(13)*.

Prevalence of sexually transmitted infections

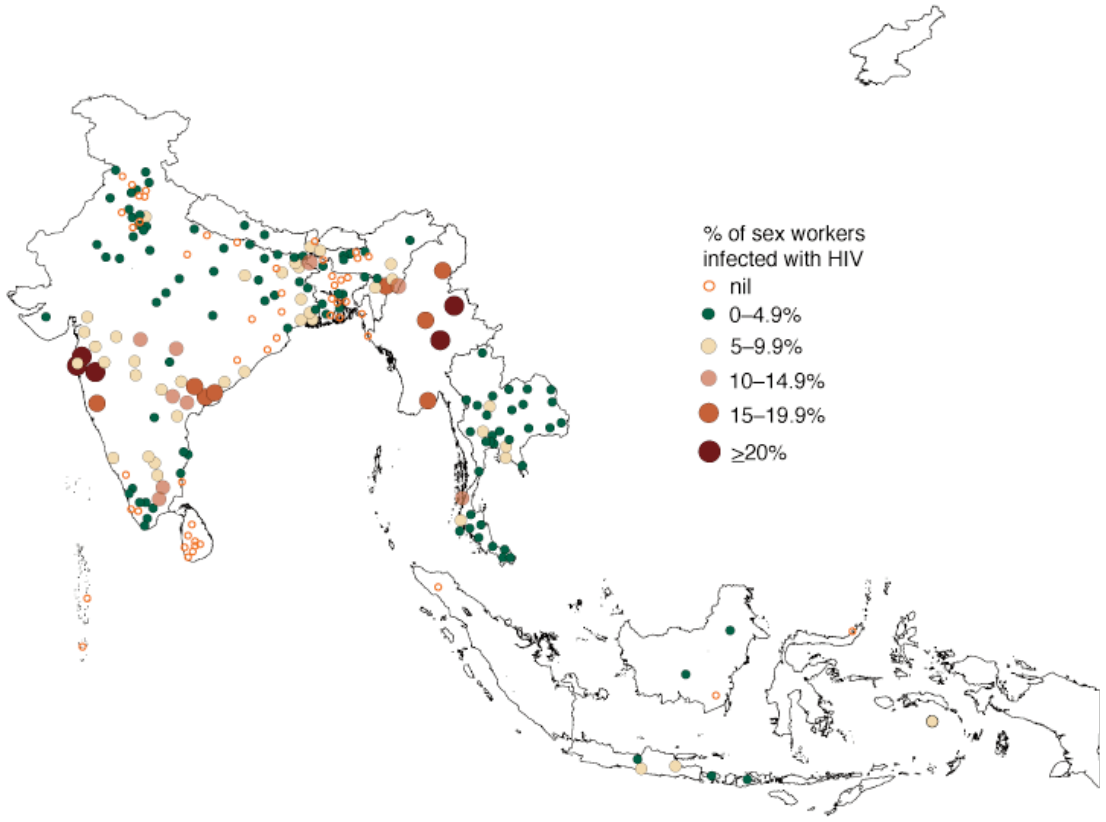
Due to the high turnover of partners, female sex workers have among the highest rates of sexually transmitted infections. In Indonesia, prevalence of one or more sexually transmitted infections (active syphilis or chlamydia or gonorrhea) ranged from 38% to 75% among direct sex workers in seven cities; among indirect sex workers, prevalence of one of the three sexually transmitted infections was lower (29–39%) *(19)*. The prevalence of sexually transmitted infections (syphilis or gonorrhea or chlamydia) among female sex workers in Indian districts ranged from a low of 7.6% in Prakasam District, Andhra Pradesh to a high of 50% in Pune District of Maharashtra *(20)*. Syphilis was the predominant bacterial sexually transmitted infection in most of the districts across five states (3.1–40%). Prevalence of *Neisseria gonorrhoeae* and *Chlamydia trachomatis* was generally on the lower side, 0–9.3% and 0.9–8.6%, respectively. The prevalence of herpes simplex virus-2 (HSV-2) antibody was very high and ranged from 35% in Chennai to 96% in Pune.

In Nepal, analyses of trends show slight reduction in sexually transmitted infection rates in Terai highway districts. Prevalence of gonorrhea decreased significantly from 13.5% to 1.2% and that of chlamydia from 10% to 8.3% during 2003–2009 *(12)*. In Bangladesh, prevalence of active syphilis has decreased consistently among brothel-based female sex workers at all sites but, not among street-based and hotel-based sex workers *(13)*.

HIV prevalence

Cross-sectional surveys and sentinel surveillance data show that HIV prevalence varies widely across the South-East Asia Region (Figure 8); at several sites more than 10% of female sex workers are infected. HIV prevalence was the highest in Myanmar where all five sentinel sites had HIV prevalence above 15% *(4)*. Wide variations in HIV prevalence exist within countries — for example, in India, out of 125 sentinel sites, 55 sites had HIV prevalence below 1%, while in 17 sites it was above 10%; Mumbai and Pune in Maharashtra in western India have sites with HIV prevalence above 30% *(20)*. In Bangladesh, Maldives, Nepal and Sri Lanka HIV prevalence is below 5% *(12,17,21,22)*.

Figure 8: HIV prevalence among female sex workers, South-East Asia Region, 2007–2009



Source: Sentinel surveillance data reported by national AIDS programmes. Sample size for each site was adequate as per national protocols. The latest available surveillance data is used from each country: Bangladesh, India, Indonesia, Sri Lanka-2007; Maldives, Myanmar, Thailand-2008; Nepal-2009

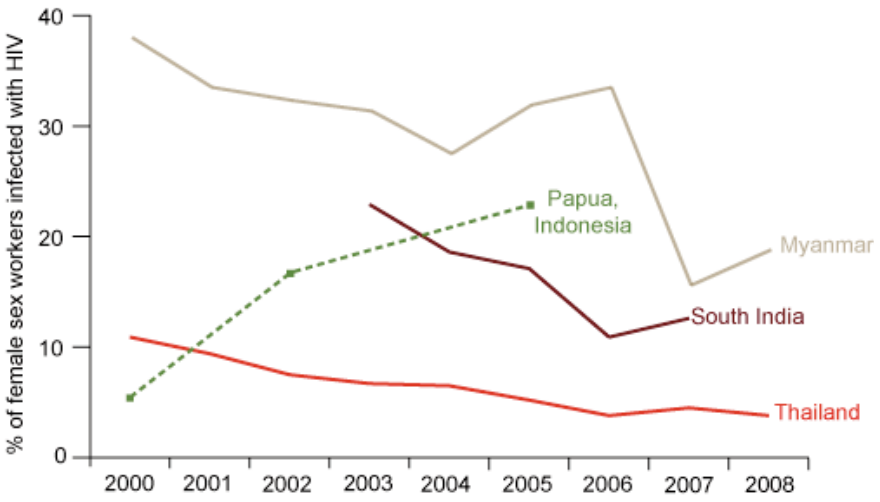
In general, HIV prevalence was higher among direct sex workers than among indirect sex workers. For example, HIV prevalence varied from 6% to 16% in direct sex workers in Indonesia, whereas in indirect sex workers it ranged from 1.6% to 9% *(16)*.

Sex trafficked women and girls from Nepal to India are particularly vulnerable and tend to have higher HIV prevalence. A survey of sex-trafficked women and girls in Nepal found that 46% (22 of 48) were infected with HIV *(23)*.

Analyses of trends show that HIV prevalence among female sex workers is increasing in Papua, Indonesia. In other areas, however, HIV prevalence among sex workers has been generally on the decline *(24)*. In south India, HIV prevalence at consistent sentinel sites has decreased from 23% in 2003 to 13% in 2007, a 45% reduction (Figure 9). In Thailand, HIV prevalence among female sex workers has declined dramatically over the years (Figure 10). In 1998, 30 out of 46 surveillance sites had HIV prevalence above 10%, whereas in 2008, only one out of 40 sites had HIV prevalence above 10% *(25)*. In Nepal, HIV prevalence has remained low (<5%) from 2003 to 2009. This was accompanied by an increase in consistent condom use with clients in the past year, from 23% in 2003 to 70% in 2009 *(12)*.

HIV prevalence among sex workers is decreasing in some areas

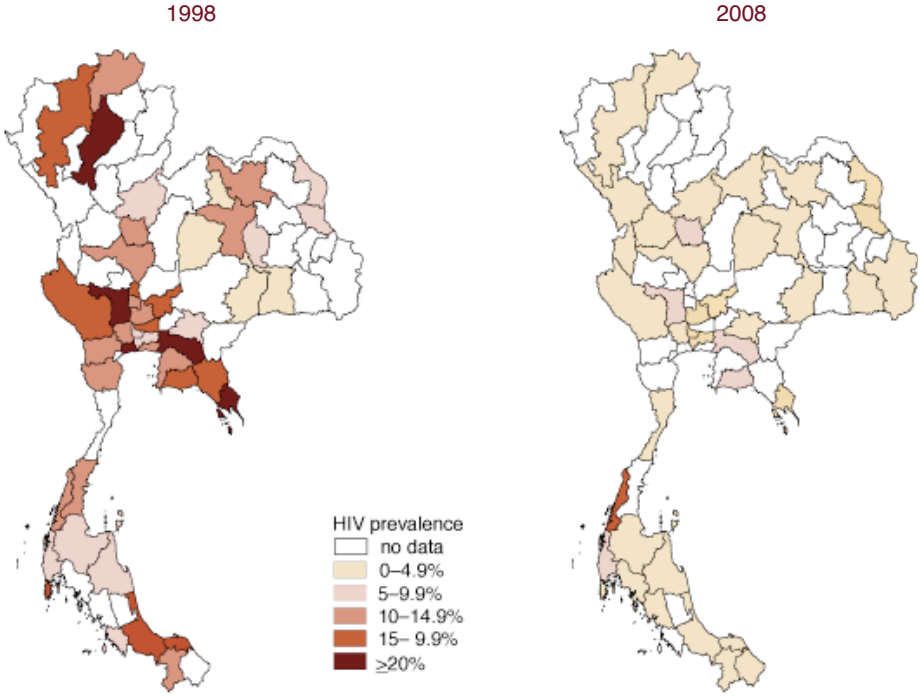
Figure 9: Trends in HIV prevalence among female sex workers, South-East Asia Region, 2000–2008



Source: Sentinel surveillance data from consistent sites reported by national AIDS programmes. Sample size for each site was adequate as per national protocols.

Dramatic decline in HIV infection among sex workers in Thailand

Figure 10: Comparison of HIV prevalence among female sex workers, by district, Thailand (1998 vs 2008)



Source: Sentinel surveillance data reported by Ministry of Public Health, Thailand.

HIV incidence

In 17 southern districts of India which have sex work driven epidemics, HIV incidence among female sex workers ranged from 0.43% in Pune to 5.1% in female sex workers in Kolhapur in Maharashtra (using Calypte HIV 1 BED Incidence EIA, Calypte Biomedical Corporation, Md, USA) *(19)*. The high HIV incidence among female sex workers in Maharashtra is consistent with high HIV prevalence in several surveillance sites in the state.

Clients of Sex Workers (including mobile populations)

Clients of female sex workers constitute the largest "high-risk" population subgroup, driving the Asian epidemics and serve as "bridges" to the general population. For example, a client of an HIV-infected sex worker may acquire HIV infection. He may then have unprotected sex with his wife, infecting her in turn. In this scenario, he has acted as a "bridge", from which HIV infection has passed from the sex worker to his wife.

Population size

The median percentage of men who exchange money for sex in Asia is 5–7% *(26)*. However, this proportion varies across countries. In India, a nationally representative community-based behavioural surveillance survey in 2006 found that the percentage of sexually active men who have sex with a sex worker in the past month was 3.4% (95% CI=2.6–4.2) *(27)*. This percentage was higher in urban areas (4.6%, 95% CI=3.1–6.1) than in rural areas (2.8%, 95% CI=1.8–3.8) and varied widely from 0.8% in Himachal Pradesh to 19% in Andhra Pradesh. According to a population based survey in four locations in Myanmar in 2008, 11% of sexually active men aged 15–49 years reported having sex with a sex worker in the past year (range: 7.4–15%) *(28)*. In a 2008 behaviour survey in Thailand, 11% of general population males, 16% of male factory workers and 23% of male military recruits reported having sex with a sex worker in the past year *(10)*. Applying these rates to the large country populations, translates into very large numbers of clients in the South-East Asia Region. While most national programmes acknowledge a large number of migrant populations, reliable and nationally representative data on the size of migrant populations is almost non-existent.

In Thailand, there is evidence that the proportion of men visiting sex workers has decreased over time. Analyses of trends of annual behavioural surveillance surveys data show that the proportion of male factory workers has decreased from 31% in 1995 to 16% in 2008 *(10)*. Similarly, among male military recruits, this proportion has decreased from 49% in 1995 to 23% in 2008.

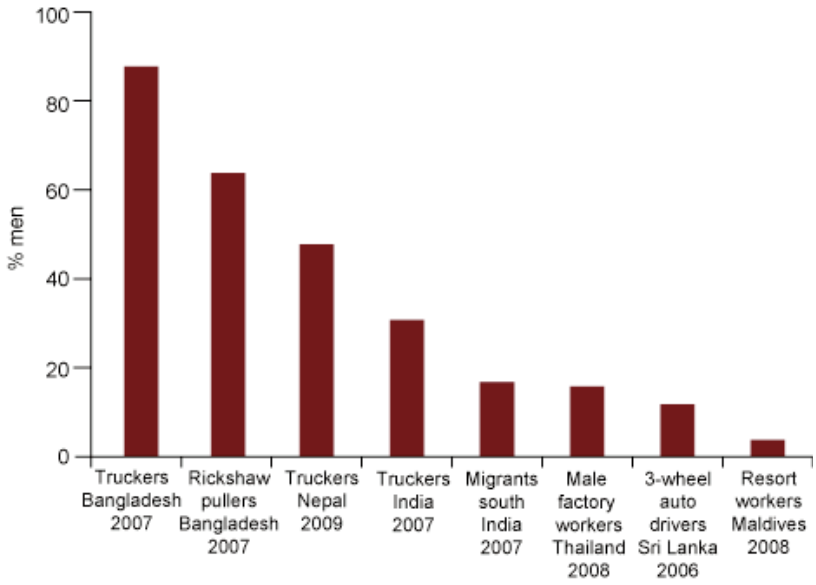
Risk behaviours

Number and type of sexual partners: Clients of sex workers have a mix of sex partners — paid, non-paid, casual men and women. According to national behavioural surveillance surveys, a large majority of clients are married: 55–87% in Indonesia, 41–78% in India and 64% in Nepal *(12,27,29)*. The proportion of men who bought sex from female sex workers in the past year was the highest in Bangladesh — 88% in truckers, 64% of rickshaw pullers (Figure 11) *(13)*. In Sri Lanka, 1.1% of male factory workers and 12% of three-wheel auto drivers reported having sex with a female sex worker in the past 12 months *(15)*. Among Indian long distance truckers, 31% had paid partners in the past 12 months; also, over a fifth (21%) had non-paid female partners and 2.1% had sex with males or hijras (transgender persons) *(30)*. In Indonesia, 11–60% "high-risk men" (truckers, taxi drivers, dock workers and seafarers), had sex with female sex workers and 6–30% had casual sex partners in the past three months; 55–87% of these men were married. In a large survey of 3426 migrants (conducted in 2004) in southern coastal and northern areas of Thailand, 25% reported visiting a sex worker, 57% had regular partners and 6% had other non-regular partners in the past year *(31)*.

Drug use: The proportion of clients who injected drugs in the past year was below 1% in Indonesian cities and in most other countries. However, in Dhaka, Bangladesh a significant proportion of rickshaw pullers (7.2%) and truckers (2.5%) reported injecting drugs in the past year *(13)*.

Many South-East Asian men buy sex

Figure 11: Percentage of males having paid sex in the past year, South-East Asia Region



Source: Reports of behavioural surveys, national AIDS programmes.
Sample size was adequate as per national protocols.

Condom use: Rates of condom use among clients is consistent with rates of condom use reported by female sex workers, in each country. Condom use among clients is particularly low in Bangladesh and Indonesia; less than 20% rickshaw pullers and truckers consistently used condoms in the past year. In Indonesia, 7–45% of "high-risk men", used a condom with a sex worker in the past three months *(29)*.

Condom use varies by type of partner and is generally higher with a commercial partner. In India, while 70% truckers consistently used condoms with paid partners in the past year, only 19% used it with non-paid partners and 30% with male/transgender partners *(30)*. Similarly, in Thai migrants, 79% reported always using a condom in the past year with female sex workers, 51% with non-regular partners but only 0.5% with regular partners *(31)*. Consistent condom use among Nepali truckers in the past 12 months was 81% with female sex workers, 3.6% with wife, 46% with girl friend and 74% with other female friend. Among Nepali migrants from the far-west region, condom use was higher during sex with female sex workers in India (71%) than during sex with female sex workers in Nepal (50%) *(32)*.

Prevalence of sexually transmitted infections

Syphilis was also the predominant sexually transmitted infection among clients in all countries from which data were available. In Indonesia, syphilis rates among "high-risk men" ranged from 1.6% to 12% across six locations, the highest sexually transmitted infection rates were in Batam *(29)*. Among Bangladeshi rickshaw pullers, dock workers and truckers, prevalence of syphilis has been consistently below 2% in the past five years *(21)*. In resort workers in Maldives, syphilis prevalence was 1.2% *(17)*.

Prevalence of sexually transmitted infections (syphilis or gonorrhea or chlamydia) among clients of female sex workers in Indian districts ranged from a low of 3.5% to 11% across 11 sites; prevalence rates of *N. gonorrhoeae* and *C. trachomatis* were lower — 0–1.6% and 0–3.6%, respectively. The prevalence of herpes HSV-2 antibody among clients in the same survey was very high ranging from 10% to 78% *(19)*.

HIV prevalence

There is limited surveillance among clients of female sex workers. Sentinel surveillance data among migrants in Thailand showed HIV prevalence to be consistently below 5% in the past five years *(25)*. Among migrants and truckers in India, median HIV prevalence was 2.7% and 2.4%, respectively *(20)*. In Bangladesh, HIV prevalence was consistently nil among rickshaw pullers, truck drivers and other bridge populations, for the past three years. In some countries where male sexually transmitted infection clinic attendees are used as a proxy for clients of female sex workers, HIV prevalence varied widely: India 0–39% (mean 3.6); Thailand 0–25% (mean 4.0); Myanmar 0–22% (mean 5.4) *(4,20,25)*.

Data on HIV prevalence among clients is available from a few community based surveys. HIV prevalence among clients of female sex workers in India recruited from soliciting sites varied from 2% to 11% (median 6.4%) *(19)*. A large survey, again in India, among long distance truckers (n=2066) along national highway routes found the overall HIV prevalence to be 4.6%; the highest prevalence was along the south-east route (6.8%) *(30)*. In "high-risk men" in Indonesia, HIV prevalence was low, ranging from 0% to 1.8% *(29)*. Among Nepali truckers along highway districts, HIV prevalence dropped from 1.8% in 2006 to nil in 2009. In Maldives 0.2% of the 484 resort workers were found to be infected with HIV *(17)*.

Men Who Have Sex With Men and Transgender Populations

The term "men who have sex with men" describes a type of behaviour, as opposed to a specific group of people. Men who have sex with men include self-identified gay and bisexual men, as well as men who engage in male–male sex but who identify as heterosexual. Men who have sex with both men and women may represent an important "bridge" group between a subpopulation at high risk for HIV infection and a larger population at lower risk for infection. "Transgender" is an umbrella term used to describe a wide range of identities, including transsexuals, male and female cross-dressers or transvestites — also referred to as *waria* in Indonesia and *hijra* in India and Bangladesh. Many transgender persons, because of their marginalization from mainstream society, have few options for employment and operate as sex workers. In general, the risk of HIV transmission in anal sex between men is greater than the risk of transmission in vaginal sex between men and women putting men who have sex with men and transgender persons at higher risk of HIV.

Population size

Available literature indicates that the prevalence of male-to-male sex in the past year was 4% in south-east Asia *(33)*. Estimates of the population size of men who have sex with men provided by national AIDS programmes are given in Annex 1, Table A4. Countries have used a variety of methods to estimate the population size of men who have sex with men. Some countries, such as Bangladesh, Maldives, Nepal, Timor-Leste, have used mapping studies. India used the Delphi technique. In Myanmar, the proportion of males self reporting male-to-male sex behaviour in a behaviour survey was applied to the total adult male population to derive the size of men who have sex with men population. Population-based surveys in 24 provinces in Thailand, estimated the population of men who have sex with men to be 3% of the adult male population (15–49 years) *(6)*. Reliable information on the number of men who have sex with men in Bhutan and Sri Lanka is not available.

Risk behaviours

Number of sexual partners: A proportion of men who have sex with men have multiple sex partners, both male and female; and a significant proportion also buy and sell sex. The number of partners vary across countries. In Indonesia, in a community based survey across six cities, 75% of men who have sex with men had a casual male partner in the past month, with a mean of 2.8 partners, 35% sold sex to a male client in the past month with a mean of 6.6 clients, while 13% reported buying sex from another male *(34)*. In surveys across ten locations in India, the mean number of commercial male partners in the past month ranged from 3.1 in Delhi to 25.2 in Bangaluru and the number of non-commercial partners ranged from 1.7 in Delhi to 13.9 in Bangaluru *(35)*. In Nepal, the mean number of commercial partners (0.9) was much lower than non-commercial partners (5.5) *(36)*. The median number of clients reported by transgender persons in the past week varied widely from 27 in Bangladesh to 1–4 in Indonesia.

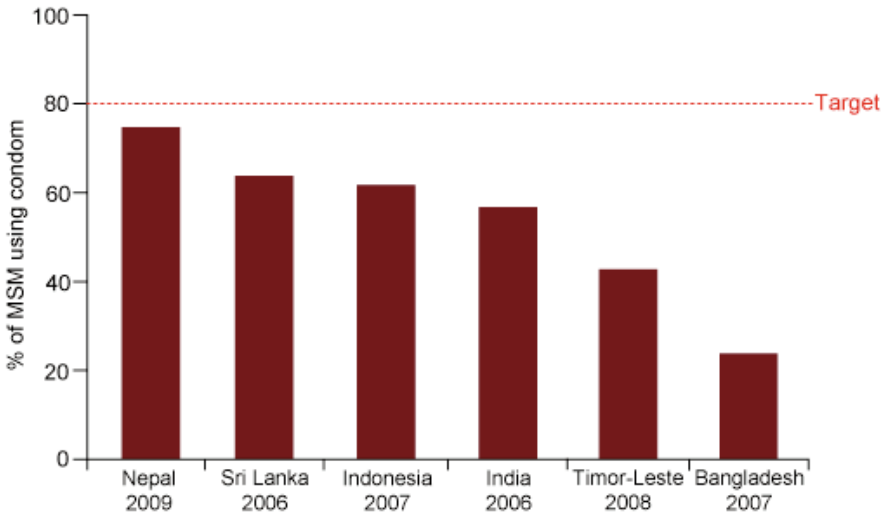
A significant proportion of men who have sex with men are married (to women) in the South-East Asia Region — 10% in Kolkata to 50% in Delhi (in India); 23% in Kathmandu; 15% in Indonesia. Regardless of the marital status, a large proportion of men who have sex with men in all countries reported sex with female partners. Over a 12-month period, the proportion of men who have sex with men reporting vaginal or anal sex with a female partner was: Bangladesh 58%, Sri Lanka 23% and Timor-Leste 94% *(13,15,37)*. In India, 13–70% men who have sex with men reported having sex with a female partner in the past six months *(35)*.

Alcohol and drug use: Alcohol and injecting drug use have been reported by men who have sex with men, male sex workers and transgender persons in many countries of the Region. In most of the countries (except Bangladesh, some locations in India and Maldives), the proportion of men who have sex with men reporting injecting drug use in the past year was small, usually below 5%. Data from India, Indonesia and Nepal indicate that a sizeable proportion of men who have sex with men report use of non-injectable drugs, such as marijuana. For example, in Indonesia, 31% of men who have sex with men in Jakarta and 25% in Batam reported using drugs such as ecstasy, methamphetamines and ice in the past three months *(34)*. Recent use of methamphetamine was associated with higher HIV infection in Indonesia *(34)*.

Condom use: In general, condom use in male-to-male sex is low with all partners in all countries of the Region. Bangladesh, Maldives and Timor-Leste have the lowest condom use rates in male-to-male sex (Figure 12). Condom use varies with the type of male partner and is generally higher with commercial and non-regular partners than with non-commercial and regular partners. In Kathmandu, Nepal 77% and 65% of men who had sex with men used condoms consistently in the past month with their paying and non-paying male partners respectively *(36)*. In Sri Lanka, consistent condom use in the past 12 months was 47% and 26% with non-regular and regular partners, respectively *(15)*.

Figure 12: Percentage of men who have sex with men using condoms during last anal sex, South-East Asia Region

Condom use in MSM is below the target in all countries



Source: Reports of behavioural surveys, national AIDS programmes. Sample size was adequate as per national protocols.

Condom use with female partners is very low and inconsistent with both regular and commercial female partners. The men who have sex with men population in Maldives hardly used condoms consistently with their female partners (2% in Addu; 18% in Malé) *(17)*. In Timor-Leste, condom use with female partners was very low with both regular (9.1%) and casual partners (20%) in the past 12 months *(37)*. In Indian metropolitan cities, consistent condom use with a female partner in the past six months varied from 9% in Chennai to 33% in Mumbai *(34)*. In Indonesia, the proportion of men who have sex with men that always use condoms with female casual partners and female sex workers in the past month was 12% and 15%, respectively. Similarly in Thailand, only 44% of bisexual men who have sex with men consistently used condoms in the past three months with their female partners *(38)*. Thus, female partners of men who have sex with men in the Region are at risk for sexually transmitted infections and HIV due to inconsistent condom use by men who have sex with men with their male and other female partners.

Among transgender sex workers, condom use is extremely low; 15–50% of waria in Indonesia reported always using condoms at last sex with clients and only 12% used both condoms and lubricants *(34)*. In Dhaka, Bangladesh the proportion of hijras reporting consistent condom use with clients in the past week decreased from 6.3% in 2002 to 1.4% in 2007 *(13)*.

Prevalence of sexually transmitted infections

Available data indicate high prevalence of bacterial and viral sexually transmitted infections among men who have sex with men and transgender persons, which presents

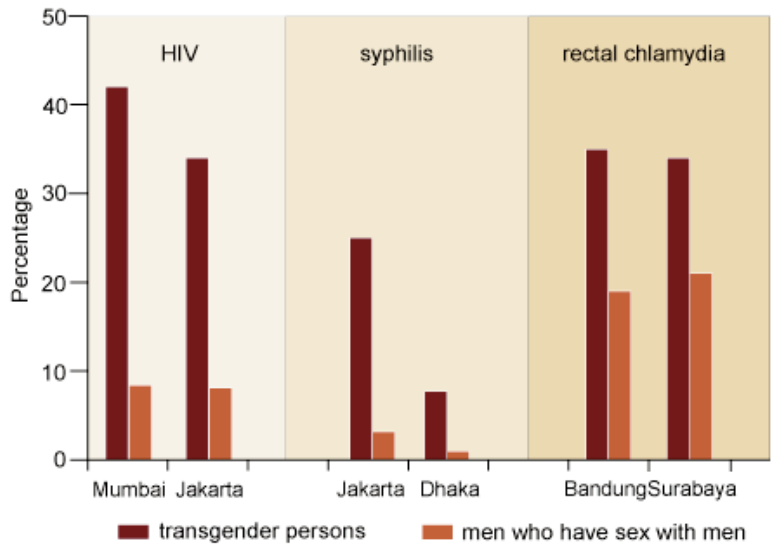
a significant risk for HIV transmission. Sexually transmitted infection rates are higher among transgender populations than men who have sex with men (Figure 13).

In the Region a very high prevalence of HSV–2 among men who have sex with men has been noted: 15–78% in India and 29% in Dili, Timor-Leste *(39,40)*. High HSV-2 prevalence has also been observed among HIV-positive men who have sex with men (40% in Bangkok) *(41)*. Hepatitis B virus prevalence is also high: 73% among HIV-positive men who have sex with men in Bangkok and 6% among men who have sex with men in Addu, Maldives *(17,41)*.

Syphilis prevalence among men who have sex with men ranges from 3.5% to 18% in India, 3.2% to 5.6% in Indonesia and 14% in Myanmar *(11,19,34)*. Syphilis prevalence data for the transgender population, where available, are even higher: 8% in Bangladesh, 17% in India and 25–29% in Indonesia *(19,21,42)*.

C. trachomatis and *N. gonorrhoeae* infections are high among men who have sex with men and transgender populations. In Indonesia, prevalence of rectal chlamydia among transgender persons (23–35%) is relatively higher than that among men who have sex with men (19–22%) *(34,42)*. Among men who have sex with men, the prevalence of rectal chlamydia was 5% in Nepal, and that of urethral chlamydia was 0.3–4.4% in India. While high prevalence of rectal gonorrhea is noted among men who have sex with men in Nepal (13%), a relatively low prevalence (0–0.9%) has been observed in India *(19,36)*; no data are available from other countries in the Region.

Figure 13: Prevalence of HIV and sexually transmitted infections among men who have sex with men and transgender population, South-East Asia Region, 2007



Transgender persons have higher rates of HIV and STIs than MSM

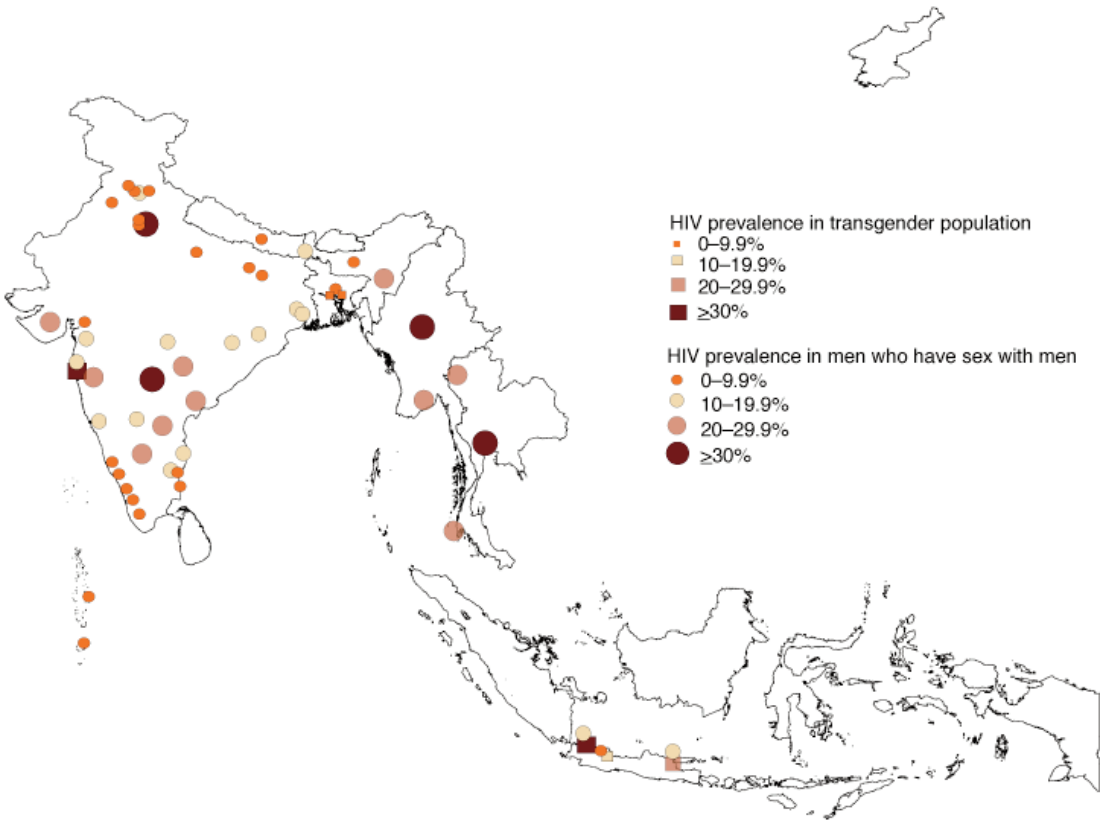
Source: Integrated bio-behavioural survey reports, national AIDS programmes.
STI = sexually transmitted infection; MSM = men who have sex with men.

HIV prevalence

Surveillance sites in four countries (India, Indonesia, Myanmar and Thailand), recorded HIV prevalence above 20% among men who have sex with men or transgender persons (Figure 14). In some countries, available data indicate that HIV infection has remained low among men who have sex with men. For example, HIV prevalence has remained below 5% in Nepal in the last three rounds of surveillance in the past five years. Similarly, in Bangladesh, Maldives and Timor-Leste, it is below 1%. Bhutan and Sri Lanka have no data on HIV prevalence among men who have sex with men.

HIV prevalence is higher among the transgender population than among men who have sex with men. In Mumbai, India one study reported an extremely high HIV prevalence of 68% among the transgender population *(43)*. In a 2007 sentinel surveillance in Mumbai, HIV prevalence among the transgender population (42%) was six times higher than among men who have sex with men (8.4%) *(20)*. In Indonesia, HIV prevalence ranged from 14% to 34% among warias (Bandung 14%; Surabaya 25%; Jakarta 34%); this was four to seven times higher than among men who have sex with men (Bandung 2%; Surabaya 5.6%; Jakarta 8.1%) *(42)*.

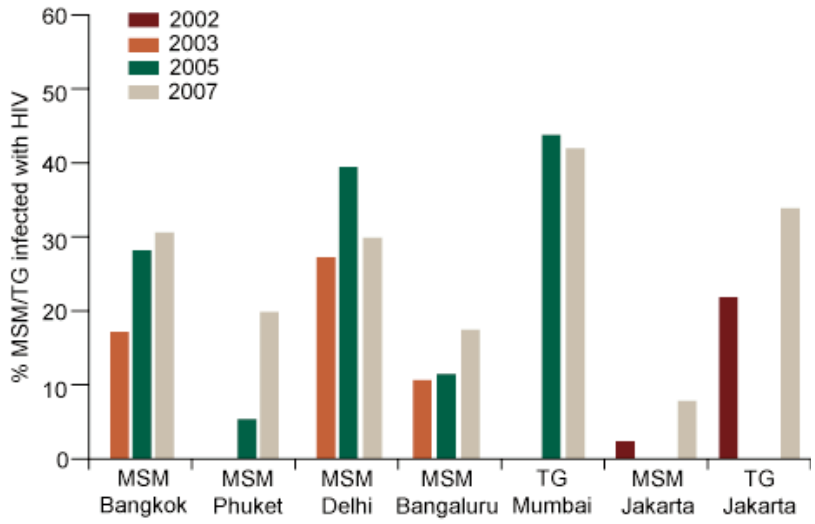
Figure 14: HIV prevalence among men who have sex with men and transgender population, South-East Asia Region, 2007–2009



Source: Sentinel surveillance data reported by national AIDS programmes. Sample size for each site was adequate as per national protocols. The latest available surveillance data is used from each country: Bangladesh, India, Indonesia, Sri Lanka-2007; Maldives, Myanmar, Thailand-2008; Nepal-2009.

In India and Thailand, while overall the HIV epidemic has declined, HIV prevalence among men who have sex with men is not showing evidence of a decline; in fact a rapid increase in HIV transmission is noted in several urban locations (Figure 15). In Bangkok, HIV prevalence among men who have sex with men has increased sharply from 17% in 2003 to 31% in 2007 *(44)*. In Bangaluru, India HIV prevalence is showing an increasing trend — 11% in 2003 to 18% in 2007 *(20)*.

Figure 15: Trends in HIV prevalence among men who have sex with men and transgender persons, selected cities, South-East Asia Region, 2002–2007



Increasing HIV prevalence among MSM/TG in several cities

Source: Sentinel surveillance data reported by national AIDS programmes. Sample size for each site was adequate as per national protocols.
MSM = men who have sex with men; TG = transgender persons.

HIV incidence

Limited information on HIV incidence among men who have sex with men is available from India and Thailand. In Thailand, HIV incidence density was 5.7 per 100 person-years in a cohort of men who have sex with men in Bangkok and 2.7 per 100 person-years (95% confidence interval, 2.2–4.3%) among men who have sex with men attending an HIV testing clinic using nucleic acid testing to detect acute infection *(45, 46)*. In India (using BED CEIA) HIV incidence across six districts in south India ranged from 0.99% in Guntur District in Andhra Pradesh to 2.8% in Hyderabad city, also in Andhra Pradesh *(19)*.

Injecting Drug Users[1]

Population size

Of the global 15 million injecting drug users, an estimated 560 000 live in the South-East Asia Region *(47,48)*. The number of injecting drug users estimated by national AIDS programmes of each country is provided in Annex 1, Table A4. Six countries in

1 This section draws largely from Sharma M, et al 2009 *(48)*.

the Region have substantial injecting drug user problem (India, Indonesia, Maldives, Myanmar, Nepal and Thailand). There are significant variations in the size of injecting drug users within countries. In India, the proportion of injecting drug users per 100 adult males (aged 15–49 years) varies widely, from 0.01% in Andhra Pradesh, Jammu & Kashmir and Uttaranchal to as high as 4.0% in Manipur, 3.8% in Mizoram and 2.9% in Nagaland in the north-east *(9)*. In Indonesia, a majority of the estimated 220 000 injecting drug users are concentrated in just a few provinces — with larger pockets of injecting drug use in east and west Java (Jakarta and Surabaya), south Sulawesi and northern Sumatra, and smaller pockets in east Kalimantan, central Java and south Sumatra. Myanmar has the largest concentration of injecting drug users in the northern (Kachin) and eastern (Shan) states that share borders with China, Laos and Thailand. The Sagaing Division in north-west Myanmar, as well as major cities, such as Mandalay and Yangon, are also identified as areas with large numbers of injecting drug users. In Nepal, of the estimated 28 000 injecting drug users, the majority are in the highway districts (range: 10 400–14 560) followed by Kathmandu valley (range: 5200–6760) *(49)*.

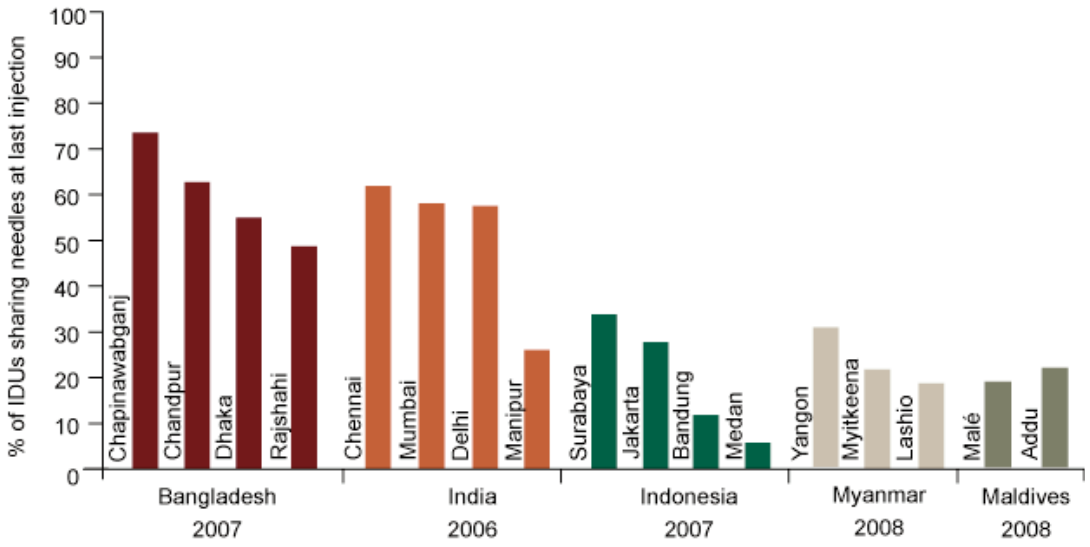
In general, capital cities and other large metropolitan areas have a substantial number of injecting drug users. Females form a small proportion of the injecting drug user population in the Region (1–8% in Indonesia; 5% in Myanmar; 10–18% in India).

Risk behaviours

Sharing of injection equipment: Bangladesh and India had the highest rates of needle–syringe sharing as reported from behavioural sentinel surveys (Figure 16). Despite high levels of syringe sharing in Bangladesh, HIV prevalence among injecting drug

Figure 16: Percentage of injecting drug users sharing injecting equipment at last injection, selected cities, South-East Asia Region

Sharing of injecting equipment is common across the South-East Asia Region



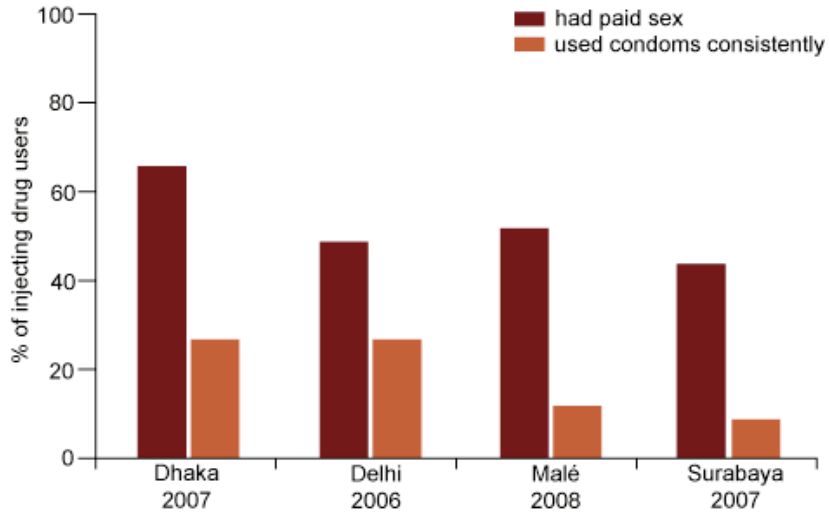
Source: Reports of behavioural surveys, national AIDS programmes. Sample size was adequate as per national protocols.
IDU = injecting drug use

users was comparatively low, though it has grown five-fold from 1.7% in 2000 to 7.1% in 2007 in the capital, Dhaka *(21)*. The reasons for the low levels include limited sexual transmission among injecting drug users (and to their sexual partners) due to the high prevalence of male circumcision and declining syphilis rates, small size of sharing networks, and patterns of drug use that limit HIV transmission. Notably, harm reduction interventions including large-scale needle–syringe programmes that began in 1998 when HIV prevalence among injecting drug users was still below 1%.

A reduction in needle–syringe-sharing behaviour was evident in Nepal. In Kathmandu, rates of needle–syringe sharing declined from 46% in 2002 to 7% in 2009 *(50)*. Concomitant declines in HIV prevalence among injecting drug users were noted from nearly 68% in 2002 to 21% in 2009. In Manipur, north-east India rates of sharing equipment at last injection declined from 55% in 2001 to 26% in 2006 *(14)*, and HIV prevalence halved from 39% in 2002 to 18% in 2007 *(20)*.

Sexual risk behaviours: Data from 2006–2008 from selected cities in the South-East Asia Region show that a large proportion of injecting drug users have paid for sex but most were not using condoms (Figure 17). In Bangladesh, the proportion of injecting drug users who bought sex in the past year from a female sex worker varied from 46% to 66%, whereas consistent condom use in the past year was very low (14–43%) *(13)*. While consistent condom use was 5–35% in Indonesia *(51)*, it was much higher in Nepal (45–89%) *(50)*. Moreover, a large proportion of injecting drug users are married or have a regular partner (Indonesia: 38–59%; India:10–58%). Consistent condom use with regular partners is negligible (Indonesia: 5–18%; India 0–18%).

Figure 17: Percentage of injecting drug users engaging in unsafe sexual behaviours in the past year, selected cities, South-East Asia Region



A large proportion of IDUs have paid sex but few use condoms

Source: Reports of behavioural surveys, national AIDS programmes. Sample size was adequate as per national protocols.

Prevalence of sexually transmitted infections

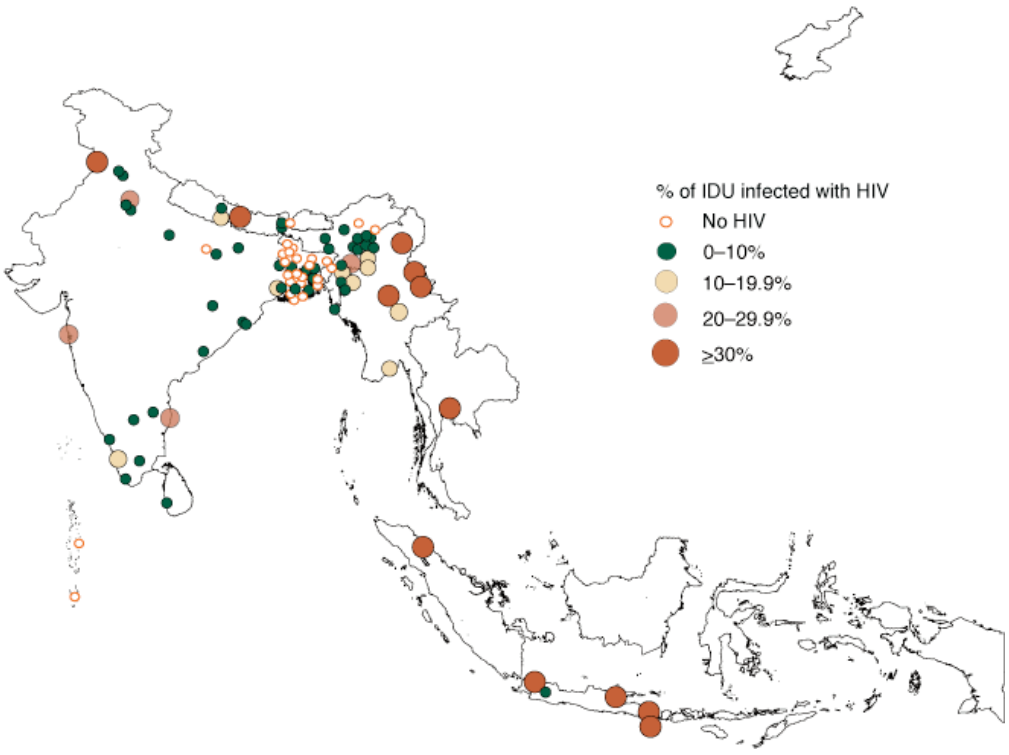
Vulnerability to HIV among injecting drug users is enhanced by high rates of sexually transmitted infections. Assessments conducted in five districts of India showed active syphilis rates of 0.1–20% in 2007 *(52)*. Syphilis rates among female injectors are also high; in one site in Bangladesh, 10% were infected in 2006–2007 *(21)*. Among the surveyed sites, high prevalence of *C. trachomatis* has been found in Nagaland, India (11%) and Indonesia (6%). The prevalence of HSV-2 in injecting drug users in Mumbai, India was 24% *(19)*. These data underscore the importance of controlling sexually transmitted infections among injecting drug user populations.

HIV prevalence

HIV prevalence among injecting drug users vary widely among countries of the Region with significant injecting drug user problem; a low of 0% in the Maldives to a high 52% in Indonesia (Figure 18).

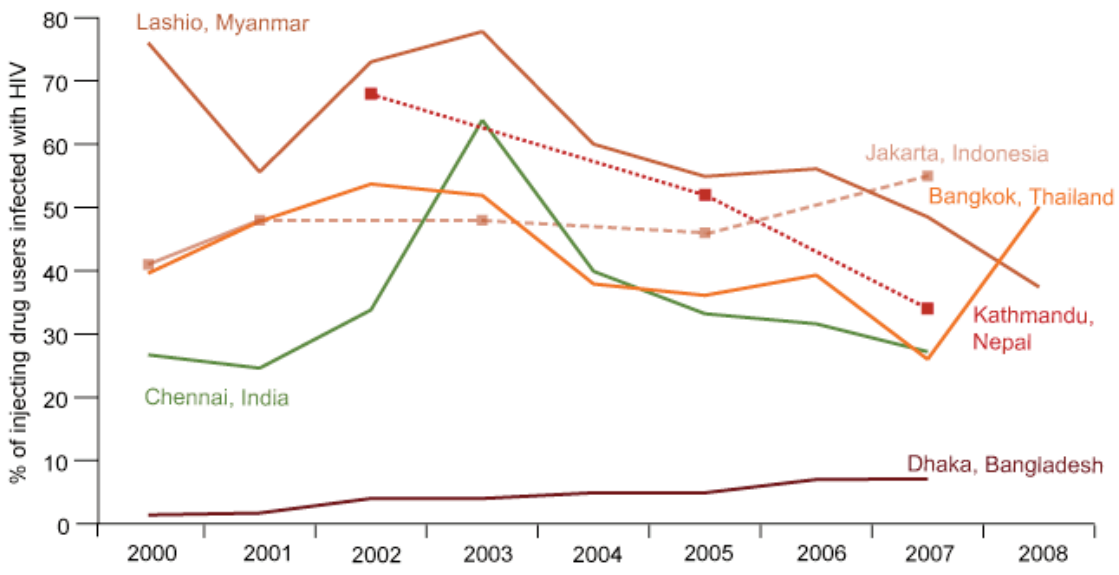
Not only are the old HIV epidemics uncontrolled over many years, there is indication of rising HIV prevalence in new pockets. For example in north India, HIV prevalence

Figure 18: HIV prevalence among injecting drug users, South-East Asia Region, 2007–2009



Source: Sentinel surveillance data reported by national AIDS programmes. Sample size for each site was adequate as per national protocols. The latest available surveillance data is used from each country: Bangladesh, India, Indonesia, Sri Lanka-2007; Maldives, Myanmar, Thailand-2008; Nepal-2009

Figure 19: Trends in HIV prevalence among injecting drug users, selected cities, South-East Asia Region, 2000–2008



HIV prevalence remains consistently high among IDUs

Source: Sentinel surveillance data reported by national AIDS programmes. Sample size for each site was adequate as per national protocols. Dashed line indicates no data available for that period.

ranged from 6% to 30% in Punjab; in Siliguri division of Darjeeling district in West Bengal, HIV prevalence has consistently been 10% or more in the past three years.

A wide variation in HIV prevalence within countries has also been noted. For example, in Myanmar, HIV prevalence among injecting drug users ranged from 13% in Taunggyi to 55% in Myitkyina *(4)*. In India, HIV prevalence ranged from 0% to 30% in 50 sentinel sites across 23 states in India.

In the cities of Bangkok, Chennai, Jakarta and Lashio, HIV prevalence among injecting drug users remained unacceptably high, often above 25% (Figure 19). Country-wise trends show that HIV prevalence among injecting drug users was consistently high in most states of India, Myanmar and Thailand (specifically in Bangkok). Bangladesh has witnessed a steady rise in HIV prevalence, while in Nepal, HIV prevalence among injecting drug users has actually decreased in all areas.

HIV incidence

Little information is available on HIV incidence in the injecting drug user population. Modelling data from Thailand suggest that HIV incidence is highest among people injecting drugs (2.6 per 100 per year) *(53)*. In parts of north-eastern states of India (Manipur and Nagaland), HIV incidence as measured by prevalence among young people who inject drugs (aged 15–24 years) has decreased from 11% in 2003 to 3.2% in 2007 *(20)*.

Prisoners[1]

Overall, the number of persons imprisoned in the South-East-Asia Region per 100 000 population is considered to be relatively low: India (32), Indonesia (52) and Nepal (26). Thailand however was an exception at 249 per 100 000. Prison populations from some countries of the Region were as follows: Bangladesh (74 170), India (3 58 368),Indonesia (1 18 453), Sri Lanka (20 975) and Thailand (1 61 844). A common finding among all prisons in the Region was serious overcrowding, human and financial constraints, adverse health problems, sexual risk behaviours and injecting drug use *(54)*.

As drug use is illegal in most countries in the Region, there is a sizeable population of incarcerated injecting drug users. HIV prevalence among prison populations is often significantly higher than in the general population. The risk of being infected in prisons through sharing of contaminated injecting equipment and unprotected sex is high. A Thai study found that half of 689 prisoners were injecting drug users, and that 49% had injected while in prison *(55)*.

The men who have sex with men population inside prisons is acknowledged to be common, but research to collect prevalence data in this sensitive area has rarely been undertaken. A 2003 study undertaken in Thailand found that 80% of the inmates reported male-to-male sexual activity while incarcerated *(55)*.

Data of HIV prevalence inside prisons is overall scarce. HIV prevalence among prisoners in India, Indonesia and Thailand is generally above 10% *(54)*. HIV transmission in prisons may be fuelled by risk behaviours, such as sharing of injecting equipment. A study among 95 inmates in five prisons in eastern Nepal found that 28% used drugs, and of these 75% "always" shared needles *(56)*. A study of 705 injecting drug users in Klong Prem Prison in Thailand, found that 38% had injected while in prison, and that 97% of these had shared injecting equipment *(54)*. Behavioural surveys in the Maldives also indicated that 32% injecting drug users had injected while in prison *(17)*.

In Indonesia routine sentinel surveillance data show HIV prevalence of more than 2–6% among prisoners in four sites *(24)*. A sampling of all prisoners in 2003 showed that only 5–10% were HIV-positive on entry to prisons, but approximately 20% of the total population was infected, suggesting that HIV is transmitted in prisons through risk behaviours *(10)*. In Timur Cipinang Prison in Jakarta, HIV prevalence increased from 17.8% in 2005 to 30.4% in 2006 *(24)*. Similar data among incarcerated injecting drug users are not available from other countries of the Region.

HIV Among Youth

Young people, aged 15–24 years, constitute a sizeable proportion of the total population of countries in the South-East Asia Region. Sexual and reproductive health

1 This section draws largely from Sharma M, et al 2009 *(48)*.

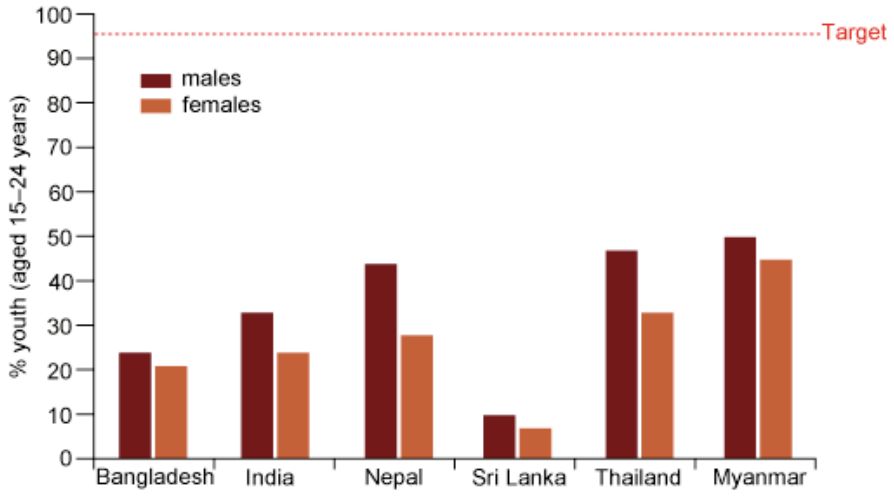
issues and substance abuse are among the major health problems faced by young people of the Region. Adolescent girls in some countries have to cope with early marriage and child-bearing. More than 50% girls in Bangladesh, India and Nepal are married off before they attain 18 years of age. In some countries, a significant proportion of HIV infections are now occurring among women who are married and get infected through unprotected sex with an infected spouse.

Knowledge about HIV and its prevention is an important prerequisite for adopting healthy behaviours. While most of the youth in the Region are aware of HIV / AIDS, comprehensive and correct knowledge about HIV is below 50% among males and females in all countries; this falls much short of the 95% target set by United Nations General Assembly Special Session on HIV / AIDS (UNGASS) (Figure 20).

Population-based surveys have been carried out among the young population in Maldives, Myanmar Thailand and Timor-Leste, which indicate that a variable proportion of young people, depending on the country, engage in risky sexual behaviours.

According to national behavioural sentinel surveillance surveys, the proportion of youth who had sex before the age of 15 years was low in India (3%) and Bangladesh (2.3%); however, in Thailand, this proportion showed an increasing trend from 6.4% in 2006 to 13.4% in 2008. Males engaged in early sex more frequently than females *(2,10,57)*. Nearly a quarter (24%) of the Thai 11th-grade male students (median age 17 years) were sexually active and had sex mostly with a lover or casual acquaintances; only 2% had sex with a female sex worker in the past year and 2.1% with other males.

Figure 20: Percentage of young women and men aged 15–24 with correct knowledge of HIV/AIDS, South-East Asia Region, 2007



Source: UNGASS country reports, 2008

Less than half the youth population has correct knowledge about HIV/AIDS

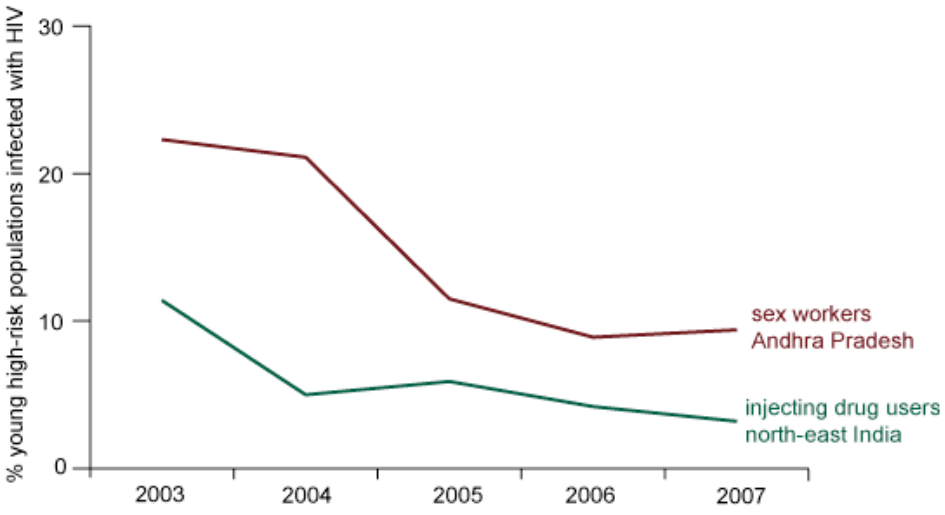
Risky sexual behaviours were higher among 17-year-old male vocational students—43% were sexually active; 4.5% bought sex from a female sex worker and 11% had sex with a casual acquaintance in the past year. Consistent condom use among 11th-grade and vocational students varied by type of partner, the highest with female sex workers (65% and 57%, respectively) and lowest with lovers (27% and 23%, respectively). In Myanmar, 7.4% (range: 2.8–15%) out-of-school youth reported having sex with a sex worker in the past year; 70% used condoms consistently *(58)*. The prevalence of male-to-male sex in the past year in Thailand, Myanmar and Maldives was 2.1%, 1.6%, and 0.4%, respectively *(10,17,58)*. Condom use with male partners was low: 56% in Myanmar and 45% in Thailand.

Young people who share needles and syringes as well as young male and female sex workers are at very high risk of contracting HIV. Age-disaggregated data on HIV prevalence is not widely available and is limited by a small sample size. Analyses of data among young female sex workers and injecting drug users in parts of India show a decreasing trend in HIV prevalence (Figure 21).

Age disaggregated data in the National Family Health Survey-3 indicate a very low HIV prevalence among young people, 0.1% in the 15–24 years age group (0.04% in 15–19 years and 0.18% in 20–24 years) *(2)*. HIV prevalence was much higher among urban youth (0.14%) than rural youth (0.09%). Across the five high HIV burden states, HIV prevalence was highest in Manipur (0.39%), followed by Andhra Pradesh (0.37%) and lowest in Tamil Nadu (0.13%). In Uttar Pradesh, which is a low HIV burden state, just 0.02% of youth were infected.

Figure 21: HIV prevalence among high-risk populations (aged 15–24 years) in parts of India, 2003–2007

Declining trend in HIV infection among young high-risk population



Source: Sentinel surveillance data reported by National AIDS Control Organization, India. Sample size is based on nationally approved protocols. Data included from consistent sites.

Limitations of data

The findings in this section are based on biological and behavioural surveillance surveys carried out according to nationally approved protocols. Survey results based on inadequate sample size (as per national protocols) were excluded. Trends in HIV prevalence and risk behaviours are presented based on data from consistent (continuing) sites.

Data presented by national AIDS programmes are subject to at least five important limitations. First, the geographic coverage of biological and behavioural surveillance for high-risk populations is limited. Surveillance among high-risk populations is primarily conducted in large cities or other major urban areas. Given the large size of countries in the Region and the epidemiological diversity, a few surveys in the large urban areas may not be representative of the national situation. Second, sentinel surveillance for high-risk populations in several countries, such as India and Myanmar, are conducted at 'targeted intervention sites' that also provide services to the same population. Trends in HIV prevalence at targeted intervention sites represents trends in populations that are exposed to interventions, and may not be representative of the entire high-risk population. To overcome this important limitation of surveillance at targeted intervention sites, many countries have undertaken integrated biological and behavioural surveys using probability based sampling methodologies. In these surveys, participants are often recruited from selected sites (for example men who have sex with men are recruited from cruising sites). Other members of the population who do not frequent these sites are excluded (e.g. men who have sex with men who find partners on the internet, through advertisements in the newspaper) are excluded. Thus, an important limitation of such surveys is that the surveyed population does not represent the entire high-risk population. The fourth limitation is that behaviour data is collected from respondents based on self-reported behaviours. It is possible, that some respondents may report desirable behaviours (social desirability bias). For example, in Myanmar 96% female sex workers reported condom use at last sex with a client. The high rates of condom use are inconsistent with high HIV infection in this population, indicating a possible social desirability bias among reported behaviours by female sex workers. On the contrary, some behaviours, such as drug use and male-to-male sex may be under-reported due to the illegal nature of these activities in most countries. Finally, the definitions used for 'high-risk populations' are inconsistent. This makes it difficult to compare results across countries.

References

1. UNAIDS and WHO. *AIDS Epidemic Update*. Geneva, World Health Organization, 2009.
2. National Health and Family Survey-3, 2006. Government of India. (http://www.nfhsindia.org/nfhs3.html, accessed 11 November 2009).
3. *Global tuberculosis control: epidemiology, strategy financing*. Geneva, World Health Organization, 2009.
4. National AIDS Programme. *Report of the HIV sentinel sero-surveillance survey*. Ministry of Health, Myanmar, 2009.
5. Raizada N, et al. HIV seroprevalence among tuberculosis patients in India, 2006–2007. *PLoS One*, 2008, 3(8): e2970.
6. Family Health International and Bureau of AIDS, TB and STIs. *The asian epidemic model. Projections for HIV/AIDS in Thailand: 2005-2025*. Ministry of Public Health, Thailand, 2008.
7. *Mathematic model of HIV epidemic in Indonesia 2008–2014*. Ministry of Health, Indonesia.
8. Vandepitte J, et al. Estimates of the number of female sex workers in different regions of the world. *Sexually Transmitted Infections*, 2006, 82(Suppl 3): 18-25.
9. National AIDS Control Organization. Report of the Expert Group on size estimation of populations with high-risk behaviour for NACP-III Planning. *The National AIDS Control Programme-Phase III (2006–2011)*. Ministry of Health and Family Welfare, India, 2006.
10. *Behavior surveillance survey*. Ministry of Public Health, Thailand, 2008.
11. National AIDS Programme. *Behavioral surveillance survey: injecting drug users and female sex workers*. Ministry of Health, Myanmar, 2008.

12. *Integrated biological and behavioral surveillance survey (IBBS) among female sex workers in 22 Terai highway districts of Nepal*. Family Health International, Nepal, 2009.
13. National AIDS/STD Programme. *Behavioural surveillance survey: technical report 2006–2007*. Directorate General of Health Services, Ministry of Health and Family Welfare, Bangladesh, 2008.
14. National AIDS Control Organization. *National behavioural surveillance survey (BSS for sex workers and clients)*. Ministry of Health and Family Welfare, India, 2006.
15. National STD/AIDS Control programme. *Sri Lanka behavioral surveillance survey. First round survey results. 2006–2007*. Ministry of Healthcare and Nutrition, Sri Lanka, 2007.
16. *Integrated biological-behavioral surveillance (IBBS) among most-at-risk-groups (MARG), Indonesia. Surveillance highlights: Female sex workers*. Ministry of Health, Indonesia, 2007.
17. *2008 Biological and behavioural survey findings*. Ministry of Health, Maldives, 2008.
18. University of New South Wales and Australia and Ministry of Health, Timor-Leste. *Integrated biological-behavioral surveillance (IBBS): female sex workers*. Ministry of Health, Timor-Leste, 2009.
19. Indian Council of Medical Research and Family Health International. *Integrated behavioural and biological assessment Round 1 (2005-2007): national interim summary report*. Family Health International, India, 2008.
20. National AIDS Control Organization. *HIV sentinel surveillance report*. Ministry of Health and Family Welfare, India, 2008.
21. National AIDS/STD Programme. *Sentinel surveillance, 2007*. Ministry of Health, Bangladesh, 2007.
22. *HIV serological surveillance*. Ministry of Healthcare and Nutrition, Sri Lanka, 2007.
23. Gupta J, et al. HIV vulnerabilities of sex-trafficked Indian women and girls. *International Journal of Gynaecology Obstetrics*, 107(1):30-4. Epub 2009 Jul 21.
24. *HIV sentinel surveillance*. Ministry of Health, Indonesia, 2008
25. *HIV sentinel surveillance*. Ministry of Health, Thailand, 2008.
26. Carael M, et al. Clients of sex workers in different regions of the world: hard to count. *Sexually Transmitted Infections*, 2006, 82(Suppl 3): 26-33.
27. National AIDS Control Organization. *National behavioural surveillance survey (BSS for general population)*. Ministry of Health and Family Welfare, India, 2006.
28. Ministry of Health, Myanmar and WHO. *Report of the HIV Myanmar national behavioural surveillance survey, 2007–2008 Report*. Ministry of Health, Myanmar, 2008.
29. *Integrated biological/behavioral surveillance among most-at-risk-groups (MARG) in Indonesia: surveillance highlights Fact sheets: high risk men*. Ministry of Health, Indonesia 2008.
30. Pandey A, et al. Risk behaviour, sexually transmitted infections and HIV among long-distance truck drivers: a cross-sectional survey along national highways in India. *AIDS*, 2008, 22(Suppl 5): 81-90.
31. Ford K, Chamrathrithirong A. Sexual partners and condom use of migrant workers in Thailand. *AIDS and Behaviour*, 2007, 11(6): 905-14.
32. *UNGASS country progress report, Nepal.* , Geneva, UNAIDS, 2008. (http://data.unaids.org/pub/Report/2008/Nepal_2008_country_progress_report_en.pdf, accessed 9 November 2009).
33. Caceres C, et al. Estimating the number of men who have sex with men in low and middle income countries. *Sexually Transmitted Infections*, 2006, 82(Suppl 3): 3-9.
34. Morineau G, et al. Sexual risk taking, STI and HIV prevalence among men who have sex with men in six Indonesian cities. *AIDS and Behaviour*, 2009, DOI 10.1007/s10461-009-9590-6.
35. National AIDS Control Organization. *National behavioural surveillance survey. Men who have sex with men (MSM) and injecting drug users (IDUs), 2006*. Ministry of Health and Family Welfare, India 2007.
36. Family Health International, Ministry of Health, New Era and SACTS. *Integrated biological and behavioural survey (IBBS) among men who have sex with men 2009*. Family Health International, Nepal, 2008.
37. University of New South Wales, Australia and Ministry of Health, Timor-Leste. *Survey in MSM*. Ministry of Health, Timor-Leste, 2008.
38. Li A, et al. Sexual behavior and risk factors for HIV infection among homosexual and bisexual men in Thailand. *AIDS and Behaviour*, 2009, 13(2): 318-27.
39. Brahmam GN, et al. and IBBA Study Team. Sexual practices, HIV and sexually transmitted infections among self-identified men who have sex with men in four high HIV prevalence states of India. *AIDS*, 2008, 22 Suppl 5, S45-57. oi:10.1097/01.aids.0000343763.54831.15.
40. Pisani E and Dili survey team. *HIV, STIs and risk behaviour in East Timor: an historic opportunity for effective action*. Family Health International, Timor-Leste, 2004.

41. McNicholl J, et al. Prevalence of sexually transmitted infections (STI) in a cohort study of men who have sex with men (MSM) in Bangkok, Thailand. Paper presented at: *The Fourth IAS Conference on HIV Pathogenesis, Treatment and Prevention*; July 22–25 2007; Sydney, Australia. Abstract #CDB198.
42. *Integrated biological/behavioral surveillance among most-at-risk-groups (MARG) in Indonesia: surveillance highlights Fact sheets: men who have sex with men and warias/transgender*. Ministry of Health, Indonesia, 2008.
43. Setia MS, et al. Men who have sex with men and the transgender population in Mumbai, India: An emerging risk group for STIs and HIV. *Indian Journal of Dermatology, Venereology & Leprology*, 2006, 72(6), 425-431.
44. UNAIDS. *UNGASS country progress report, Thailand*. Geneva, UNAIDS, 2008. (http://data.unaids.org/pub/Report/2008/thailand_2008_country_progress_report_en.pdf accessed 9 November 2009).
45. Van Griensven F, et al. Continuing high HIV incidence in a cohort of men who have sex with men in Bangkok, Thailand (abstract # 1037b). *Presented at the 16th Conference on Retroviruses and opportunistic infections*; 8-11 February, Montreal, 2009.
46. Ananworanich J, et al. Incidence and characterization of acute HIV-1 infection in a high-risk Thai population. *Journal of Acquired Immune Deficiency Syndrome*, 2008, 49:151-55.
47. Mathers BM, et al. For the 2007 Reference Group to the UN on HIV and injecting drug use. Global epidemiology of injecting drug use and HIV among people who inject drugs: a systematic review. *Lancet* 2008; 372:1733–1745. doi: 10.1016/50140-6736(08)61311-2.
48. Sharma M, et al. A situation update on HIV epidemics among people who inject drugs and national responses in South-East Asia Region. *AIDS*, 2009, 23(11):1405-13.
49. National Centre for HIV/AIDS and STD control. *National estimates of HIV infections.* Ministry of Health and Population, Nepal, 2007.
50. *Integrated biological and behavioral surveillance survey (IBBS) among injecting drug users in Kathmandu*. Family Health International, Nepal, 2009.
51. *Integrated biological/behavioral surveillance among most-at-risk-groups (MARG) in Indonesia: surveillance highlight. Fact sheets: injecting drug users*. Ministry of Health, Indonesia, 2008.
52. Mahanta J, et al. Injecting and sexual risk behaviours, sexually transmitted infections and HIV prevalence in injecting drug users in three states in India. *AIDS*, 2008, 22(Suppl 5): 59-68.
53. Gouws E, et al. Short term estimates of adult HIV incidence by mode of transmission: Kenya and Thailand as examples. *Sexually Transmitted Infections* 2006; 82 (Suppl III): iii51–iii55; doi: 10.1136/sti.2006.020164.
54. *HIV prevention, care and treatment in prisons in the South-East Asia Region*. New Delhi, World Health Organization, Regional Office for South-East Asia, 2007.
55. Thaisri H, et al. HIV infection and risk factors among Bangkok prisoners, Thailand: a prospective cohort study. *BMC Infectious Disease*, 2003, 3:25.
56. Paul C, et al. *Awareness, perception and risk behaviours of drug users in the prisons*. Paper presented at the XIV International AIDS Conference, Barcelona, 2002.
57. UNAIDS. *UNGASS report, Bangladesh*. Geneva, UNAIDS, 2008. (http://data.unaids.org/pub/Report/2008/bangladesh_2008_country_progress_report_en.pdf, accessed 9 November 2009).
58. National AIDS Programme. *Behavioral surveillance survey: out of school youth*. Ministry of Health Department of Health, Myanmar, 2008.

National Response to the HIV Epidemic

Prevention of HIV Infection Among High-Risk Populations

HIV Prevention Among Sex Workers

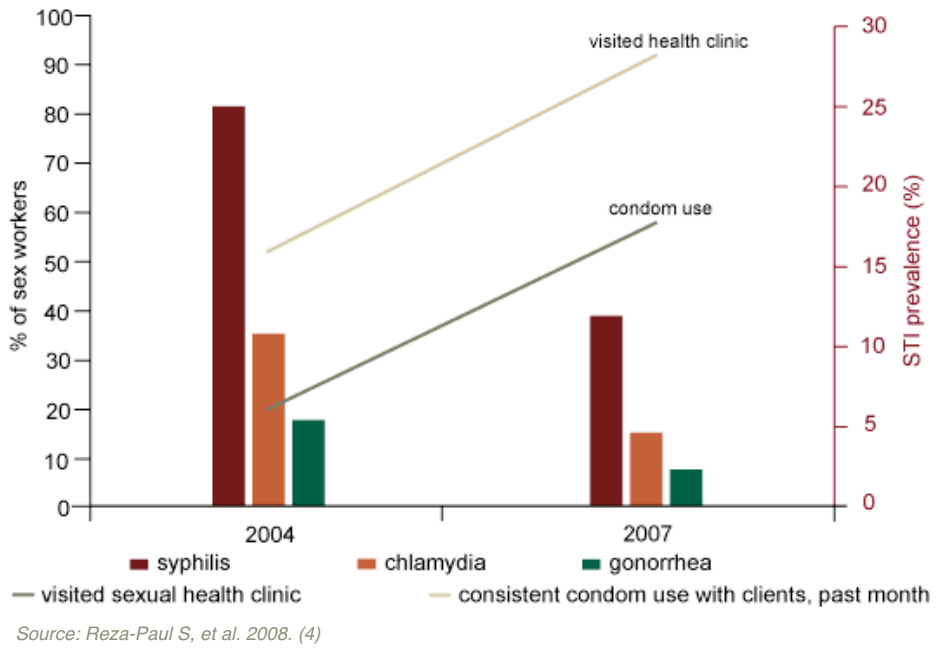
Although sex work is considered illegal in the South-East Asia Region, most countries recognize commercial sex as a key driver of the epidemic and have developed targeted interventions for sex workers. Key components of interventions for sex worker include: (i) an enabling environment through advocacy at local and national levels; (ii) peer outreach to promote condoms and sexually transmitted infection services; and (iii) condom supply and promotion.

Thailand's 100% condom use programme and India's Sonagachi sex worker empowerment project in West Bengal, are widely cited throughout the world as best practices for HIV prevention among sex workers. The 100% condom use policy, which advocates condom use at all times in all risky behaviour settings in a defined geographical area, helped to empower sex workers to negotiate aggressively with clients to use condoms *(1)*. Implemented through a network of sexually transmitted infection clinics, the 100% condom programme achieved early success by covering all sex establishments where condom use was mandated. The responsibility of enforcing condom use was on the establishments, which would be closed down if they were non-compliant. One of the most important activities was to provide local advocacy with help of the police and other gatekeepers. The 100% condom use programme reversed the HIV epidemic in Thailand cutting the transmission of new infections from sex worker to clients by 86% in just five years (from 109 000 in 1990 to 15 000 in 1995) *(2)*. In 2008, infections from sex workers to clients accounted for just 10% of all new infections. Under renewed efforts to strengthen HIV prevention among sex workers, 61 out of 76 provinces are now providing a standardized package of services for sex workers at sexually transmitted infection clinics and 41 provinces have established outreach programmes for sex workers.

The Sonagachi project in Kolkata, West Bengal, India is a sex worker cooperative, which lobbies for the recognition of sex workers' rights and legalization, runs literacy and vocational programmes, and provides micro loans, thus increasing sex worker empowerment. Savings and credit schemes have also helped reduce dependency on sex work. Self regulatory boards effectively address a range of abuses from trafficking to child prostitution. This project increased condom use and decreased sexually transmitted infections among sex workers *(3)*.

Integrating lessons from Sonagachi, the Avahan India AIDS initiative, funded by the Bill and Melinda Gates Foundation has scaled up interventions with sex workers in six high HIV burden Indian states. The model uses a community-led HIV prevention approach, featuring community mobilization and empowerment along with enhancing an enabling environment and increased access to and utilization of health services. The programme has a positive impact by increasing condom use and decreasing the prevalence of sexually transmitted infections (Figure 22) *(4)*.

Figure 22: Impact of community-based interventions for female sex workers, Mysore, India, 2004-2007



Source: Reza-Paul S, et al. 2008. (4)

Greater access to services and increased condom use, reduced STIs among sex workers

In Myanmar, nearly three-fourths of sex workers were reached by one or more prevention services in 2008 through both public and private sectors – including sexually transmitted infection clinics, drop-in centres and outreach projects (5). However, service provision in Myanmar is largely concentrated in urban and semi urban areas and includes exclusively condom supply in many areas rather than a comprehensive package of services.

In Indonesia, condom social marketing programmes at "hotspots" (locations where high number of commercial sexual transactions occur) and establishment of condom revolving funds at brothels have reported significant successes leading to expansion of these programmes in more locations.

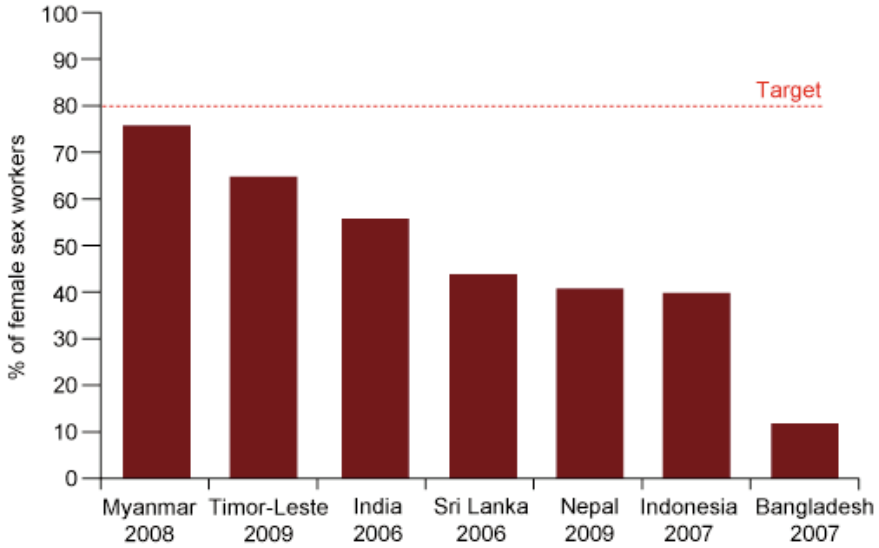
In Sri Lanka, interventions for sex workers are implemented mainly through government sexually transmitted infection clinics. In Bangladesh, interventions are provided through a strong network of nongovernmental organizations that have kept HIV below 1% among female sex workers and their clients. In Bhutan, Maldives and Timor-Leste, interventions for sex workers are still in early stages.

Based on data available from surveys, the percentage of sex workers being reached with prevention services ranges from 12% in Bangladesh to 76% in Myanmar (Figure 23). Approximately, 30% of sex workers reported having received an HIV test in the past 12 months, ranging from 5% in Bangladesh to 71% in Myanmar.

Despite many successes in the control of HIV among female sex workers, important challenges remain, such as the need to increase and sustain programme coverage for

Figure 23: Percentage of sex workers reached by prevention programmes in the past year, South-East Asia Region

Insufficient coverage of prevention interventions for sex workers



Source: Reports of behavioural surveys, national AIDS programmes. Sample size was adequate as per national protocols.

sex workers. As sex work is illegal in most countries in the Region, continuing advocacy is required to create an enabling environment for sex work interventions. Local advocacy support should be gained from local power brokers (establishment owners, "madams", pimps, brokers, local police) to support condom use or access to intervention services among female sex workers with law enforcement agencies at local and higher levels. Due to changing work settings and operations of sex workers, provision of outreach services is becoming harder. In general, it is easier to reach sex workers in brothels and establishments, but much harder to reach those who are street-based, home-based or operate through the Internet or mobile phones. Another challenge is to regularly map and refresh lists of "hotspots" and places where female sex workers operate. Without updated mapping and size estimates of sex workers, it is difficult to plan for services and monitor the impact of programmes. Finally, as nongovernmental organizations play a critical role in providing services to sex workers in the South-East Asia Region, programmes for sex workers can be jeopardized if donors phase-out their support to nongovernmental organizations.

HIV Prevention Among Men Who Have Sex With Men

Although the significance and potential of HIV among men who have sex with men has been documented and acknowledged, the national responses have been too little and too late.

Most countries in the Region have criminal sanctions against "homosexual behaviour" that present tremendous obstacles to HIV prevention for men who have sex with men. Only three countries in the Region, namely Indonesia, Thailand and Timor-Leste, do not consider sex between consenting same-sex adults a criminal offence. Recently, a

bill passed in Nepal recognized transgender as a "third" gender. Progress has also been seen in India. In mid-2009 the Delhi high court ruled that sex between two consenting same-sex adults should not be considered criminal behaviour, although an appeal against that ruling has been filed with the Indian Supreme court.

The majority of the countries in the Region have mentioned men who have sex with men as a "priority or core group" for interventions in their national strategic plan documents but only half the countries have programmes that specifically target this group for services such as outreach, condom distribution, HIV testing, sexually transmitted infection referrals and antiretroviral treatment. Specifying programme targets for men who have sex with men is crucial as it helps the national governments to prepare detailed action plans, budget and fund the plans, and make them accountable to their constituencies.

Most of the Member countries have some form of targeted interventions for men who have sex with men, male sex workers and the transgender population. However, these interventions are located only in a few major urban centres. Components of targeted interventions include: peer outreach education; promotion and distribution of condoms and water-based lubricants; and referrals to HIV and sexually transmitted infections screening and treatment.

Interventions for men who have sex with men are primarily implemented through nongovernmental organizations. There is tremendous scope for greater involvement of community based organizations and groups of men who have sex with men and the transgender population in complementing the services of nongovernmental organizations. Currently, there is limited capacity of community based organizations and nongovernmental organizations serving men who have sex with men and the transgender population in the South-East Asia Region due to a variety of factors including: limited government funding; unpredictable international funding; and lack of capacity-building activities. Advocacy with nongovernmental organizations and capacity building are thus important components of developing and scaling up targeted interventions for men who have sex with men.

India has made progress in scaling up interventions for men who have sex with men. Comprehensive operational guidelines for implementing HIV prevention interventions among men who have sex with men have been prepared. As of March 2009, 129 targeted interventions were in place exclusively for men who have sex with men, of which 37 are managed by community based organizations *(6)*.

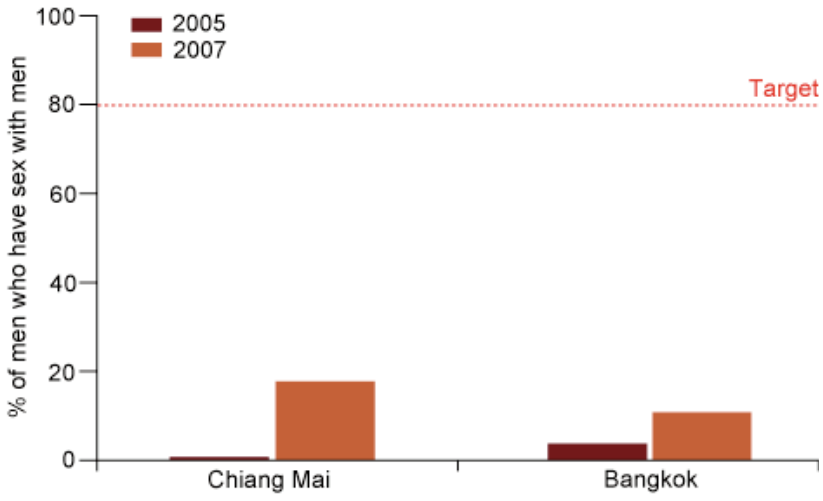
In Nepal, targeted interventions in 11 out of 15 districts are led by the men who have sex with men population themselves. In Myanmar, 38 286 (16%) men who have sex with men were reached with HIV prevention services in 2008; 80% men were reached through one nongovernmental organization — Population Services International *(5)*.

In Sri Lanka, one large community-based nongovernmental organization and several smaller community based organizations run by "gay" men meet some of the sexual health needs of men who have sex with men. In Timor-Leste, men who have sex with men interventions employ a peer educator based outreach approach and provide training, information, health education, condoms, and referral for sexually transmitted infection and voluntary testing and counselling services in selected districts with large urban populations. Maldives and Bhutan have limited interventions for men who have sex with men. In Thailand, despite the increase in coverage in the past couple of years, access to a minimal package of services for men who have sex with men is extremely low and way short of the 80% coverage target (Figure 24). In Bangladesh, Maldives and Sri Lanka, less than 20% of men who have sex with men were covered by prevention services, whereas in Nepal and Indonesia, 23% and 40%, respectively, reported having access to prevention services in the past year *(7–11)*. In India, across survey locations (17% to 97%) men who have sex with men reported having received interpersonal communication in the past year about HIV and sexually transmitted infections *(12)*.

Research conducted in Asian countries document a variety of barriers faced by men who have sex with men and the transgender population in accessing HIV testing and antiretrovirals including rampant stigma and discrimination from health care providers *(13)*. Negative societal attitudes about same-sex sexuality, stigma associated with people living with HIV, and punitive laws hinder men who have sex with men and the transgender population from accessing services. The very low HIV programme coverage for men who have sex with men in Asia indicates the need to

Figure 24: Percentage of men who have sex with men reached by minimum package of services in Bangkok and Chiang Mai, Thailand, 2005–2007

Despite increasing coverage, access to minimum package of services for MSM is extremely low



Source: Thailand Ministry of Public Health — US CDC collaboration

intensify the scale and quality of HIV prevention and care interventions among men who have sex with men, male sex workers and the transgender population.

There are many challenges in implementing interventions for men who have sex with men and the transgender population. Due to the widespread stigma, most of the men who have sex with men remain hidden and inaccessible to health services. Unless an enabling environment is created, by repealing laws that criminalize consensual same-sex sexual relations among adults, coverage of men who have sex with men programmes is likely to remain low. Moreover, increased advocacy is needed to mobilize resources for priority interventions among men who have sex with men, male sex workers and the transgender population.

Annex 2 presents the Consensus Statement that was agreed to by all governments, communities and development partner participants in the Regional Consensus Meeting on Developing a Comprehensive Package of Services to Reduce HIV among Men who have Sex with Men and Transgender Populations in Asia Pacific, held in Bangkok in June–July 2009.

Harm Reduction Interventions for Injecting Drug Users[1]

Despite an overall wider acceptance of harm reduction in the South-East Asia Region, as a public health approach and HIV prevention measure, the reach of harm reduction interventions to address the HIV epidemic among injecting drug users remains inadequate. Components of the comprehensive package of HIV prevention, treatment and care interventions for injecting drug users implemented in the countries is provided in Annex 1, Table A5.

Needle–Syringe Programmes

The number of needle–syringe programme sites ranged from 323 in Indonesia to none in the Maldives. Bangladesh reported the highest ratio of needle–syringe programme sites-to-injecting drug user populations — one needle–syringe programme for every 323 injecting drug users (or 93 sites for 30 000). In Myanmar and Thailand, there is only one needle–syringe programme site per approximately 4000 injecting drug users. In India, Indonesia and Nepal, one needle–syringe programme site was available per 825, 681 and 778 injecting drug users, respectively. Needle–syringe programmes were not officially available in the Maldives, though there are anecdotal reports of small-scale informal syringe distribution.

The reach of needle–syringe programmes was highest in Bangladesh. In 2008, 17 582 (44% to 88%) injecting drug users accessed needle–syringe programmes in the past 12 months. The National AIDS Commission in Indonesia reported 22% coverage with needle–syringe programmes in 2007, with over 49 000 of the estimated 220 000

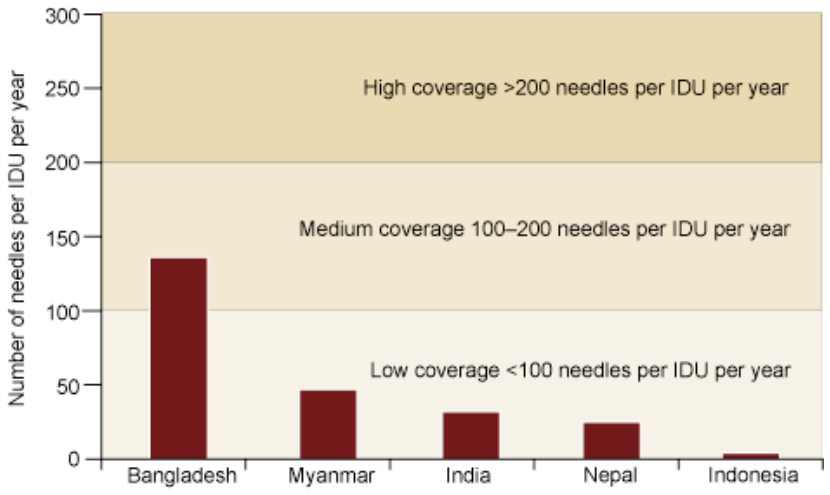
1 This section draws largely from a review paper: Sharma M, Oppenheimer E, Saidel T, Loo V, Garg R.A situation update on HIV epidemics among people who inject drugs and national responses in South-East Asia Region. AIDS. 2009 Jul 17;23(11):1405-13.

injecting drug users accessing the service during the year *(14)*. In Myanmar, 8274 of the estimated 75 000 injecting drug users (11%) were reached with HIV prevention services in 2008 *(5)*.

While information on the frequency/regularity of contact with services is not available, data from 2008 show that far too few needles–syringes were reaching injecting drug users in the Region (Figure 25). To have an impact, injecting drug users must receive a sufficient number of syringes to prevent reuse and be able to access sterile equipment as long as they continue to inject. The actual numbers of needles and syringes distributed by needle–syringe programmes in comparison with the estimated need were low, e.g. in Myanmar, 3 511 232 needles and syringes were distributed in 2008 which represents 13% of the annual requirement of at least 27 million *(5)*.

Figure 25: Coverage of needle–syringe programmes, South-East Asia Region, 2008

Too few needles–syringes distributed to IDUs



Source: Universal access country reports, 2008.
Note: Needles accessed through pharmacies and other retail are not included.

Opioid Substitution Therapy — Methadone and Buprenorphine

In 2008, opioid substitution therapy was available in a number of sites in the following countries: India (63), Indonesia (46), Maldives (1), Myanmar (7), Nepal (2) and Thailand (147) (Annex 1, Table A5). Currently only Indonesia, Nepal and Thailand allow supplies of methadone and buprenorphine. In Maldives and Nepal the number of injecting drug users accessing opioid substitution therapy were small (<150). In Bangladesh, opioid substitution therapy services are yet to commence, though

government approval for a methadone-based pilot programme now exists. The total number of injecting drug users reported to be accessing opioid substitution therapy in the Region is approximately 15 000.

The proportion of injecting drug users accessing opioid substitution therapy in each of these countries in 2008 was less than 5% — 3.9% in India, 1.5% in Indonesia, 0.7% in Myanmar and 0.5% in Nepal. In Maldives, the programme commenced in October 2008 and currently has 30 injecting drug users. Opioid substitution therapy was delivered as a community-based service in India and the Maldives but is typically based in psychiatric or "drug de-addiction" units in the other countries. In Myanmar, opioid substitution therapy was offered on in-patient basis (hospitalization) during the stabilization period in which the time frame varied among the sites. To be effective, opioid substitution therapy must be administered at therapeutic doses for an adequate duration. The reported dosage of methadone in the Region varies from a high 82.7 mg in Indonesia to a low 45 mg in Nepal (15). Intra-country doses may also vary, e.g. in Myanmar the median doses across seven sites varied between 45 and 70 mg *(16)*.

Public policy and legislative problems with regard to drug use remain a significant challenge for most countries in the Region. Methadone and buprenorphine remain unavailable and prohibitively expensive in many countries of the Region. Lack of country capacity to move beyond pilot programmes is another major constraint for injecting drug use interventions. While needle–syringe and opioid substitution therapy programmes have been in place in most countries for several years, currently a mere 3% of injecting drug users in the Region are receiving opioid substitution therapy, and 20–25% are being reached by needle–syringe programmes. Despite good outcomes of small-scale programmes, these have not been expanded to reach effective levels of coverage.

The geographical distribution of needle–syringe and opioid substitution therapy programmes within countries is not always in tune with the magnitude and trends of the epidemic. For example in India, in 2007, despite a markedly high HIV prevalence in many parts of the country (Kerala, Punjab, Tamil Nadu and West Bengal), the availability of scaled-up needle–syringe programme and opioid substitution therapy were limited largely to sites in the north-eastern states. Harm reduction services in the Region are mostly implemented by nongovernmental organizations in community settings. While this helps in reducing stigma, improving access and generating community awareness, scaling up nongovernmental organization-based services that operate outside the established public health system creates challenges, particularly in large countries, such as India and Indonesia. The lack of a scaled-up programme is commonly related to non-sustained funding. Currently, many countries in the Region have donor-dependent harm reduction interventions that are not owned by national HIV programmes.

Interventions for Prison Populations

Harm reduction interventions (needle–syringe programmes, opioid substitution therapy and condom distribution) targeting prison populations in the Region are almost non-existent, despite evidence that the prevalence of HIV infection among incarcerated injecting drug users was consistently higher than in the general population (above 10% in India, Indonesia and Thailand) *(17)*.

Indonesia remains the only country in the Region to have a national strategy (2005–2009) to guide HIV prevention, care and treatment efforts in prisons *(18)*. The strategy focuses particularly on reducing injecting drug use-related HIV transmission. No country in the Region currently offers needle–syringe programmes in closed settings. Bleach was available for the cleaning of injecting equipment in Kerobokan prison in Indonesia, and pilot condom distribution programmes have been started in a few prisons; however, anecdotal reports suggest that the condom supply is inconsistent. In Thailand, while condoms are available in two Bangkok prisons, the attitude of prison staff towards sex between prisoners could influence condom distribution *(19)*.

In closed settings, opioid substitution therapy was available only in four prisons in Indonesia, with plans to extend this service to other prisons *(20)*. Opioid substitution therapy has recently been started in Tihar jail in India by United Nations Office on Drugs and Crime (UNODC) on a small scale, and the service is expected to be extended to 60 prisoners *(21)*.

Prevention and Control of Sexually Transmitted Infections

The South-East Asia Region accounts for approximately 40% of the global burden of sexually transmitted infections *(22)*. Some countries have high rates of ulcerative sexually transmitted infections while others have a high prevalence of bacterial infections, such as gonococcal and chlamydial infections. The highest sexually transmitted infection prevalence rates in the Region are found among sex workers and men who have sex with men that have multiple partners. Clients of sex workers serve as 'bridge' populations for transmission of infections contracted during sexual intercourse to the general population.

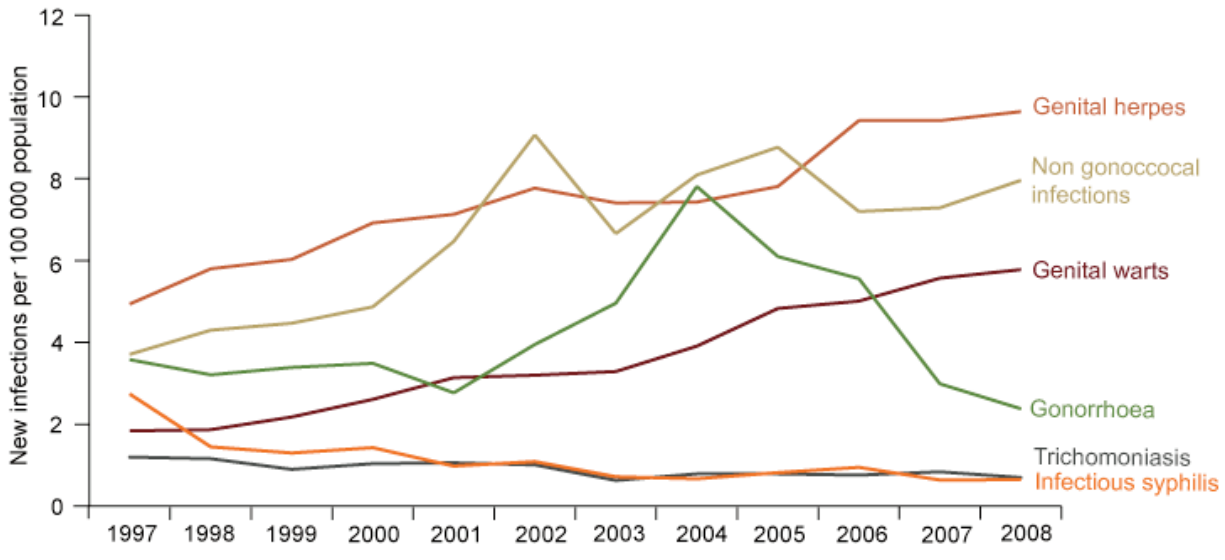
The control of sexually transmitted infections is the responsibility of the national AIDS programmes. Almost all countries in the Region have national guidelines for the management of sexually transmitted infections based on either syndromic or etiologic management or both. These guidelines aim to ensure uniform treatment of sexually transmitted infections by all practitioners in the public and private sectors. The commonly used antimicrobial drugs for the treatment of sexually transmitted infections are penicillin, azithromycin, doxycycline, metronidazole and acyclovir.

In the South-East Asia Region, private providers are often more acceptable to many people because they are perceived to offer better access and confidentiality, and are less stigmatizing than public sector facilities. Self-medication and direct over-the-counter purchases from pharmacies is a common form of management of sexually transmitted infections in this Region.

Although sexually transmitted infection control varies across the Region, India, Myanmar, Sri Lanka and Thailand have implemented successful control programmes. Sri Lanka has one of the best sexually transmitted infection control programmes in the Region. There is a well-established network of public sector sexually transmitted infection clinics at provincial and district levels, which are run by both specialist and non-specialist public health clinicians. Public health inspectors and nurses have both clinic and community outreach responsibilities including sexually transmitted infection contact tracing and visits to venues of sex workers and men who have sex with men. Following improvements in infrastructure and awareness generation, sexually transmitted infection clinic attendance increased, which resulted in an apparent increase in the incidence of some sexually transmitted infections. Even with increasing attendance, however, cases of infectious syphilis and chancroid continued to decline during this period (Figure 26).

In Thailand, the 100% condom use programme enabled sex workers to demand condom use and access sexually transmitted infection care. With the implementation of this programme through a network of sexually transmitted infection clinics, rates of curable sexually transmitted infections fell by over 95% during the 1990s. However,

Figure 26: Incidence of sexually transmitted infections, Sri Lanka, 1997–2008



Source: National STD/AIDS Control Programme, Ministry of Health, Sri Lanka

in recent years, sexually transmitted infection cases have been detected with increasing frequency among men who have sex with men and heterosexual young populations. Recent efforts have been made to improve the quality of services at sexually transmitted infection clinics in provincial hospitals. Ensuring access to sexually transmitted infection services for marginalized populations, including migrant workers, remains a challenge for the public health sector.

The Ministry of Health and Family Welfare of the Government of India has adopted a policy of integrating sexually transmitted infection prevention and management services within the existing reproductive health services. Services for the control of sexually transmitted infections are being delivered through a network of public health facilities ranging from primary health centres to district hospitals to medical colleges. These services are also offered through clinics at targeted intervention sites for bridge and high-risk populations. In 2008–2009, about 66 700 000 sexually transmitted infections / reproductive tract infection episodes were managed through the national sexually transmitted infection control programme. In addition, a large number of patients are managed by a network of private providers. Recently, a Public Private Partnership scheme was launched in 91 priority districts in 16 states. In the pilot stage of implementation, 8515 private practitioners (including 2233 allopaths and 6282 non-

Elimination of Congenital Syphilis

Several countries in the South-East Asia Region are renewing their commitment to eliminate congenital syphilis (to decrease the incidence of congenital syphilis to below 0.5 per 1000 live births in a country where more than 90% pregnant women are screened for syphilis). More newborn infants are affected by congenital syphilis than any other infection including HIV and tetanus. Though morbidity and mortality due to congenital syphilis is much higher than that due to mother-to-child transmission of HIV, control of syphilis has not received the same attention as HIV. This is mainly due to inadequate political commitment and insufficient national and international awareness of the burden of congenital syphilis.

Congenital syphilis can be eliminated by increasing awareness at all levels of the health services, supported by a high level of commitment. The community, especially pregnant women, needs to be made aware of the extent, gravity and consequences of syphilis and the need for early antenatal care and treatment. Elimination of congenital syphilis is feasible by providing antenatal care services to pregnant women, screening pregnant women for syphilis, treating seropositive women and their partners, and treating newborn infants of seropositive women. The elimination of congenital syphilis will contribute to the achievement of the three Millennium Development Goals on maternal and child health and on HIV / AIDS.

allopathic physicians) were identified, trained and provided with colour-coded drug packets for syndromic management of sexually transmitted infections *(23)*. The National AIDS Control Organization is also making efforts to strengthen the sexually transmitted infection/reproductive tract infection service delivery through targeted intervention programmes for high-risk populations, as they have the highest rates of sexually transmitted infections.

In Myanmar, 46 AIDS and sexually transmitted diseases (STD) teams of the Department of Health play a pivotal role in implementing prevention and control of sexually transmitted infections. The AIDS/STD Prevention & Control Programme is strategically located in high burden areas throughout the country. Some of the essential activities of sexually transmitted infections services include: (i) early case detection with proper diagnosis either etiologically or by a syndromic approach followed by treatment according to national guidelines; (ii) syphilis screening for pregnant women; (iii) health education and counselling; (iv) condoms promotion as well as free distribution; (v) provision of voluntary confidential testing and counselling service; (vi) contact tracing or partner notification; and (vii) special activities for high-risk populations, such as sex workers, men who have sex with men, injecting drug users.

In Indonesia, dermato-venereology clinics established at teaching and district hospitals under the sexually transmitted infection control programme provide sexually transmitted infection control services. Sexually transmitted infection prevalence in Indonesia remains high, while consistent condom use remains low. In response to the situation, an action plan entitled "National Strategy for the Control of Sexually Transmitted Infection and Reproductive Tract Infections (2008–2012)" was prepared by the Ministry of Health. The programme focuses on syndromic management of sexually transmitted infections, condom promotion, and escalating periodic presumptive treatment for sex workers in 22 provinces supported by the Global Fund to Fight AIDS, Tuberculosis and Malaria.

In Nepal, sexually transmitted infection services have expanded from 132 clinics in 2006 to 155 in 2007; about half of these clinics are run by nongovernmental organizations. A review of the sexually transmitted infection programme in 2006 revealed key areas where the national programme is strengthening its services.

Some of the key challenges in implementing sexually transmitted infection programmes include lack of laboratory capacity for diagnosis at decentralized reporting centres, inadequate participation and compliance by the private sector, lack of regular monitoring and evaluation, interrupted supply of effective dugs and increasing resistance to currently available drugs.

Blood Safety

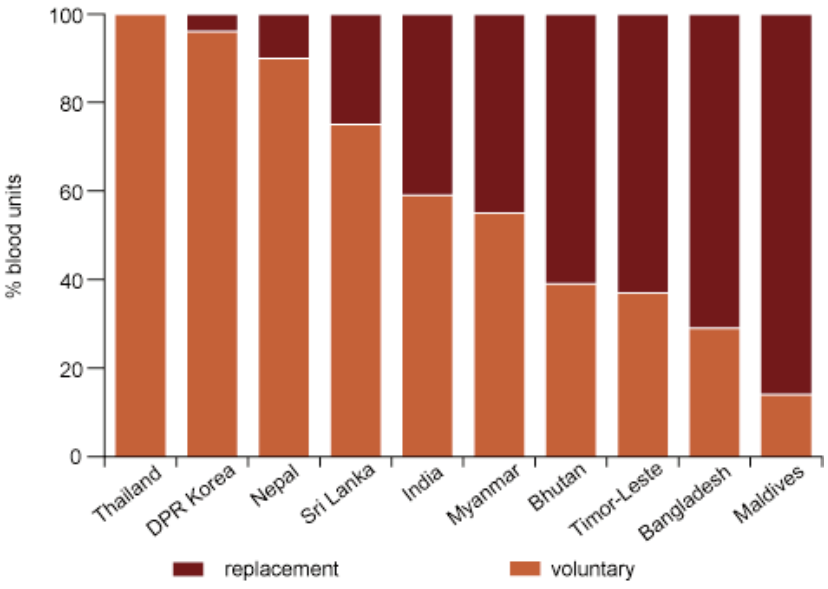
Based on 2007 data, 3456 blood banks in the South-East Asia Region collected 9.4 million units of blood annually, of a total estimated requirement of 16 million units. About 66% of the total blood is collected from voluntary non-remunerated blood donors, but country-wise variations exist (Figure 27). Two-thirds of the population of South-East Asia resides in India where more than 6 million units of blood are collected annually. Bangladesh is the only country in this Region that still permits professional blood donors. Overall in the Region, 37% of blood is converted into components and the remaining 63% is transfused as whole blood.

Six countries in the Region have a national blood policy and eight countries have nationally coordinated blood transfusion services (Annex 1, Table A7). In Myanmar, almost all blood banks are part of hospital-based clinical laboratories. Red Cross societies manage a major part of national blood transfusion services in Indonesia, Nepal and Thailand. In many countries, blood transfusion services lack adequate resources to update their technology. Moreover, blood banks need to increase their reach to enhance their donor base.

Screening for HIV and hepatitis B virus (HBV) is almost universal in the South-East Asia Region; hepatitis C virus (HCV) screening has also been initiated in several countries. Screening for infectious markers is of utmost importance in this Region because of the large number of carriers of hepatitis B and hepatitis C. Overall, 0.23% of screened blood units in the Region were found to be HIV-positive.

Figure 27: Percentage of voluntary blood donation, South-East Asia Region, 2007

Voluntary blood donation is still low in many countries



Source: National blood safety reports submitted to global database on blood safety

Post-exposure Prophylaxis

Post-exposure prophylaxis is short-term antiretroviral treatment to reduce the likelihood of HIV infection after potential exposure, either occupationally or through sexual intercourse. By end 2008, all countries in the Region reported having a national policy or protocol for post-exposure prophylaxis which covered occupational exposure (through needle-stick prick in health care settings); however, only Thailand has a policy to cover non-occupational exposure (e.g. sexual violence). Post-exposure prophylaxis is available both at tertiary and regional/district level levels in most countries. Thailand has the highest proportion of facilities reporting the availability of post-exposure prophylaxis services (78%); in all other countries post-exposure prophylaxis is available in less than 5% of health care facilities.

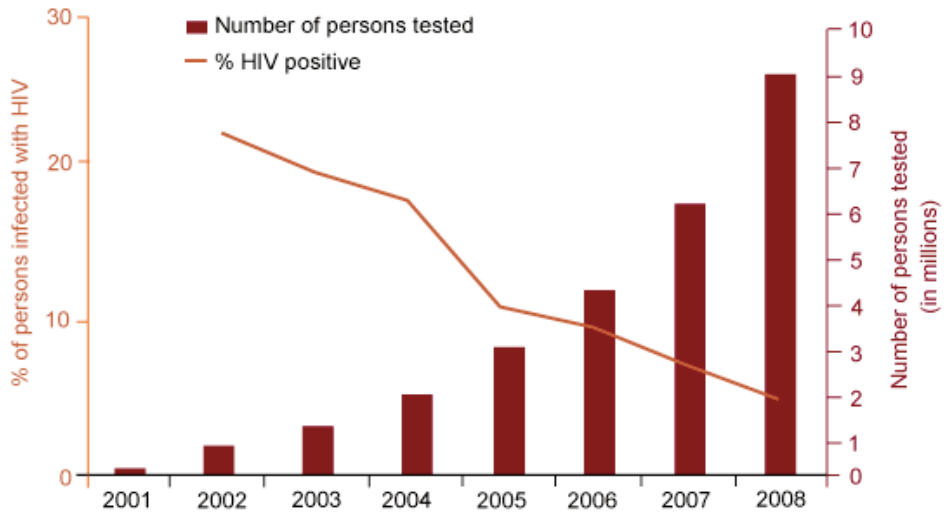
Testing and Counselling

All countries in the Region are expanding testing and counselling services and eight out of the 11 countries have a national policy on HIV testing and counselling. In the public sector, HIV testing and counselling is provided free of charge in most countries. National testing and counselling guidelines in India, Indonesia, Nepal, Thailand and Timor-Leste, include recommendations for provider initiated testing and counselling, in which health care providers routinely offer testing and counselling services to individuals likely to be at increased risk for HIV. In practice, however, the level of implementation of provider initiated testing and counselling varies widely across the Region, and a better understanding of the situation is needed.

In several countries, services are provided both by the government and private or nongovernmental organization sectors. However, in Bhutan, Maldives and Sri Lanka, the government is the exclusive provider, whereas in Bangladesh almost all testing and counselling services are done by nongovernmental organizations. During 2008, 6883 health facilities were providing HIV testing and counselling services throughout the Region. The ratio of adult population served per testing facility varies widely among countries (Annex 1, Table A8). Bangladesh has the highest number of adults served per facility as it has a concentrated epidemic mainly in major urban areas.

The scale-up of testing and counselling services in the public sector in India is exemplary and the number of facilities providing testing and counselling services has expanded from 109 in 2001 to 4817 in December 2008. Further, availability of services has decentralized over the years. Testing and counselling services now reach the district and sub-district levels, particularly in the high HIV burden areas. The number of clients accessing testing and counselling services increased from 0.14 million to 8.7 million, an impressive 60-fold increase in just eight years (2001–2008) (Figure 28). With increasing number of individuals accessing HIV testing and counselling, HIV seropositivity among clients decreased from 22% in 2001 to 5% in 2008. The improved quality of testing and counselling services is reflected by the increasing acceptance of

Figure 28: Scale-up of testing and counselling services, India, 2001–2008



Source: National AIDS Control Organization, Ministry of Health and Family Welfare, India

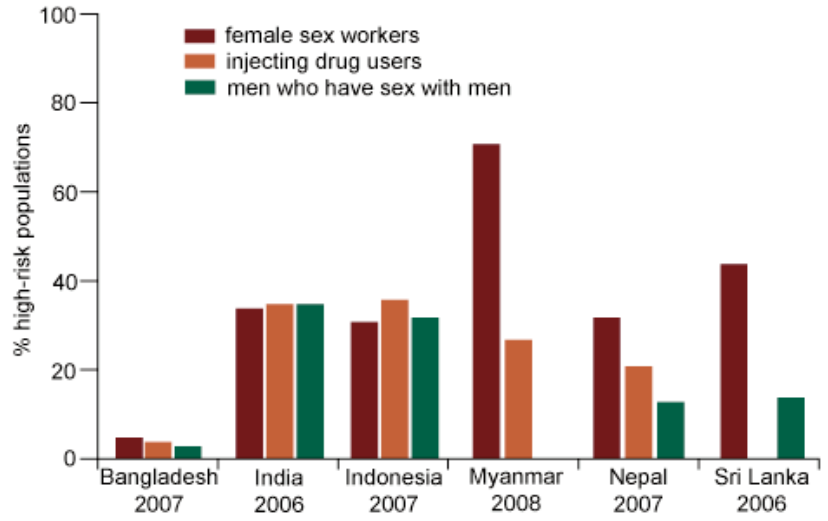
testing after counselling and increasing proportion of tested individuals receiving their results. The acceptance of HIV testing among voluntary confidential testing and counselling clients increased from 62% in 2002 to 85% in 2006 and 94% in the last quarter of 2008.

Approximately, 10.2 million individuals were tested throughout the Region in 2008. Women accounted for more than 50% of those tested in India, Myanmar, Nepal and Thailand, reflecting the contribution of women tested in antenatal services under the prevention of mother-to-child transmission programme. The number of tests per 1000 adult population is the highest in Thailand (26 tests per 1000 population), followed by India (14 tests per 1000 population).

Policy guidelines of all countries mention that testing and counselling should be targeted for high-risk populations. Overall, the proportion of sex workers, injecting drug users and men who have sex with men receiving an HIV test in the past 12 months was 30%, 28% and 23%, respectively, with few country-wise variations (Figure 29).

With the expansion of services, it is expected that the coverage of HIV testing among the sexually active general population should increase. Due to the concentrated nature of the epidemic, few population-based data are available to assess coverage in the general population. A behaviour survey among vocational students (median age 17 years) in Thailand indicates a slowly increasing trend in the uptake of HIV testing in this population *(24)*. In a household survey among youth (15–24 years) in selected townships of Myanmar, the proportion of sexually active males and females who received an HIV test in the past year was 12% and 13%, respectively *(25)*. In Maldives, 12% of youth (15–24 years) reported ever having tested for HIV *(9)*.

Figure 29: Percentage of high-risk populations who received an HIV test in the past 12 months, South-East Asia Region



Source: Reports of behavioural surveys, national AIDS programmes. Sample size was adequate as per national protocols.

High-risk populations have limited access to testing and counselling services

Interventions to Reduce the Risk of HIV Transmission from Mother-to-Child

HIV may be transmitted to the infant during pregnancy, delivery or through breastfeeding. If no interventions are provided, an estimated 30–35% of the infants born to HIV-infected women will acquire HIV. Transmission is increased among women with more clinically advanced disease, low CD4 cell counts, and high HIV viral load. Antiretrovirals and optimal infant feeding practices are necessary to reduce HIV transmission to the infant and promote child survival. The effective implementation of a cohesive plan for the prevention of mother-to-child transmission of HIV is essential to eliminate paediatric HIV. A comprehensive approach to preventing HIV among infants and young children consists of four elements: (i) primary prevention of HIV transmission; (ii) prevention of unintended pregnancies among women living with HIV; (iii) prevention of HIV transmission from women living with HIV to their children; and (iv) provision of treatment, care and support for women living with HIV, their children and families.

Most countries in the Region have made limited progress in scaling up HIV testing and counselling services to pregnant women, with provision of antiretroviral prophylaxis or antiretroviral treatment to women who require it for their own health, safer delivery care, clear guidance on infant feeding counselling and support for those who test positive for HIV. While some countries have aimed to introduce countrywide antenatal care testing, most countries have chosen to prioritize districts with higher HIV prevalence. In very low HIV burden countries, prevention of mother-to-child transmission services are offered at a limited number of centres of excellence with well

trained staff. The number of facilities providing HIV testing and counselling services per 100 000 pregnant women varies widely from less than one in Bangladesh to 315 in Myanmar.

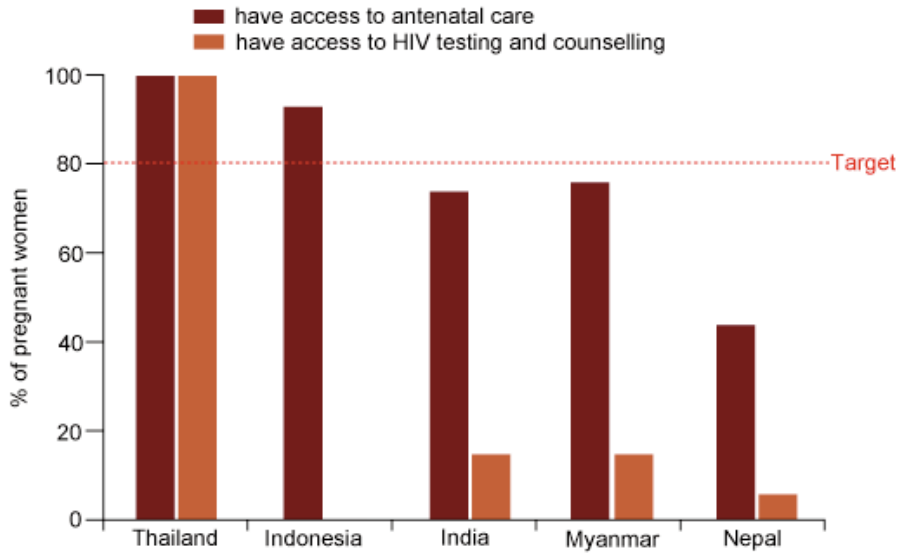
Overall, a mere 13% (range: <1% to 100%) of pregnant women had access to HIV testing and counselling (Figure 30) in 2008. Lack of access to antenatal care services has been cited as a major barrier for expanding HIV testing and counselling among pregnant women. In countries with the highest HIV burden, 45% to 100%, pregnant women access antenatal care at least once during their pregnancy. However, except in Thailand, less than 5% health facilities that provide antenatal care services also provide prevention of mother-to-child transmission services (Annex 1, Table A9). As depicted in the figure below, there are significant missed opportunities in high burden HIV countries for the delivery of HIV testing and counselling services among pregnant women who currently access antenatal care services.

During 2008, approximately 18 000 (28%) HIV-infected pregnant women received antiretroviral prophylaxis. The percentage of HIV-infected pregnant women receiving antiretrovirals varies widely from 3% in Nepal to 95% in Thailand (Figure 31). While some countries (Bangladesh, India) are using single-dose nevirapine, others use a combination of two or three antiretrovirals for prophylaxis.

Thailand is the only country in the Region to have achieved universal coverage of prevention of mother-to-child transmission services. The prevention of mother-to-child transmission programme in Thailand started as an operational research pilot

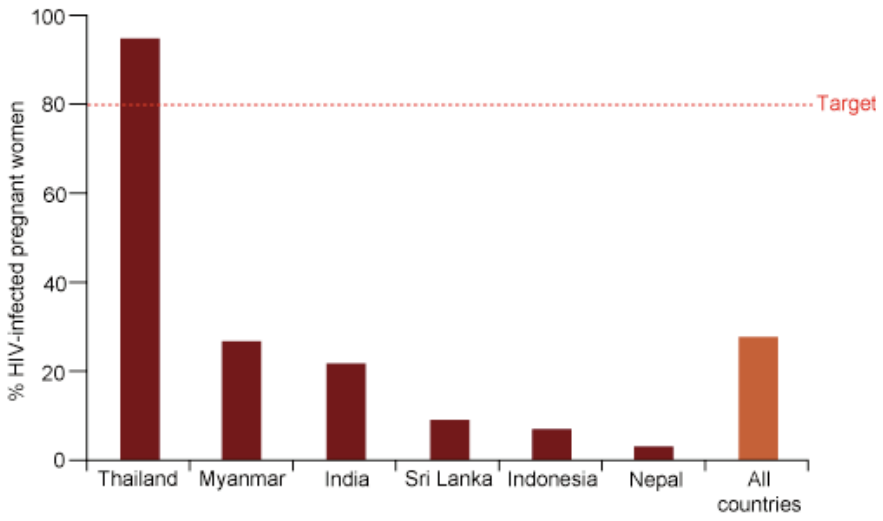
Figure 30: Percentage of pregnant women with access to antenatal and HIV testing and counselling services, South-East Asia Region, 2008

Too few pregnant women have access to HIV testing and counselling services



Source: Universal access country reports, 2008; World Health Statistics Report, WHO, 2009

Figure 31: Percentage of pregnant women with access to antiretroviral prophylaxis, South-East Asia Region, 2008



Source: Universal access country reports, 2008.

Just over a quarter of HIV-infected pregnant women receive antiretroviral prophylaxis

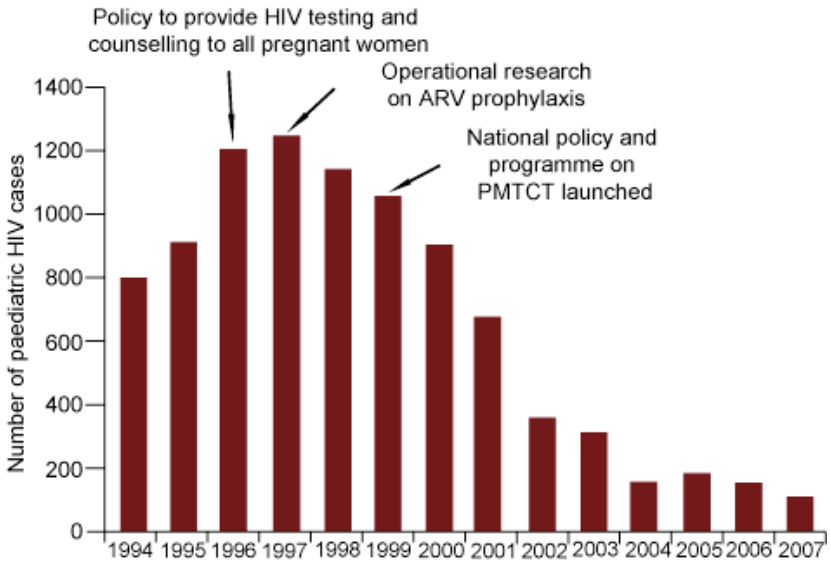
project in two areas. Following successful pilots, the programme was introduced nationwide since 1999. In 2008, of the 781 898 pregnant women who delivered in the public sector, almost 100% received HIV testing and counselling; of the 6085 found positive, 5769 (95%) received antiretroviral prophylactic drugs. The successful implementation of prevention of mother-to-child transmission programme has led to a substantial decrease in HIV transmission and a dramatic decline in the number of paediatric AIDS cases (Figure 32).

India has approximately 75% of all HIV infected pregnant women needing antiretroviral prophylaxis. In India, the prevention of mother-to-child transmission programme began in 2000 at ten teaching medical hospitals, which have now been designated as centres of excellence. In 2008, 4.2 million pregnant women were tested at 4817 government health facilities. Of the 19 986 pregnant women who tested HIV-positive, 10 280 (51%) mother–baby pairs received antiretroviral prophylaxis, indicating a high loss to follow-up after diagnosis. Currently single-dose nevirapine is being used; however, there are plans to add a seven-day zidovudine/lamivudine 'tail' for all women who receive single-dose nevirapine. In addition, National AIDS Control Organization plans to transition to more effective multi-drug antiretroviral prophylaxis in selected sites in 2010.

Key challenges in the implementation of prevention of mother-to-child transmission programme include: developing strategies to effectively identify women with HIV in the context of concentrated epidemics with low antenatal care use and high rates of non-institutional deliveries, identifying mechanisms to reduce drop outs/losses to follow-up in the chain of counselling, testing, and linkage to care in the pre-, peri- and post-partum periods, and determining the appropriate methods to identify and treat

Figure 32: Reported HIV cases among children (aged 0–4 years), Thailand, 1994–2007

Dramatic decline in paediatric HIV infections after scale-up of interventions to prevent mother-to-child transmission of HIV



Source: Bureau of AIDS, STI & TB, Ministry of Public Health, Thailand.
ARV = antiretroviral; PMTCT = prevention of mother-to-child transmission.

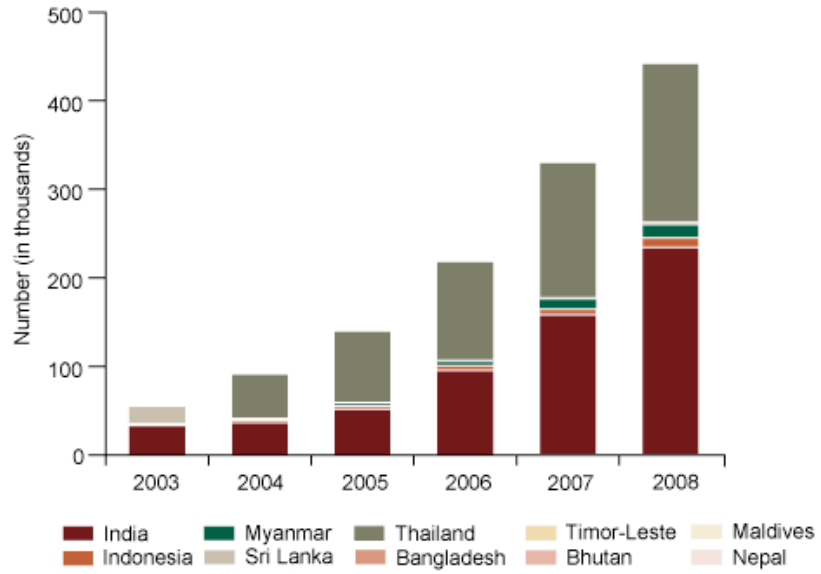
HIV-infected pregnant women in settings with very low antenatal care. Two other central challenges that will require focused attention are: (i) to improve linkages between antenatal care, reproductive and child health and antiretroviral treatment services, so that infected women are evaluated clinically and immunologically for antiretroviral eligibility, and those who require antiretrovirals for their own health are successfully linked with treatment services; and (ii) to operationalize the use of more effective multi-drug prevention of mother-to-child transmission prophylaxis regimens for women who do not yet require antiretrovirals for their own health.

Antiretroviral Therapy

There has been tremendous scale-up of antiretroviral therapy among Member countries in the Region. The number of HIV-infected persons receiving antiretroviral therapy increased eight-fold from 55 000 in 2003 to 443 000 in 2008 (Figure 33). By December 2008, antiretroviral therapy was being provided at 1453 health facilities; 88% facilities were in the government sector. Overall, 39% of all people living with HIV receiving treatment are females (range: 25% in Indonesia to 52% in Bhutan). Children constituted 5.3% of all those on treatment (Annex 1, Table A10).

The overall antiretroviral therapy coverage in the Region is 40% (Figure 34). Thailand was the first country in the Region to start antiretroviral therapy in 2000, and by December 2008 there were an estimated 179 557 HIV-infected persons on treatment, representing 71% of those in need of treatment. In other countries, the coverage of antiretroviral therapy is less than 40% — falling short of the 80% target for universal coverage.

Figure 33: Number of people with advanced HIV infection receiving antiretroviral treatment, by country, 2003–2008

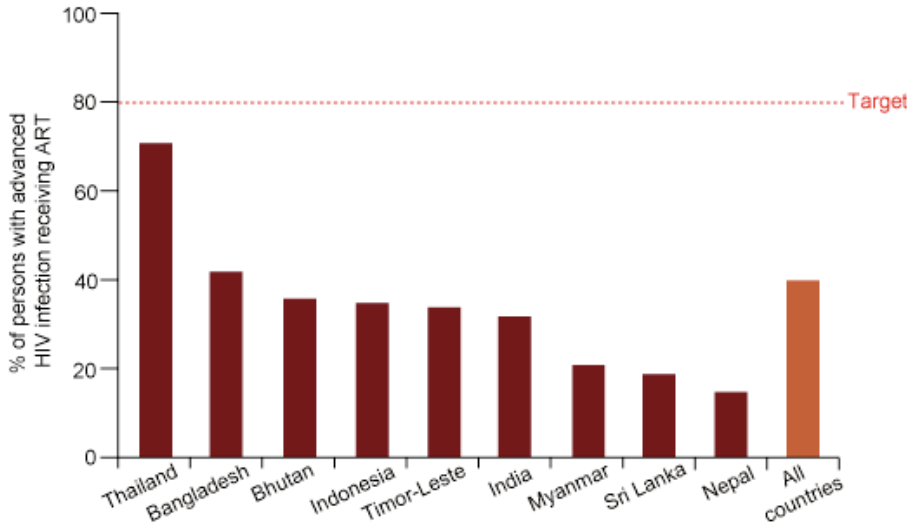


Source: Country reports.
ART = antiretroviral treatment.

Eight-fold scale-up of ART programme

Almost 90% of the need for antiretroviral therapy is in just two countries — Thailand and India. While Thailand has the largest number of health facilities providing antiretroviral therapy (1014) in the Region, India has scaled up the number of antiretroviral therapy centres from eight in 2004 to 197 in 2008. The average number of patients receiving treatment per antiretroviral therapy centre in India is very high (1189 patients per centre) compared to Thailand (177 per centre).

Figure 34: Percentage of persons with advanced HIV infection receiving antiretroviral treatment, by country, South-East Asia Region, 2008



Source: Universal access country reports, 2008.
ART = antiretroviral treatment; PLHIV = people living with HIV.

The majority of PLHIV who need treatment do not get it

Currently, all countries in the Region have national antiretroviral treatment guidelines and free national antiretroviral therapy programmes, in which standardized first-line antiretroviral treatment, is prescribed and delivered using a public health approach. The most frequent first-line regimen used in adults is AZT/3TC (D4T/3TC) +NVP (EFV) in India, Indonesia and Myanmar, followed by second-line D4T/3TC (AZT/3TC) + NVP (EFV) in Thailand. In all other countries, except Thailand, second-line therapy is provided only to a limited number of patients.

The implementation and expansion of antiretroviral therapy programmes in the Region has been accompanied by significant improvements in survival and decreases in morbidity among persons accessing care. Analyses of national programme data from six countries indicate an overall 12-month survival rate of 79% (65–82%), which is similar to rates of survival seen in other resource-limited settings.

The success of antiretroviral therapy programmes in the Region have largely been a result of strong collaborative efforts of the national programmes, with commitment from the government, civil society and advocacy groups, nongovernmental organizations and donor agencies, as well as the global momentum to provide life-saving therapies to those in need. However, to ensure success of these programmes, key challenges — such as identifying and linking infected persons to care earlier in the course of disease to prevent early mortality; developing appropriate measures to support treatment adherence and prevent loss to follow-up; and strengthening of health systems to monitor programme progress and support the effective long-term decentralization of HIV treatment services — need to be addressed. Continued advocacy and research for affordable and better tolerated drugs as well low-cost strategies to monitor treatment response are also essential elements to ensure the long-term success of antiretroviral therapy in the Region.

HIV/TB Interventions

Five countries in the Region (India, Indonesia, Myanmar, Nepal and Thailand) account for the majority of the people living with HIV and tuberculosis (TB). Collaborative activities between national HIV and TB programmes include establishing mechanisms for collaboration (such as coordinating bodies, joint planning, surveillance and monitoring and evaluation); decreasing the burden of HIV among people with TB (with HIV testing and counselling, co-trimoxazole preventive therapy, antiretroviral therapy and HIV prevention, care and support); and decreasing the burden of TB among people with HIV (with the three I's for HIV/TB: intensified case-finding, isoniazid preventive therapy and infection control for TB).

Table 2 presents the status of implementation of HIV/TB activities in five countries that have majority of the HIV/TB infected population. In general, mechanisms for collaboration have been set up in all countries in the form of coordinating bodies or

Table 2: Status of Implementation of Selected TB/HIV Strategies in High Burden Countries, South-East Asia Region, 2008

Country	Coordination	HIV surveillance in TB patients	Intensified TB case finding in PLHIV	Isoniazid preventive therapy	TB infection control	HIV testing and counselling among TB patients	Co-trimoxazole preventive therapy	Antiretroviral treatment provision
India	National and state TB/HIV coordinating bodies established	Survey in 15 districts in 2006–2007; routine reporting of HIV status in TB patients ongoing in 11 states	Symptom based screening of PLHIV at all ICTC and ART centres since 2004	Not included in national guidelines	National guidelines developed	Provider initiated voluntary T&C to all TB patients is a national policy for 11 high HIV burden states; risk-based referral in remaining states	Included in national guidelines and is available at ART centres	ART available at 197 centres
Indonesia	National HIV/TB working group established in 2003; TB/HIV collaborative activities implemented in 10 provinces	Initiated in 4 provinces	Formal referral of HIV patients to TB clinics in limited project areas	Not initiated	National guidelines under preparation	Routing HIV T&C to all TB patients in Papua; risk-based referral in other areas	Available in project areas	Provided in project areas
Myanmar	National TB/HIV coordinating body established	Annual sentinel surveillance carried out in 10 sites since 2006	PLHIV suspected to have active TB referred to TB clinics at 11 clinics	IPT implemented at pilot sites	National guidelines not in place	T&C for TB patients included in national guidelines; HIV testing among TB patients at pilot sites	CPT included in national guidelines	Limited ART availability
Nepal	National TB/HIV working group established in 2006	Sentinel surveillance carried out in 2006–2007	All people living with HIV/AIDS accessing care are screened for TB symptoms	Not part of national policy	National policy and strategy for infection control developed	Not done routinely for all TB patients	No information available	Limited ART availability
Thailand	Coordination bodies established at central, regional and local levels	Ongoing, routine testing and recording of HIV status of all registered TB patients	National guidelines updated; scaling up of intensified TB case-finding underway	IPT for people at risk included in national guidelines; IPT implemented in pilot sites	Infection control guidelines prepared; staff trained	PITC for HIV for all TB patients; 79% TB patients received HIV testing in 2009	CPT for HIV-infected TB patients with CD4 <250 cells/mm^3	ART widely available

Source: Country reports, 2009.
TB = tuberculosis; PLHIV = people living with HIV; T&C = testing and counselling; ICTC = integrated counselling and testing centre; ART = antiretroviral treatment; IPT= isoniazid preventive therapy; CPT = co-trimoxazole preventive therapy; PITC = provider-initiated testing and counselling.

joint HIV/TB working groups. Testing and counselling and antiretroviral treatment services are being scaled up in high burden areas. There has been limited implementation, however, of interventions to decrease the burden of TB among people living with HIV. Mechanisms for integrated recording and reporting of HIV/TB activities are also weak.

Thailand is successfully scaling-up HIV/TB collaborative interventions throughout the country. Coordinating bodies have been established at all levels, and regular meetings take place at the national level. Nationwide scale-up of provider Initiated Counselling and Testing for HIV among TB patients, implemented since 2007, has resulted in increased coverage of HIV testing among TB patients from 52% in 2006 to 79% in 2008. Intensified TB case finding among newly detected patients with HIV, has been initiated leading to an increase in percent of newly diagnosed HIV patients screened for TB from 81% in 2006 to 93% in 2008. Much has also been achieved in strengthening and monitoring the provision of co-trimoxazole prophylaxis and antiretroviral treatment to HIV-infected TB patients. The proportion of patients receiving co-trimoxazole prophylaxis has increased from 64% in 2006 to 69% in 2008. Approximately 38% patients with dual HIV/TB infections were receiving antiretroviral treatment in 2008. Reaching co-trimoxazole prophylaxis and antiretroviral treatment to a greater proportion of HIV/TB patients early on in the course of HIV is critical to reducing the present high death rates among HIV/TB patients. In 2007, among new smear-positive TB patients, 24% of HIV/TB patients died compared to 6.8% of TB patients with HIV-negative or unknown status.

The incorporation of TB exclusion and isoniazid preventive treatment into routine opportunistic infection care for people living with HIV attending HIV clinics, is another important but presently inadequately addressed issue in all countries. Encouragingly, pilots for isoniazid preventive treatment have been started in Myanmar and isoniazid preventive treatment is under consideration by the national HIV/TB coordinating committee in Thailand.

India is another country to have made substantial progress in scaling up joint HIV/TB activities. A national policy to coordinate common activities for HIV/AIDS and TB has been formulated by the National AIDS Control Organization and the Central TB Division. TB and HIV/TB interventions are reciprocally included in the national policies of both programmes. HIV/TB coordination activities are conducted nationwide, and have been intensified in 11 states with districts considered to have the highest HIV burden in the country. Based on reports received from nine states in 2008, of the 418 198 patients registered for TB, 73 146 (18%) were tested for HIV before or during TB treatment; of these 15% were also infected with HIV.

All countries, including India, have guidelines on co-trimoxazole prophylaxis for HIV patients; however, a variable proportion of persons enrolled in HIV care are receiving co-trimoxazole.

While important steps are being taken to implement scaled-up collaborative HIV/TB activities, several challenges remain. These include: mobilizing the necessary administrative and political will and as well as resources at all levels; building effective two-way referral linkages between HIV and TB facilities; ensuring a patient-centric approach at a unified point of care, and; building adequate capacity among HIV and TB staff at health facilities.

Strategic Information

Strategic information is the information and knowledge to influence policy making, programme development and action. HIV strategic information is required for: advocacy and resource mobilization; targeting resources to vulnerable population groups and to high transmission geographical areas; monitoring progress against planned programme objectives; as well as, measuring the impact of interventions and for being accountable to the donors, policy makers and the civil society. Key components of HIV strategic information include:

- surveillance of HIV, sexually transmitted infections and risk behaviours
- HIV drug resistance surveillance
- programme monitoring and evaluation
- research.

Surveillance of HIV, Sexually Transmitted Infections and Risk Behaviours

Systematic collection of behavioural and biological indicators is the basis for estimating the burden of HIV/AIDS and for monitoring the impact of the national response to the epidemic.

In general, surveillance activities in the Region have expanded and improved substantially over the past few years. Table A11 (in Annex 1) and Figure 35 provide the number and location of surveillance sites throughout the Region. Facility-based sentinel surveillance among different population groups is the mainstay for HIV serological data collection and community-based surveys are needed to collect data on risk behaviours. For "concentrated" epidemics, it is most important to conduct surveillance among populations engaging in high-risk behaviours. All countries in the Region (except DPR Korea) have conducted serological and/or behavioural surveillance among populations with high-risk behaviours at one or more locations. In 2008–2009, Myanmar conducted its first behavioural surveillance among female sex workers, injecting drug users, and men who have sex with men and out-of-school youth. In recent years, integrated biological and behavioural surveys were conducted

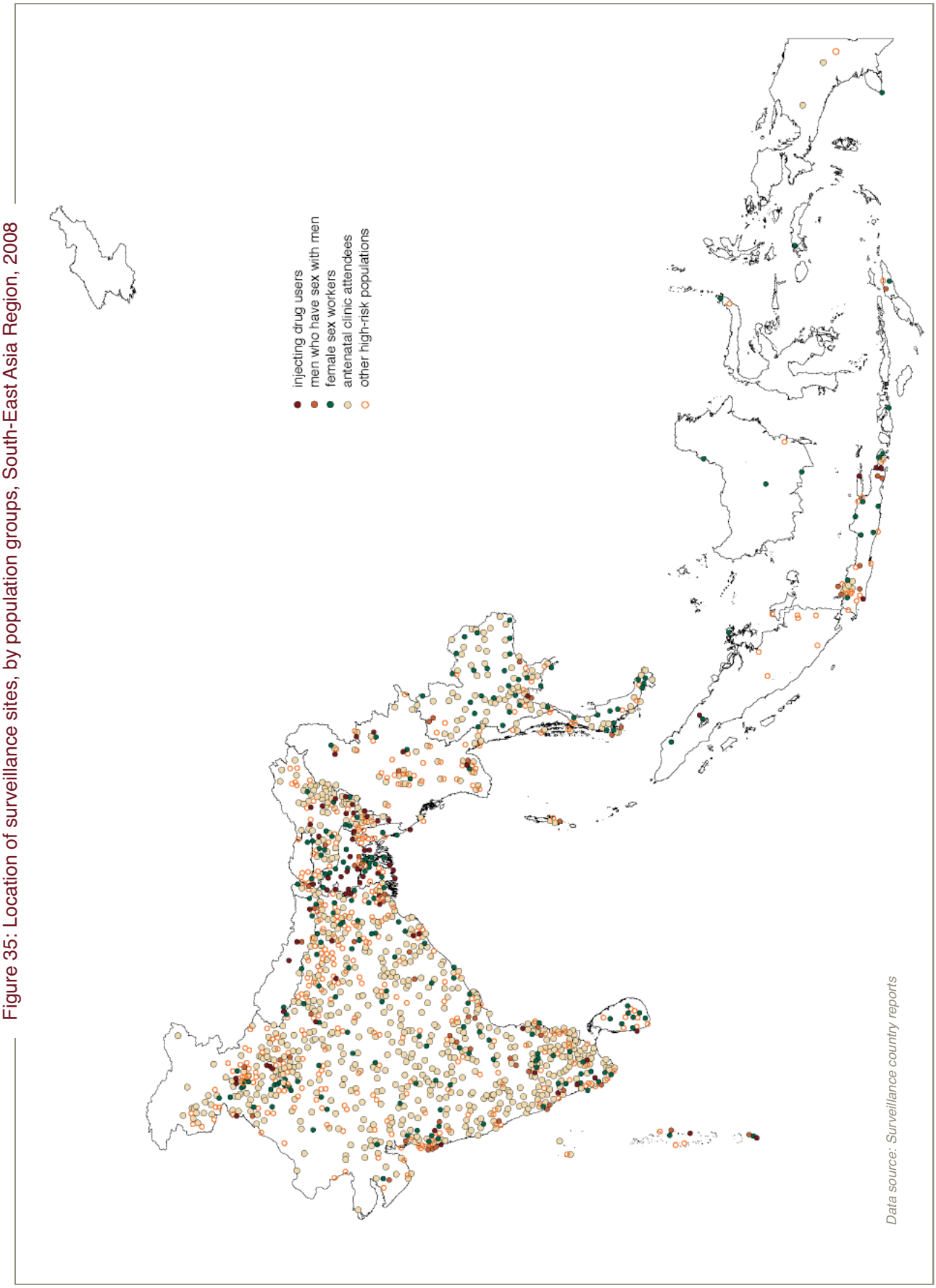


Figure 35: Location of surveillance sites, by population groups, South-East Asia Region, 2008

in many countries including India, Indonesia and Nepal. Maldives conducted integrated biological and behavioural surveys among high-risk populations for the first time in 2008. The main advantage of an integrated biological and behavioural survey is that it offers logistic convenience for collecting both biological and behavioural data at the same time. Newer sampling methodologies, such as respondent driven sampling has been used successfully to reach high-risk populations in some countries.

While surveillance in high-risk populations is of highest priority, countries with high HIV burden (India, Myanmar and Thailand) also conduct annual surveillance among pregnant women at a large number of antenatal care clinics. In addition to serological and risk behaviour surveillance, reporting of HIV / AIDS and sexually transmitted infections cases is an important and integral part of HIV surveillance system in a country. Regular reporting of cases attending health facilities can provide important data on the magnitude and trends in HIV and sexually transmitted infections cases without over-burdening the system. Unfortunately, routine reporting of HIV / AIDS and sexually transmitted infections cases is generally weak or non-existent in all countries (except Maldives, Sri Lanka and Thailand) in the Region. Information on HIV incidence is generally lacking in the Region. Thailand is the only country that conducts regular laboratory-based HIV incidence surveillance among female sex workers and antenatal care women.

The lack of availability of a reliable size of high-risk populations remains a major data gap and a barrier to effective planning and delivery of services for these populations. There has been recent commitment and efforts by the countries for better mapping and estimation of size of various high-risk populations. Also, national AIDS programmes are taking greater ownership of the process and producing national estimates of the people living with HIV. In recent years, much capacity has been built at the national level in using HIV estimates and projections tools, namely, Workbook, Estimations and Projection Package, and Spectrum *(26,27,28)*. In Indonesia and Thailand, HIV estimates and projections were made using the Asia Epidemic model *(29)*.

Implementation of HIV Drug Resistance Surveillance and Prevention Activities

As Member countries move toward Universal Access to HIV Prevention, Care and Treatment for people living with HIV, plans for the delivery and expansion of antiretroviral therapy should incorporate plans for prevention and evaluation of HIV drug resistance. Because of the occurrence of mutations during HIV replication, the chronic nature of HIV infection and the need for lifelong treatment, the development of HIV drug resistance is inevitable in populations taking antiretrovirals. As part of a national plan to evaluate and prevent HIV drug resistance, several Member countries have adapted the WHO global strategy for HIV drug resistance prevention, assessment and evaluation to the local context. Key elements of this strategy include

the implementation of systematic surveys to assess the prevalence of HIV transmission among persons recently infected with HIV and acquired HIV drug resistance among persons started on first-line antiretroviral drugs, and the collection and analysis of HIV drug resistance 'early warning indicators', which are routine antiretroviral treatment programme based indicators that provide information on preventable HIV drug resistance.

In the past three years, national HIV drug resistance working groups have been established in India, Indonesia, Myanmar and Thailand. Surveys to assess the prevalence of transmitted HIV drug resistance have been conducted in India, Indonesia and Thailand among select populations. Results from each country survey indicate the prevalence of transmitted HIV drug resistance to be below 5%. Surveys to assess the development of acquired HIV drug resistance among persons receiving first-line antiretrovirals have been implemented in India and Indonesia; and presently analysis of results is underway. Finally, the collection and analyses of 'early warning indicators' was piloted in Indonesia in 2008 and is planned in several pilot sites in India in 2009–2010.

While most other countries collect these indicators by paper-based data abstraction, Thailand has analysed data from a national HIV patient-care database representing almost 30 000 patients receiving antiretroviral treatment through the national programme. In each setting, these indicators, which include prescribing practices, appointment keeping and drug supply continuity, are really a reflection of the provision of high-quality first-line antiretroviral services. Evaluation of these factors as well as site and programme-based interventions to improve service delivery can thus serve not only to prevent the emergence of HIV drug resistance, but also to maximize the benefits of affordable first-line antiretroviral treatment to those in need.

Programme Monitoring and Evaluation

An efficient monitoring and evaluation system is the cornerstone for measuring a country's progress in providing universal access to prevention, care and treatment services by 2010 and achieving the Millennium Development Goals (i.e. to "halt and reverse the spread of HIV" by 2015). In the Region, not enough actions have been taken at the country level to fully apply, use and intricately link monitoring and evaluation to the planning and implementation of programme interventions. Thus, monitoring and evaluation systems in countries remain under-valued, under-implemented and under-used.

Monitoring and evaluation are often cited as weak elements of the health sector that need strengthening (see box on page 68). According to the recommendations of a regional consultative meeting *(30)* the essential ingredients of the monitoring and evaluation package should include: a national monitoring and evaluation plan, a monitoring and evaluation unit, key performance indicators, establishment of a

Limitations of monitoring and evaluation (M&E) systems in South East-Asia Region countries

- Fragmentation of M&E systems leading to duplication of efforts in collecting and reporting information.
- Limited coordination and lack of linkages across interventions and among departments.
- Weak health systems with limited staff and infrastructure.
- Lack of standardized recording and reporting forms for data collection and reporting.
- Lack of completeness of reporting.
- Questionable validity (accuracy) of information.
- Uncertainty of size estimates of high-risk populations (denominator data).
- Limited commitment to, and value accorded to M&E for making informed decisions.
- Inadequate analyses/triangulation of data.
- Lack of systematic reporting and dissemination of data collected from M&E.

technical working group, adequate budget, dedicated staff, adequate infrastructure, standard data collection forms, channels for data flow, data analyses, use and dissemination, and quality assurance. While most countries reported having a national monitoring and evaluation framework for health sector interventions, essential elements of the framework have not been implemented in the countries. Weak monitoring and evaluation of HIV programme, is in part, a reflection of weak health systems in countries. National AIDS programmes are making efforts in strengthening systems for monitoring and evaluation by mobilizing resources through the Global Fund.

Research

Research to acquire new knowledge and its application should be an integral part of any HIV control programme. In general, limited progress has been made in identifying and conducting priority research to improve public health programmes and practices. Moreover, the available research is not disseminated quickly or used to improve local programmes and policies.

Ground breaking research carried out in Thailand showed that four priming injections of a recombinant canarypox vector vaccine (ALVAC-HIV (vCP1521)) plus two booster injections of a recombinant glycoprotein 120 subunit vaccine (AIDSVAX B/E) vaccine regimen may reduce the risk of HIV infection in a community-based population with largely heterosexual risk *(31)*. Although the results show only a modest benefit, they offer insight for future research.

Recently, new initiatives were undertaken by India's National AIDS Control Organization to promote research. A list of priority areas for operations research was

finalized in consultation with various stakeholders. A "Network of Indian Institutions for HIV/AIDS Research comprising 16 national institutions has been constituted that will undertake research on priority areas. Also, a research fellowship scheme for graduate and post-graduate students has been announced to encourage young researchers in the country to undertake HIV research. Finally, the "National AIDS Control Organization Ethics Committee" was constituted involving experts from biomedical, clinical, epidemiological, behavioural and social disciplines, a legal expert and a representative of people living with HIV network. The Ethics Committee reviews and provides ethical clearance for research proposals that involve participation and experimentation on human participants.

National AIDS programmes must take more initiative in setting up and driving the research agenda for HIV. There is a need to strengthen research institutions and train cadres of researchers at the national level to undertake high quality research. This will require huge and sustained financial and technical investment at the country level. Also, there is a need to identify and mobilize funds for research. Allocation and disbursement of funds should be decentralized to help local programmes and partner research organizations access these funds easily. To cut delays in disseminating research findings, mechanisms should be in place for setting up research and incorporating feedback from research into policy and programme practices. Finally, there is a need for partnerships at all levels. Partnerships between the policy makers, implementing bodies and the research agencies would help in the rapid translation of research findings to policy and practice, as well as effective and speedier control of the HIV epidemic.

National Strategic Planning

In the early stages of the epidemic, countries developed short- and medium-term plans to combat HIV and AIDS. These plans were developed by the respective ministries of health with contributions from other sectors. Subsequently, HIV/AIDS planning became more broad-based and multisectoral to reflect the expanded response to HIV/AIDS. The contribution of the health sector in response to HIV/AIDS has significantly evolved over the years with greater clarity and focus on key interventions.

In addition, there has been an increasing emphasis, in recent years, on the need to strengthen health systems and maximize synergies between different health programmes. Revitalizing primary health care has been identified as a viable guiding principle to strengthen health systems, improve the quality of health and reduce inequalities in health outcomes.

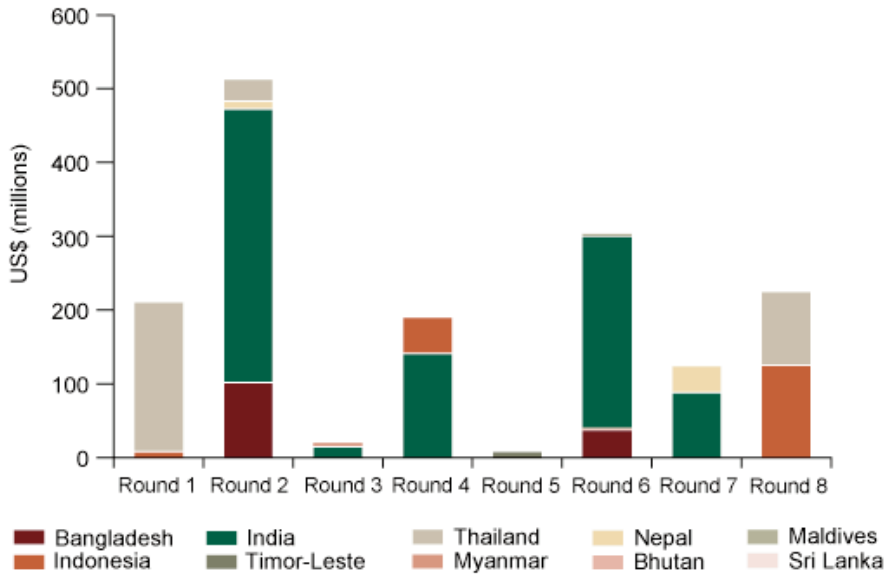
All member countries in the Region, with support from WHO and other partners, have developed their national strategic plans on HIV/AIDS as part of the national health plan. These plans are revised periodically in consultations with all stakeholders.

Partnerships

In the Region, significant partners engaged in supporting HIV / AIDS responses include the World Bank, the Asian Development Bank, UK Department for International Development (DFID), the Canadian International Development Agency (CIDA), the Swedish International Development Cooperation Agency (SIDA), the Australian Agency for International Development (AusAID) and US Agency for International Development (USAID).

The Global Fund to Fight AIDS, Tuberculosis and Malaria, is an important funding source for effective implementation of HIV / AIDS programmes. Member countries in the Region were successful in mobilizing US$ 1600 million from the Global Fund for HIV / AIDS programmes from Round 1 to Round 8 proposals (Figure 36). To ensure the sustainability of financing for HIV / AIDS it is important to integrate HIV / AIDS into the national budget review and processes for resource mobilization and allocation. Given the many other priorities for the limited national resources, external support will continue to be required to intensify and accelerate responses to HIV / AIDS. Since the start of this funding, WHO has been playing an active role in providing technical support to proposal development and the implementation of Global Fund programmes in all Member countries.

Figure 36: Resources mobilized for HIV/AIDS from the Global Fund, Rounds 1–8



Nearly US$ 1.6 billion were mobilized from the Global Fund

Source: Global Fund; http://www.theglobalfund.org/en/hivaids/

Limitations of data

Data presented in this section on national responses have several limitations. Most importantly, national data on the size of high-risk populations are unavailable, inaccurate or too old. Due to this, coverage figures for HIV programmes may be unreliable. Also, coverage data for high-risk populations are often obtained from surveys in capital cities or few urban areas and may not be nationally representative. A large majority of prevention interventions are implemented by nongovernmental organizations but unified reporting from all implementing agencies is usually unavailable. Moreover, there is limited reporting by the private sector in all countries. Thus, data on curative interventions, particularly, treatment of sexually transmitted infections and antiretroviral treatment may be incomplete and underestimated due to non-reporting by the private sector. On the contrary, sometimes reported service data may be overestimated due to double counting of the target population. For example, when two nongovernmental organizations provide services to a specific population in the same geographic area, there is a likelihood of the population being counted in the records of both nongovernmental agencies. Double counting can also occur when an individual utilizes services from more than one agency; for example, an individual may go for HIV testing to more than one health facility.

References

1. Rojanapithayakorn W. The 100% condom use programme in Asia. *Reproductive Health Matters*, 2006, 28:41-52.
2. Family Health International and Bureau of AIDS, TB and STIs, Department of Disease Control. *The Asian epidemic model. Projections for HIV/AIDS in Thailand: 2005-2025*. Ministry of Public Health, Thailand, 2008.
3. Swendeman D, et al. Empowering sex workers in India to reduce vulnerability to HIV and sexually transmitted diseases. *Social Science and Medicine,* 2009, 69(8):1157-66. Epub 2009 Aug 28.
4. Reza-Paul S, et al. Declines in risk behaviour and sexually transmitted infection prevalence following a community-led HIV preventive intervention among female sex workers in Mysore, India. *AIDS,* 2008, 22 Suppl 5:S91-100.
5. National AIDS Programme. *National strategic plan for HIV & AIDS in Myanmar: Progress report*. Ministry of Health, Myanmar, 2008.
6. National AIDS Control Organization. *Computerised management information bulletin 2008-09*. National AIDS Control Organization, India. (https://nacoonline.org/upload/M&E%20Resources/Draft%20CMIS%20BULLETIN-2008-09.pdf Accessed November 4, 2009).
7. National AIDS/STD Programme. *Behavioural surveillance survey, 2006-2007*. Ministry of Health, Bangladesh, 2007.
8. National STD/AIDS Control programme. *Behavioral surveillance survey. First round survey results. 2006-2007*. Ministry of Healthcare and Nutrition, Sri Lanka, 2007.
9. *Biological and behavioural survey findings*. Department of Public Health, Ministry of Health, the Maldives, 2008.
10. Family Health International, Ministry of Health, New Era and SACTS. *Integrated biological and behavioural survey (IBBS) among injection drug users, 2002-2007*. Family Health International, Nepal, 2009.
11. *HIV behavioural surveillance survey*. Ministry of Health, Indonesia, 2007.
12. National AIDS Control Organization. *National behavioural surveillance survey. Men who have sex with men (MSM) and injecting drug users (IDUs), 2006.* Ministry of Health and Family Welfare, India, 2007.
13. Chakrapani, V, Babu, P, Ebenezer, T. Hijras in sex work face discrimination in the Indian health-care system. *Research for Sex Work,* 2004, p12-14.
14. National AIDS Commission. *Country Report on the follow-up to the Declaration of Commitment on HIV/ AIDS (UNGASS). Reporting period 2006–2007*. Jakarta: NAC, Ministry of Health, 2008. (http://www.aidsindonesia.or.id/ documents/UNGASS%20Indonesia%20-%20small.pdf, accessed on 13 January 2008).
15. National Centre for AIDS and STD Control. *External assessment of national response to HIV/AIDS in Nepal.* Ministry of Health, Nepal. April–June 2008 (draft).

16. Thaw A, et al. Reduction in HIV risk behaviour among IDUs on methadone maintenance therapy (MMT) in Myanmar. Poster presented at the International AIDS Conference, Mexico City, Mexico, 2008 (Exhibition TUPE 0557).

17. *HIV prevention, care and treatment in prisons in the South-East Asia Region*. New Delhi, World Health Organization, Regional Office for South-East Asia, 2007.

18. *National strategy prevention and control of HIV/AIDS and drugs abuse Indonesian correction and detention 2005–2009*. Directorate General of Corrections, Indonesia, 2005.

19. Wilson D, et al. HIV prevention, care, and treatment in two prisons in Thailand. *PLoS Medicine*, 2007, 4(6):e204.

20. Irawati I, et al. Indonesia sets up prison methadone maintenance treatment. *Addiction*, 2006, 101:1525. doi: 10.1111/j.1360-0443.2006.01657.x.

21. *United Nations Office on Drugs and Crime (UNODC) Project RAS/H71*. (http://www.unodc.org/pdf/india/issues/issues01.pdf, accessed 16 November 2009).

22. *Global prevalence and incidence of selected curable sexually transmitted infections: overview and estimates*. Geneva, World Health Organization, 2001 (http://www.who.int/hiv/pub/sti/en/who_hiv_aids_2001.02.pdf accessed 5 November 2009).

23. Department of AIDS Control. *Annual report 2008–2009*. Ministry of Health and Family Welfare, India 2009. (https://nacoonline.org/upload/Publication/Annual_Report_NACO_2008-09.pdf. accessed 31 Oct 2009).

24. *Behavior surveillance survey*. Ministry of Public Health, Thailand, 2008.

25. National AIDS Programme. *Behavioral surveillance survey 2008: out-of-school youth*. Ministry of Health Myanmar, 2009.

26. R Lyerla, et al. The 2005 Workbook: an improved tool for estimating HIV prevalence in countries with low level and concentrated epidemics. *Sexually Transmitted Infections*, 2006, 82(Suppl III):iii41–iii44. doi:10.1136/sti.2006.020198.

27. T Brown, et al. Improving projections at the country level: the UNAIDS Estimation and Projection Package 2005. *Sexually Transmitted Infections*, 2006, 82(Suppl III):iii34–iii40. doi: 10.1136/sti.2006.020230.

28. Stover J, et al. Projecting the demographic impact of AIDS and the number of people in need of treatment: updates to the Spectrum projection package. *Sexually Transmitted Infections*, 2006, 82(Suppl III):iii45–iii50. doi: 10.1136/sti.2006.020172.

29. Brown T, Peerapatanapokin W. The Asian Epidemic Model: a process model for exploring HIV policy and programme alternatives in Asia. *Sexually Transmitted Infections*, 2004, 80 Suppl 1:i19-24.

30. *Monitoring and evaluation of the health sector's response to the HIV/AIDS epidemic*. Report of the Expert Consultation of 26-27 October 2007, Ubud, Indonesia. New Delhi, World Health Organization, Regional Office for South-East Asia, 2007.

31. Rerks-Ngarm S, et al and the MOPH–TAVEG Investigators.Vaccination with ALVAC and AIDSVAX to Prevent HIV-1 Infection in Thailand. *New England Journal of Medicine*, October 20, 2009 (10.1056/NEJMoa0908492).

Sustaining an Effective Response to the HIV Epidemic

Key Challenges

Lack of Enabling Environment

Widespread HIV-associated stigma in communities and discriminatory practices in health care settings is undermining HIV prevention and control efforts. Unfavourable laws, policies, and cultural and social norms that increase the vulnerability of marginalized groups to HIV infection still exist. Sex work and drug use is illegal in most countries. Men who have sex with men are a largely hidden population due to criminal sanctions against male-to-male sex in many countries. The transgender population, one of the most discriminated and stigmatized, is highly vulnerable to HIV. Although there is support of the ministries of health of Member countries to engage with and provide services to marginalized populations, the law enforcement agencies are often not adequately sensitized. Thus, access to health services remains low for the high-risk marginalized populations.

Limited Capacity of Health Systems

Effective interventions for the prevention and control of HIV exist and have been successfully implemented in some areas in the Region. However, due to weak health systems, these interventions have rarely been taken to scale or achieved the level of coverage that is needed to make an impact. The current weaknesses and gaps in the health system are largely due to under-investment in health systems. Most health services are concentrated in urban areas with limited facilities in periurban and urban areas. Diagnostic services are currently inadequate, especially at peripheral levels. District and subdistrict health facilities are usually without adequate equipments and commodities and the national supply and procurement systems are not streamlined. Lately, there has been much talk about strengthening of health systems, but little progress has been achieved.

Insufficient Health Workforce

In most countries, there continues to be a shortage of skilled staff. Many health facilities have vacant positions. Due to inadequate incentives, the national and subnational AIDS programmes face enormous challenges in recruiting skilled and competent staff. Motivating and retaining good staff is equally challenging. Unfilled staff positions, constant transfers and frequent change of leadership due to the changing political environment, undermines the implementation capacity of national and subnational AIDS programmes. Not only are the number of health care workers insufficient, but they lack the necessary technical training to provide HIV/AIDS prevention, treatment and care services as well as the managerial skills to plan, prioritize and monitor AIDS programmes.

Inadequate Coordination

As multiple agencies are involved in implementing HIV interventions, a coordinated response is needed at local, national and global levels. Without a clearly defined mechanism for effective coordination among different agencies and partners, there is often duplication and overlap of some interventions. Unfortunately, despite repeated acknowledgement of the need for better coordination, there continues to be poor collaboration between key partners, including donors, technical support agencies, national programmes and the civil society. This leads to fragmentation of the HIV response at the country level — fragmentation of service delivery, reporting systems and accounting systems.

High Prices of Antiretroviral Drugs

The prices of first- and second-line drugs continue to be unaffordable to the governments. Although the price of first-line treatment has dropped considerably over the years, large variations in prices exist between countries within the Region. With the revision of the WHO global antiretroviral treatment guidelines in 2010, there will be a substantial increase in people living with HIV needing treatment; and this will proportionately increase expenditure for first-line drugs. Second-line treatment prices are very high at the moment; this presents a significant challenge for universal access as people currently on first-line treatment progress on to second-line treatment. The prices of laboratory diagnostics and supplies will also need to be reduced, to lower the financial burden as more people start accessing HIV / AIDS treatment and care.

Gaps in Data Collection and Analyses

With the expansion of information systems, much data have been generated in countries of the Region in recent years. However, vital information on high-risk populations is still lacking. Surveillance sites for high-risk populations are too few to capture the geographic diversity of the epidemics. Information on the size of high-risk populations is unreliable in most countries. Thus, it is difficult to plan and target interventions as well as calculate coverage and outcome indicators for high-risk populations. Statistical data on HIV services are usually incomplete and untimely. There has been very little investment on operational research to scale up interventions. Populations about which more information is needed include men who have sex with men, transgender persons, and clients of sex workers including migrants. There is also a gap in synthesis and analyses of data leading to underutilization of available information for policy reforms and programmatic improvements. In general, there are limited staff and resources dedicated to HIV information systems; moreover, the available staff have limited training in surveillance, monitoring and evaluation as well as research.

Lack of Sustained Finances

Sustainable financing strategies are essential to enable countries to develop and implement long term responses to the epidemic. In most countries in the Region government funding of HIV programmes is too low to respond comprehensively to the HIV epidemic. There is heavy reliance on international funding. Some countries are dependent on donor funds for implementing even essential services, such as blood safety. While donor funds have filled critical gaps and greatly boosted national responses in several countries with limited resources, these monies usually support "few pieces" of the national response, are of limited duration, and have unpredictable continuity. Without substantial increase in domestic and international funding, service coverage and scale-up of interventions cannot be taken to the level required to meet universal access and the Millennium Development Goals.

Future Directions

Despite continuing progress in HIV prevention and control in the South-East Asia Region, much remains to be done. An estimated 200 000 individuals were newly infected with HIV in 2008. HIV transmission rates are the highest among populations engaging in high-risk behaviours, namely sex workers, men who have sex with men and injecting drug users, however the reach of prevention programmes to these populations is limited. Nearly, three out of four HIV-infected pregnant women do not receive prophylactic antiretrovirals resulting in nearly 14 000 children being born with HIV each year. The majority of the HIV-infected people are unaware of their HIV status and a large proportion do not receive treatment; even those who do receive treatment are getting it too late. Based on these observations, the following critical priority activities need the attention of countries and partners in the coming years.

1. Focusing prevention efforts on populations with the highest transmission of HIV — sex workers and their clients, men who have sex with men, the transgender population and injecting drug users.
2. Removing barriers to access to health services for high-risk populations by repealing discriminatory laws and reducing stigma in communities and health settings.
3. Decentralizing HIV testing and counselling services to enable more people to know their status.
4. Ensuring timely access to treatment by effective linkages between testing, counselling and treatment centres.
5. Improving the quality of antiretroviral treatment while improving access. Ensuring adherence support and close monitoring to "slow" the development of HIV drug resistance and thus reduce costs.
6. Integrating HIV services with related services. Particularly, programmes for preventing mother-to-child transmission of HIV should be delivered through maternal and child health services. Similarly, in countries with dual HIV/TB epidemics, HIV and TB programmes should be implemented cohesively.
7. Investing in building health systems and human resources to increase the implementation capacity for scaling-up HIV interventions. Effective supervision and better management of HIV programmes should be an integral part of strong health systems.
8. Continuing advocacy for reduced prices of antiretroviral drugs.
9. Filling in information gaps by building epidemiology capacity (both institutional and human) within countries, to carry out relevant surveillance, monitoring and research activities.
10. Undertaking research on priority topics to achieve targets for universal access including research on: effective service delivery models for scaling-up interventions and increasing adherence to treatment; simplified laboratory technologies for diagnosis and monitoring; and identifying cost-effective antiretroviral drug regimens.

Role of WHO

WHO Strengthens the Health Sector Response to HIV

The World Health Organization closely works with and supports Member States through a team of public health professionals at the WHO country offices, regional offices and the headquarters. Each high HIV burden country has at least one staff medical officer dedicated to the HIV programme. The WHO country office(s) staff provide front-line support to the national AIDS programme(s) in the respective ministries of health. They are backed-up by a team of specialized staff at the regional office(s) and WHO headquarters. Additionally, when needed, WHO draws from its network of national, regional and global expert consultants to supplement its work. WHO supports the response to HIV and AIDS through advocacy, facilitating the development of internationally agreed global norms and standards, promoting research, developing and disseminating evidence-based scientific technical tools and guidelines, and providing extensive technical assistance to countries.

WHO has the primary responsibility for promoting and supporting health sector initiatives for the prevention and control of HIV. WHO's technical work focuses on five strategic areas:

1. Enabling people to know their HIV status
2. Maximizing the health sector's contribution to HIV prevention, including sexually transmitted infection control and prevention of mother-to-child transmission interventions
3. Accelerating the scale-up of HIV / AIDS treatment and care
4. Strengthening and expanding health systems
5. Investing in strategic information to guide a more effective response.

WHO sets norms and provides guidance on policies, strategies and programmes in the five focus areas mentioned above. Through expert consultations, WHO has developed several technical documents, such as guidelines for the management of HIV infection and antiretroviral treatment for adults and children, management of opioid dependence, management of common health problems among drug users and guidelines on conducting national programme reviews. At the country level, HIV medical officers provide direct support to national AIDS programmes for adaptation of global and regional guidelines as well as support the implementation of these guidelines. For example, technical support was provided in the Region for the development of opioid substitution guidelines in Myanmar; protocols for antiretroviral drug resistance were developed in India and Indonesia; and research protocols on testing and counselling as well as evaluation of second-line antiretroviral treatment were developed in India. To draw attention to sexually transmitted infections, which are often neglected, WHO has recently developed regional strategies for its control and the elimination of congenital sexually transmitted infections.

WHO builds capacity of national authorities, partners and consultants by conducting in-country and inter-country training workshops. Areas of training include: the management of sexually transmitted infections, care and treatment for injecting drug users, recording and reporting of antiretroviral therapy programme, prevention of antiretroviral drug resistance, mapping and size estimation of populations with high-risk behaviours, HIV estimates and projections software, and programme management. Blood safety is at the heart of health sector interventions for the prevention of HIV and has received special attention. During 2001–2007 more than 170 blood bank professionals were trained under the "WHO Quality Management Project" in conjunction with the WHO collaborating centre for blood safety in Thailand.

WHO advocates creating an enabling environment for the implementation of HIV interventions, including stigma reduction and safeguarding access to medicines. The work of WHO includes providing advice and technical support to health ministries to develop enabling legislation and regulatory environments.

WHO supports health systems related to HIV/AIDS services including sexually transmitted infection management, blood safety, testing and counselling and clinical management of AIDS. To increase skills of national staff programmes in planning, prioritizing, implementing, monitoring and evaluating the national HIV responses, regional and national training workshops were conducted using participatory modular training courses in 2008–2009. An inter-country expert consultation was organized on health workforce planning, to draw attention of Member countries to this vital area in 2008. WHO assists external programme reviews and evaluation of national AIDS programmes by engaging multiple stakeholders. Recent national programme reviews conducted in Indonesia and Nepal formed the basis for the revision of national strategic plans in these countries.

WHO strengthens collaboration so that a wider range of technical and developmental partners share lessons to provide a more effective and non-duplicative support to countries. To improve collaboration among different departments within the respective ministries of health, the WHO is encouraging national AIDS programme managers to prepare joint work plans between HIV/AIDS and reproductive health programmes to scale-up prevention of mother-to-child transmission services, and to work closely with TB programmes in the implementation of the three "I"s (intensified TB case finding, infection control and isoniazid preventive treatment). At the country level, WHO staff actively participate and support the United Nations theme group activities. WHO works with regional and global funding partners to increase support to high burden countries to scale up implementation of collaborative activities.

WHO promotes research by identifying national research priorities and developing tools and generic protocols for operational research, increasing documentation and dissemination of best practices on prevention and treatment scale-up and generating

an evidence base for programmes and policies. It also provides policy advice on operational research programmes as well as scientific guidance on research protocols.

WHO assists in resource mobilization. It is enhancing and intensifying resource mobilization through regional and country initiatives that include developing systematic and long term relations with partners; mobilizing resources based on priorities and work plans; as well as strengthening advocacy and communications to enable better resource mobilization. WHO has actively supported Member countries to prepare Global Fund applications for every funding round. This has helped in mobilizing more than a billion dollars for HIV prevention, control and treatment from the Global Fund alone.

WHO facilitates exchange of information by regularly organizing annual meetings of national AIDS programme managers and other key stakeholders. This helps in building a rapport and trust with national authorities and other partners, as well providing a forum for networking and exchange of information and experiences. WHO sponsors scientific communications at international and national conferences. It also supports study tours of national staff within and outside the Region for capacity building and sharing of best practices.

Selected List of WHO documents (2007–2009)

1. *Guidelines for conducting a review of the health sector response to HIV/AIDS*. New Delhi, World Health Organization, Regional Office for South-East Asia, 2008. (http://www.searo.who.int/LinkFiles/Publications_HealthSectorResponse-AIDS2008.pdf)
2. *HIV prevention, care and treatment in prisons in the South-East Asia Region*. New Delhi, World Health Organization, Regional Office for South-East Asia, 2007. (http://www.searo.who.int/LinkFiles/Publications_TreatmentinPrisons.pdf)
3. *Regional strategy for the prevention and control of sexually transmitted infections (STIs) 2007–2015*. New Delhi, World Health Organization, Regional Office for South-East Asia, 2007. (http://www.searo.who.int/LinkFiles/Publications_WHO_Regional_Strategy_STI.pdf)
4. *Regional strategy for the elimination of congenital syphilis*. New Delhi, World Health Organization, Regional Office for South-East Asia, 2009.
5. *Management of HIV infection and antiretroviral therapy in adults and adolescents – A clinical manual*. New Delhi, World Health Organization, Regional Office for South-East Asia, 2007. (http://www.searo.who.int/LinkFiles/Publications_Management_HIV_infection_antiretroviral_therapy_adults_adolescents.pdf)
6. *HIV triangulation resource guide: Synthesis of results from multiple data sources for evaluation and decision-making*. Geneva, World Health Organization, 2009. (http://whqlibdoc.who.int/publications/2009/9789241597999_eng.pdf)

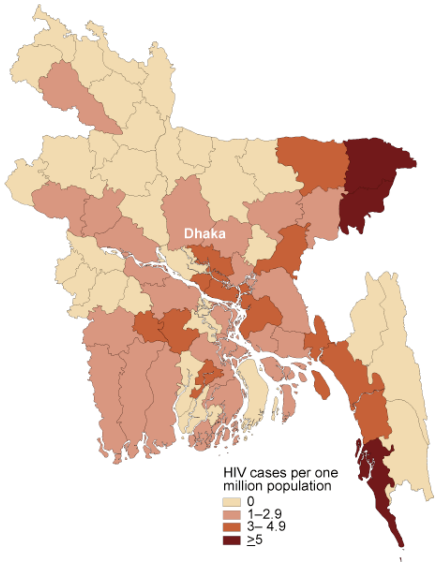
7. *Guidelines on co-trimoxazole prophylaxis for HIV-related infections among children, adolescents and adults — Recommendations for a public health approach*. Geneva, World Health Organization, 2006. (http://whqlibdoc.who.int/publications/2006/9789241594707_eng.pdf)
8. *Antiretroviral therapy for HIV infection in infants and children: Towards universal access — Recommendations for a public health approach*. Geneva, World Health Organization, 2007. (http://whqlibdoc.who.int/publications/2007/9789241594691_eng.pdf)
9. *Guidance on provider-initiated HIV testing and counseling in health facilities*. Geneva, World Health Organization, 2007. (http://whqlibdoc.who.int/publications/2007/9789241595568_eng.pdf)
10. *Antiretroviral drugs for treating pregnant women and preventing HIV infection in infant: Towards universal access – Recommendations for a public health approach*. Geneva, World Health Organization, 2006. (http://whqlibdoc.who.int/publications/2006/9789241594660_eng.pdf)
11. *Management of HIV infection and antiretroviral therapy in infants and children – A clinical manual*. New Delhi, World Health Organization, Regional Office for South-East Asia, 2007. (http://www.searo.who.int/LinkFiles/AIDS_Management_of_HIV_infection.pdf)
12. *Antiretrovirals for HIV: A compilation of facts and product information*. New Delhi, World Health Organization, Regional Office for South-East Asia, 2006. (http://www.searo.who.int/LinkFiles/AIDS_Fact-Sheet.pdf)
13. *WHO case definitions of HIV for surveillance and revised clinical staging and immunological classification of HIV-related disease in children younger than 15 years of age*. New Delhi, World Health Organization, Regional Office for South-East Asia, 2006. (http://www.searo.who.int/LinkFiles/Publications_StagingCardsChild.pdf)
14. *WHO case definitions of HIV for surveillance and revised clinical staging and immunological classification of HIV-related disease in adults aged 15 years or older*. New Delhi, World Health Organization, Regional Office for South-East Asia, 2006. (http://www.searo.who.int/LinkFiles/Publications_StagingCardsAdult.pdf)
15. *Laboratory guidelines for enumerating CD4 T lymphocytes in the context of HIV/AIDS*. New Delhi, World Health Organization, Regional Office for South-East Asia, 2007. (http://www.searo.who.int/LinkFiles/AIDS_HLM-392.pdf)
16. *Management of common health problems of drug users*. New Delhi, World Health Organization, Regional Office for South-East Asia, 2009. (http://www.searo.who.int/LinkFiles/HIV-AIDS_Primary_care_guidelines.pdf)
17. *Operational guidelines for the management of opioid dependence in the South-East Asia Region*. New Delhi, World Health Organization, Regional Office for South-East Asia, 2008. (http://www.searo.who.int/LinkFiles/Publications_guidelines_management_opioid__in_SEAR.pdf)
18. *Towards universal access: scaling up priority HIV/AIDS interventions in the health sector*. Geneva, World Health Organization, 2009. (http://whqlibdoc.who.int/publications/2008/9789241596886_eng.pdf)

19. *Priority interventions HIV/AIDS prevention, treatment and care in the health sector*. Geneva, World Health Organization, Version 1.2 – April 2009.
20. *HIV surveillance training modules (Six modules & one facilitator guide)*. New Delhi, World Health Organization, Regional Office for South-East Asia, 2007. (http://www.searo.who.int/en/Section10/Section18/Section356_4609.htm)
21. *National AIDS programme management – A set of training modules* (Nine modules). New Delhi, World Health Organization, Regional Office for South-East Asia, 2007. (http://www.searo.who.int/en/Section10/Section18/Section356_13495.htm)
22. *Training toolkit — HIV care and ART recording and reporting system*. New Delhi, World Health Organization, Regional Office for South-East Asia, 2006. (http://www.searo.who.int/en/Section10/Section18/Section1372_9911.htm)
23. ASEAN Secretariat. *Treatment and care for HIV-positive injecting drug users (set of 12 participant manuals and training manual)*. New Delhi, World Health Organization, Regional Office for South-East Asia, 2007. (http://www.searo.who.int/en/Section10/Section18/Section356_14247.htm)
24. WHO and UNAIDS. *Guidelines for using HIV testing technologies in surveillance: Selection, evaluation and implementation.* Geneva, World Health Organization, 2002. (http://data.unaids.org/Publications/IRCpub03/hiv%20surv%20guidelines_en.pdf)

Country Profiles

Bangladesh

Reported HIV cases, by district, Bangladesh, 2008

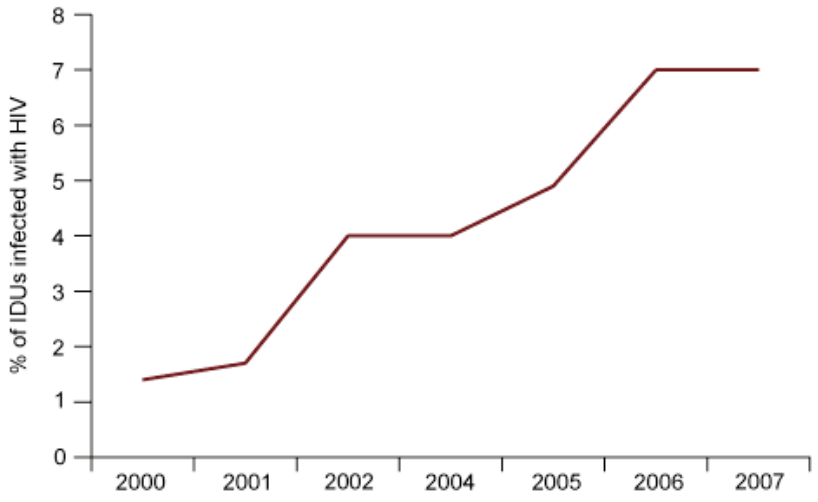


HIV is concentrated in large cities

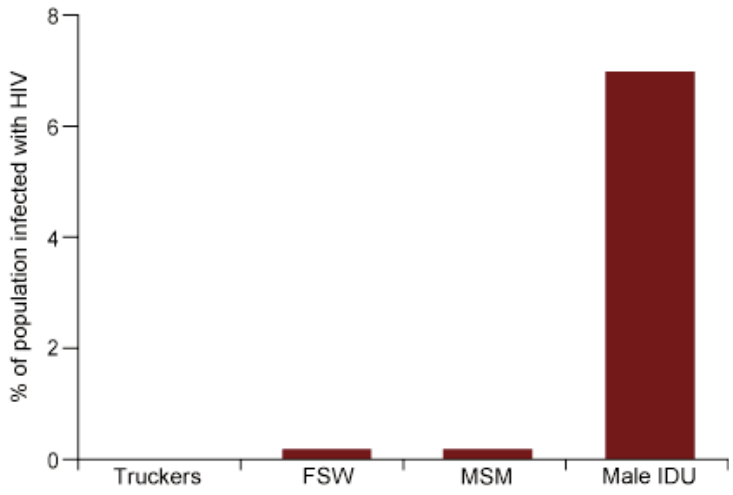
HIV burden		Population size	
First case reported:	1989	Total:	160 million
Adult HIV prevalence:	<0.1%	Sex workers:	60 000–90 000
Estimated PLHIV:	5000	IDUs:	20 000–40 000
% women:	17%	MSM:	40 000–150 000
		Hijra:	15 000

HIV prevalence among injecting drug users, Dhaka, Bangladesh, 2000–2008

HIV is increasing among IDUs in the capital city



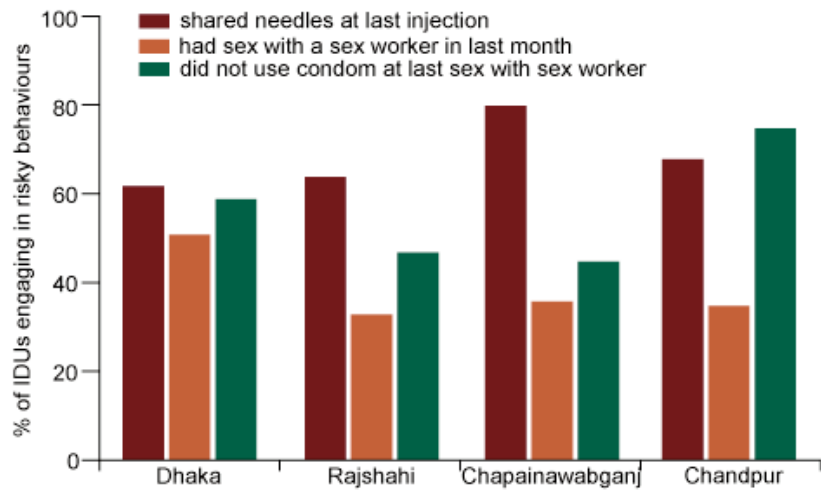
HIV prevalence among high-risk populations, Bangladesh, 2007



HIV is below 1% in all high-risk populations except IDUs

Source: Surveillance reports, National AIDS/STD Programme, Bangladesh.
PLHIV = people living with HIV; FSW = female sex worker; MSM = men who have sex with men; IDU = injecting drug user.

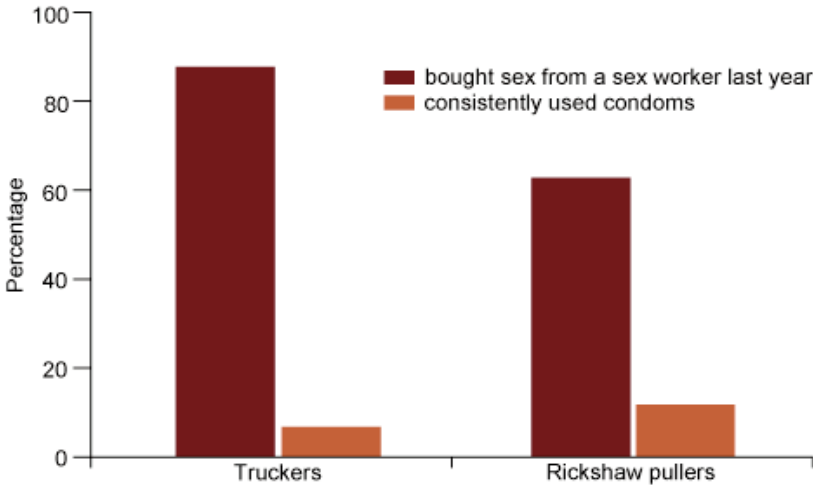
Risk behaviours among injecting drug users, Bangladesh, 2007



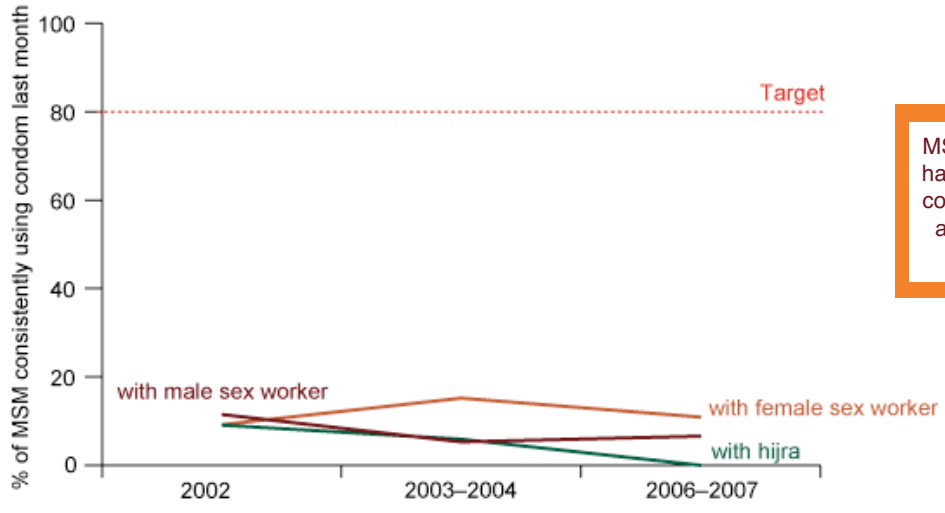
IDUs commonly engage in risky injecting and sexual behaviours

Sexual risk behaviours and condom use among truckers and rickshaw pullers, Bangladesh, 2007

Many Bangladeshi men buy sex but few use condoms



Consistent condom use among men who have sex with men, by type of partner, Bangladesh, 2007



MSM continue to have low rates of condom use with all commercial sex partners

Source: Surveillance Reports, National AIDS/STD Programme, Bangladesh
FSW = female sex worker; MSM = men who have sex with men; IDU = injecting drug user

Epidemic situation

HIV prevalence is steadily increasing among injecting drug users (IDUs) in the capital city, Dhaka. An upward trend in HIV is also seen among female sex workers (FSWs) in Hilli District (bordering West Bengal, India). In the rest of the country, HIV is very low even among high-risk populations. The potential of HIV spread, however, remains very high due to prevailing risky behaviours — a large proportion of men buy sex but few use condoms. IDUs commonly lend and borrow injecting equipment; there is a sizeable population engaging in commercial and non-commercial male-to-male sex but condom use is almost negligible. Moreover, there is much overlap in risk behaviours — a large proportion of IDUs also buy sex but usually do not use condoms; men who have sex with men (MSM) have multiple male and female partners and some also inject drugs.

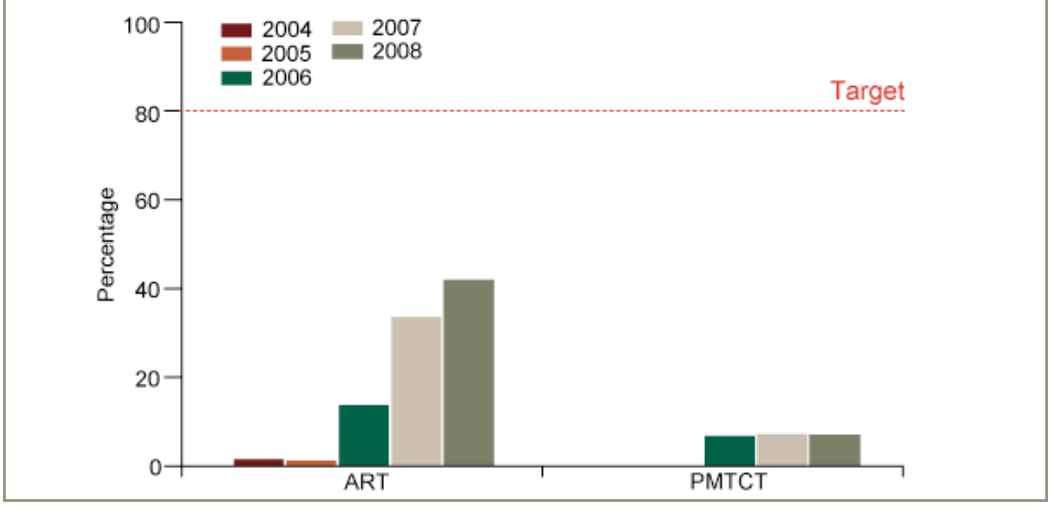
National response

The National AIDS and STD Programme of the Ministry of Health and Population is the government agency responsible for implementing HIV prevention and control programmes. The government's response to the epidemic is guided by the National Strategic Plan (2004–2010). Prevention interventions for high-risk populations are mostly implemented by a large number of nongovernmental organizations. Key partners include International Centre for Diarrhoeal Disease Research, Bangladesh, Institute of Epidemiology, Disease Control & Research, Care International, Family Health International, Save the Children USA, the World Bank and the United Nations organizations.

Programmatic coverage

Prevention interventions: Bangladesh was the first country in the Region to include harm reduction in its national strategic plan and implement targeted interventions on

Coverage of ART and PMTCT interventions, Bangladesh, 2004–2008



Source: Country reports.
Note: Antiretroviral treatment (ART) is given to individuals with advanced HIV infection as per national treatment protocols. prevention of mother-to-child treatment (PMTCT) interventions include antiretroviral prophylaxis for HIV infected pregnant women.

a large scale for high-risk populations. Harm reduction interventions are currently delivered through 93 needle–syringe programme sites (3.1/1000 IDUs). In 2008, approximately 4 000 000 needles–syringes were distributed (136/IDU/year). Opioid substitution therapy is not available at the moment. Sexually transmitted infection (STI) services for sex workers are provided in 154 targeted intervention sites (1.7/1000 sex workers). There are limited services for MSM.

Testing and counselling: One public and 83 private (including NGO) facilities are providing testing and counselling services across the country. In 2008, 24 101 individuals were tested for HIV. The coverage of testing and counselling is very low with only 5% FSW, 4% IDU and 3% MSM reporting that they were tested in the past 12 months and received their results.

Prevention of mother-to-child transmission (PMTCT): Only one health facility is providing PMTCT services. In 2008, 62 pregnant women received HIV testing and their results; 6 (7.2%) HIV-infected pregnant women received antiretroviral prophylaxis.

Antiretroviral therapy (ART): At six facilities located mostly in large cities, 283 adult patients were receiving ART in December 2008.

Strategic information: Sentinel HIV sero surveillance and behavioural surveillance among high-risk populations has been carried out regularly since 1998. There are plans to expand sentinel surveillance to additional sites and initiate integrated biological and behavioural surveillance among IDUs in Dhaka where HIV has been increasing over the years. STI surveillance is weak and HIV/AIDS case reporting is ad hoc. In 2007, districtwise mapping and size estimates were done for 54 (out of 65) districts for IDUs and sex workers. National indicators for monitoring and evaluation have been identified but no system has been set up for collection, analyses and dissemination of routine programme data within the National AIDS and STD Programme.

Programmatic gaps
• Low coverage of prevention interventions for high-risk populations • Limited capacity of the public health system
Data gaps
• Inadequate data on coverage of prevention services for high-risk populations • Lack of routine programme monitoring data
Priority actions
• Scaling-up prevention interventions for high-risk populations • Strengthening capacity of the public health system • Establishing a countrywide monitoring and evaluation system for HIV interventions • Strengthening sexually transmitted infection surveillance system

Bhutan

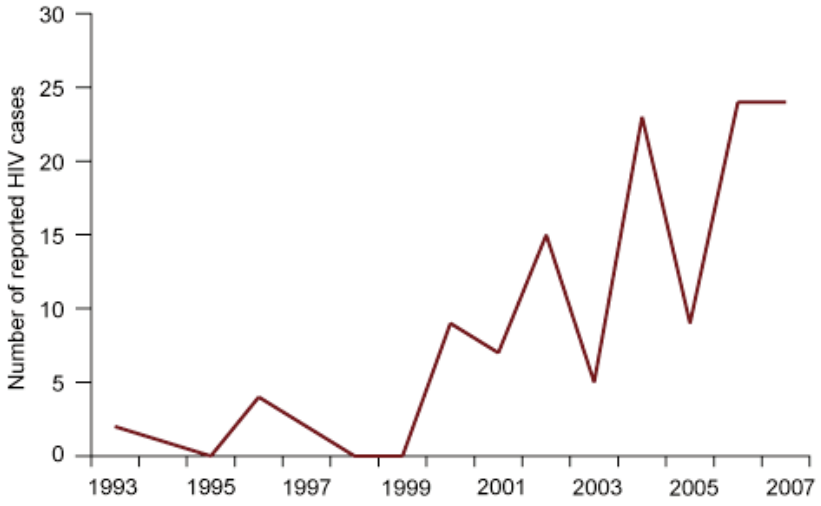
Reported HIV/AIDS cases, by district, Bhutan, 2008

The majority of HIV infections are reported from the capital city or areas bordering India

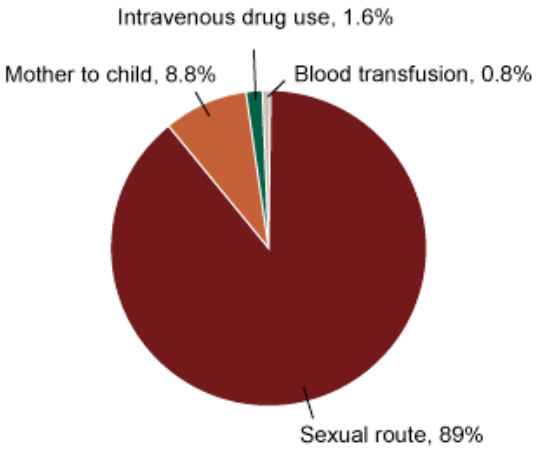
HIV burden		Population size	
First case reported:	1993	Total:	0.69 million
Adult HIV prevalence:	<0.1%	Uniformed personnel:	5000
Estimated PLHIV:	<1000		
% women:	50%		

Distribution of HIV/AIDS cases by mode of transmission, Bhutan, 2008

Steady increase in number of reported HIV/AIDS cases



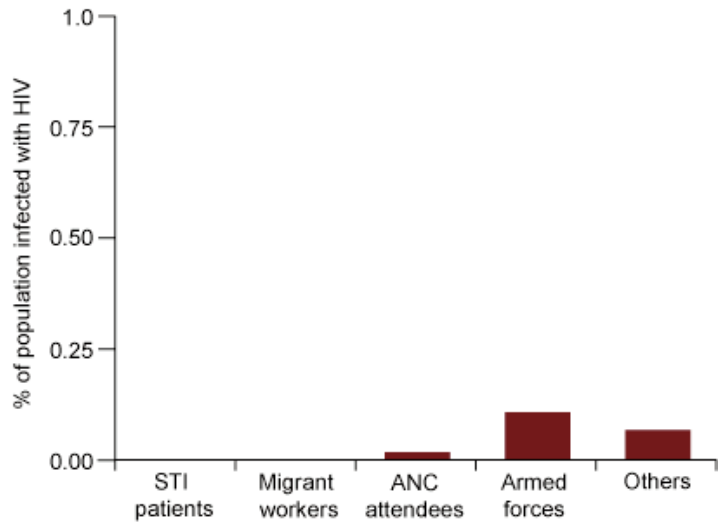
Reported HIV/AIDS cases, Bhutan, 1993–2008



The majority of HIV infections are sexually transmitted

Source: Surveillance reports, National HIV/AIDS and STI Control Programme, Bhutan.
PLHIV = people living with HIV.

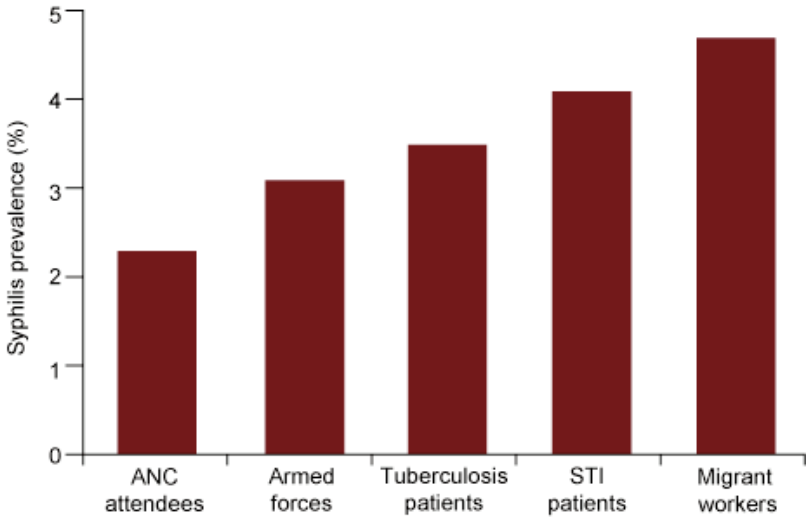
HIV prevalence, by population group, Bhutan, 2006



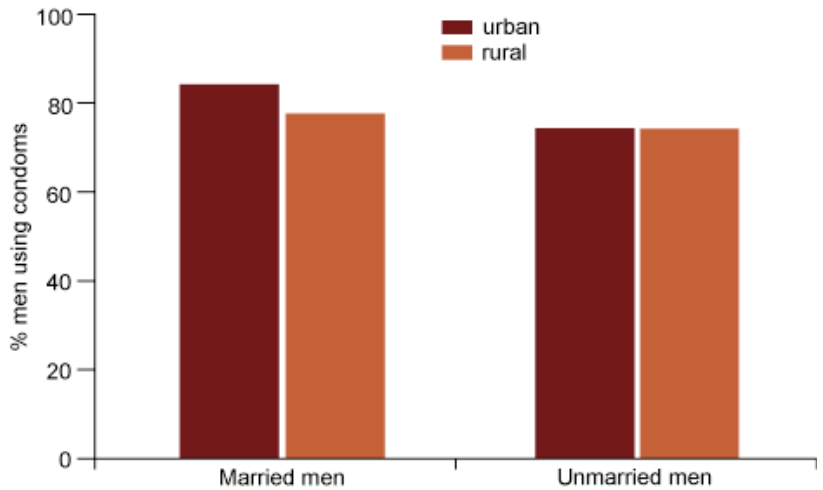
HIV prevalence is much below 1% in all population groups

Prevalence of syphilis, by population group, Bhutan, 2006

Rates of STIs are relatively high



Percentage of rural and urban men using condom, by marital status, Bhutan, 2007



The majority of men use condoms with non-regular partners

Source: Surveillance reports, National HIV/AIDS and STI Control Programme, Bhutan
PLHIV = people living with HIV; FSW = female sex worker; MSM = men who have sex with men; IDU =injecting drug user; ANC = antenatal clinic; STI = sexually transmitted infection.

Epidemic situation

While the current burden of HIV is low, there is a high potential for the virus to spread. Increasing sex work from towns along India's border to interior districts, relatively high rates of sexually transmitted infections (STIs) and a large mobile population are key risk factors for the spread of HIV through the sexual route. Moreover, the reported widespread casual sex (multiple and concurrent sex partners) among both men and women can potentially cause a large-scale heterosexual epidemic in the general population. Proximity to neighbouring high HIV burden countries with substantial epidemics among people who inject drugs (China, India and Nepal) makes Bhutan vulnerable to the spread of HIV through injecting drug use too.

National response

The Royal Government of Bhutan began HIV / AIDS prevention activities in 1988, five years before the first HIV case was reported in Bhutan. At the central level, the National HIV / AIDS Commission, constituted in 2004, functions as the multi-sectoral coordinating body for the national response to HIV and AIDS prevention and control. The National AIDS Control Programme in the Ministry of Health is responsible for implementation of HIV and STI interventions. The National Strategic Plan (2008–2013) emphasizes the importance of a multi-sectoral response to HIV, focusing on behaviour change communication and condom promotion, and HIV interventions for high-risk populations for effective control and prevention of HIV. There are few national nongovernmental organizations working in HIV prevention and control. Key international partners include the the World Bank, Global Fund and United Nations agencies.

Programmatic coverage

Prevention interventions: Prevention services for HIV and STIs are integrated within the health system at different levels. HIV information and education, syndromic treatment of STIs and counselling and referral for HIV testing is offered at the basic health units. Few targeted interventions for high-risk populations are implemented in selected urban areas and border towns. However, there is little data available on the coverage of prevention programmes for high-risk populations.

Testing and counselling: Voluntary testing and counselling is currently being expanded to the level of basic health units. By the end of 2008, testing and counselling services were provided at 34 public health facilities where 4770 individuals were tested.

Prevention of mother-to-child transmission (PMTCT): Across the country, 34 health facilities are providing PMTCT services. Five HIV-infected pregnant women received antiretroviral prophylaxis in 2008.

Antiretroviral therapy (ART): At two facilities, 30 patients were receiving ART in December 2008.

Strategic information: The surveillance system includes reporting of HIV / AIDS cases, sero-surveillance among sentinel populations and syndromic reporting of STIs. Moreover, one round of behavioural surveillance survey among the general population (including youth) has been completed. Systematic mapping and size estimation of vulnerable populations have not been initiated. While key monitoring and evaluation indicators have been defined, there is no uniform recording and reporting system to monitor HIV prevention, care and treatment services.

HIV financing: The total planned budget for 2008 was US$ 1 947 000. The World Bank is the largest external donor contributing to 58% of the budget followed by the Global Fund, which contributed 40% of the annual budget.

Programmatic gaps
• Inadequate control of sexually transmitted infections • Access to testing and counselling services is low • Insufficient targeted interventions for sex workers, migrants and other vulnerable populations
Data gaps
• Lack of data on location and size of high-risk populations • Lack of routine programme monitoring data on availability and coverage of prevention
Priority actions
• Mapping and size estimation of high-risk populations • Establishing prevention services for sex workers, migrants and other vulnerable populations • Strengthening sexually transmitted infection control • Scaling up testing and counselling services • Setting up a uniform monitoring and evaluation system to monitor prevention, care and treatment services

DPR Korea

Epidemic situation

To date, no HIV infection has been detected in any of the citizens of the Democratic People's Republic of Korea (DPR Korea). Cumulatively, 28 foreigners, who tested positive from 1998 to 2008, have been deported back to their countries. Currently, there is little epidemiological information on HIV, sexually transmitted infections (STIs) and risk behaviours. Mapping of high-risk populations has not been done. However, several factors that could contribute to an epidemic of STIs and HIV in the future exist. These include low awareness about HIV prevention, cross-border travel between DPR Korea and China, poor quality of blood transfusion services and limited services for the diagnosis and management of STIs and HIV.

National response

Recognizing the increasing number of HIV cases in neighbouring countries, the Government of DPR Korea has taken several measures. The National AIDS Committee was established in 1988 and comprises representatives from governmental institutions, nongovernmental organizations, academic institutions and social organizations. The National AIDS Programme is administered through the Department of Hygiene and Communicable Diseases Control under the Ministry of Health. The National Strategic Plan on HIV/AIDS Prevention and Control (2008–2012) has been formulated to strengthen national capacity for prevention and control of HIV/AIDS to prepare for a possible HIV epidemic. The Plan aims to enhance multi-sectoral collaboration for the prevention and control of AIDS. It also aims to improve awareness on HIV/AIDS among the general population. The Strategic Plan has not been translated into action due to lack of information on the HIV situation and financial constraints.

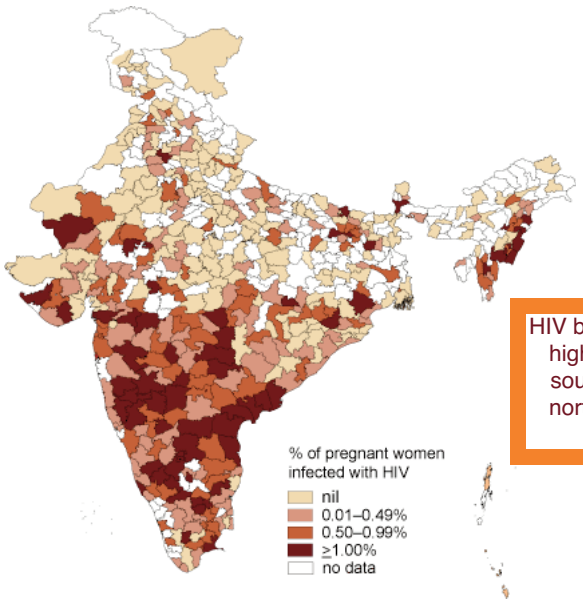
HIV testing facilities were established at the central anti-epidemic station, 10 provincial and 13 border-county anti-epidemic stations. However, these centres are not well equipped and do not have well-trained manpower. There is no systematic mapping of the increasing number of mobile populations that cross international borders from areas along the the country's border and sea-ports. Systematic screening for the management of sexually transmitted infections is also lacking.

According to the Global Fund application, Round 9, the estimated budget for HIV control in 2008 was US$ 831 000 of which US$ 750 000 was contributed by national sources. The main external donors were WHO, United Nations Children's Fund and Red Cross.

Programmatic gaps
• Inadequately developed sexually transmitted infection services • Limited number and quality of centres for HIV testing and counselling • Poor quality of blood transfusion services
Data gaps
• No information on high-risk populations • No information on sexually transmitted infections and HIV risk behaviours
Priority actions
• Mapping and estimation of size of population at risk for HIV particularly in urban areas and towns along the international borders. • Undertaking risk behaviour surveys among high-risk populations • Improving blood transfusion services • Establishing HIV testing and counselling centres in urban areas and towns along international borders

India

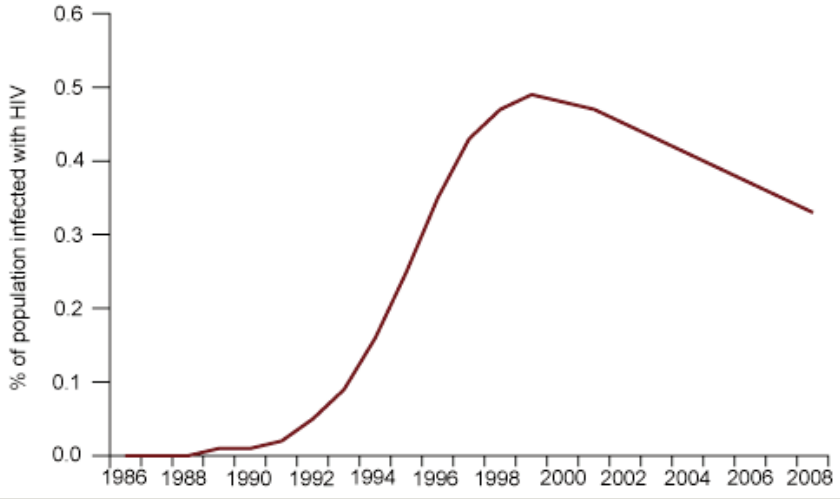
HIV prevalence among ante natal attendees, by district, India, 2007



HIV burden is the highest in the southern and north-eastern states

HIV burden		Population size	
First case reported:	1986	Total:	1.18 billion
Adult HIV prevalence:	0.34%	Sex workers:	0.8–1.2 million
Estimated PLHIV:	2.3 million	IDUs:	0.16 million
% women:	39%	MSM:	2.5 million

HIV prevalence among adult population, India, 1986–2008



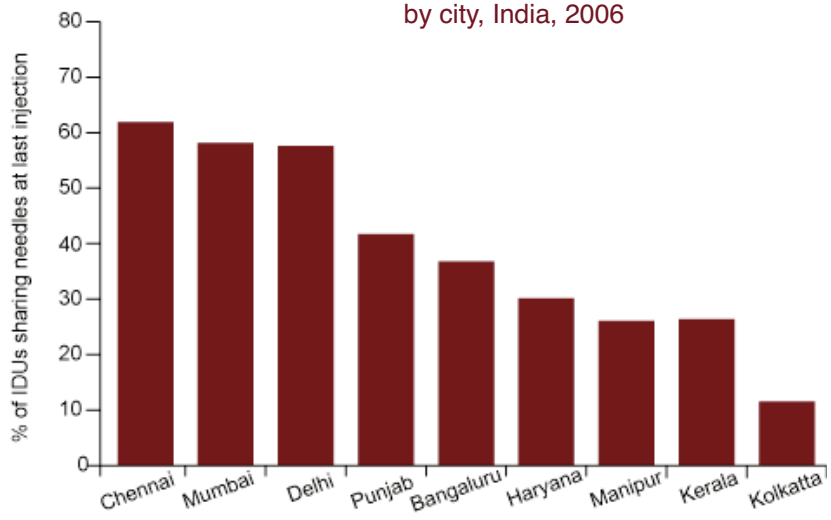
Overall, the HIV epidemic is declining

Prevalence of a sexually transmitted infections among female sex workers, by city, India, 2006

High rates of STIs among female sex workers

Source: Surveillance reports, National AIDS Control Organization, India.
PLHIV = people living with HIV; FSW = female sex worker; MSM = men who have sex with men; IDU =injecting drug user; STI = sexually transmitted infection.

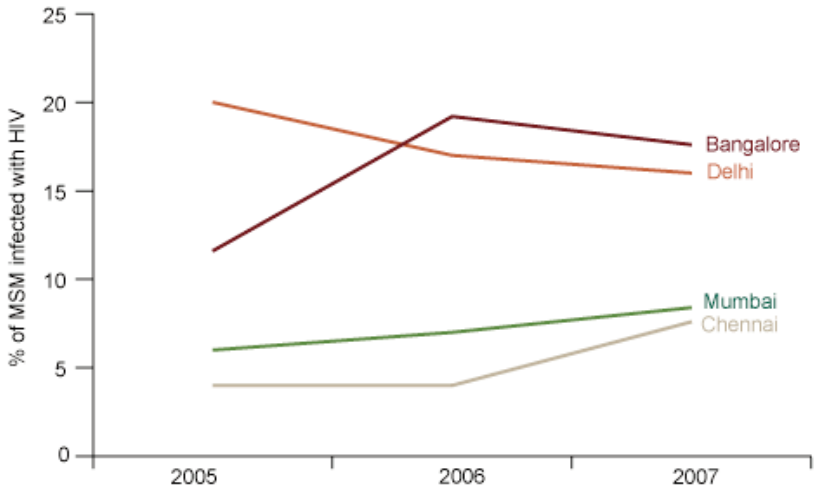
Percentage of injecting drug users sharing injecting equipment, by city, India, 2006



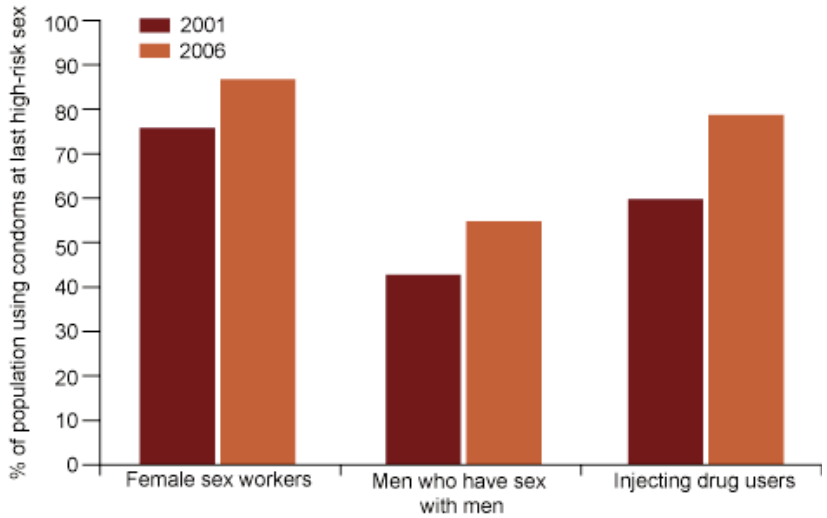
Sharing of injecting equipment is common among IDUs

HIV prevalence among men who have sex with men, by city, India, 2007

HIV prevalence among MSM is consistently high in several urban areas



Condom use among high-risk populations, India, 2001–2006



Condom use is increasing among high-risk populations

Source: Surveillance Reports, National AIDS Control Organization, India.
IDU = injecting drug user; MSM = men who have sex with men.

Epidemic situation

India has multiple and diverse HIV epidemics among different populations in different geographical areas. Long standing sexual epidemics in the southern states have begun to decline. However, continuing epidemics among injecting drug users (IDUs) in metro cities as well as newly emerging epidemics among IDUs in Chandigarh, Kerala and Punjab, are of concern as they can seed sexual epidemics in these areas. In general, improvements have been noted in condom use at high-risk sex but sexually transmitted infection (STI) rates are still high among sex workers and men who have sex with men (MSM). HIV prevalence has been consistently high or is increasing among MSM in urban areas. There is a sizeable population of internal migrants but more data is required to understand HIV patterns in this population.

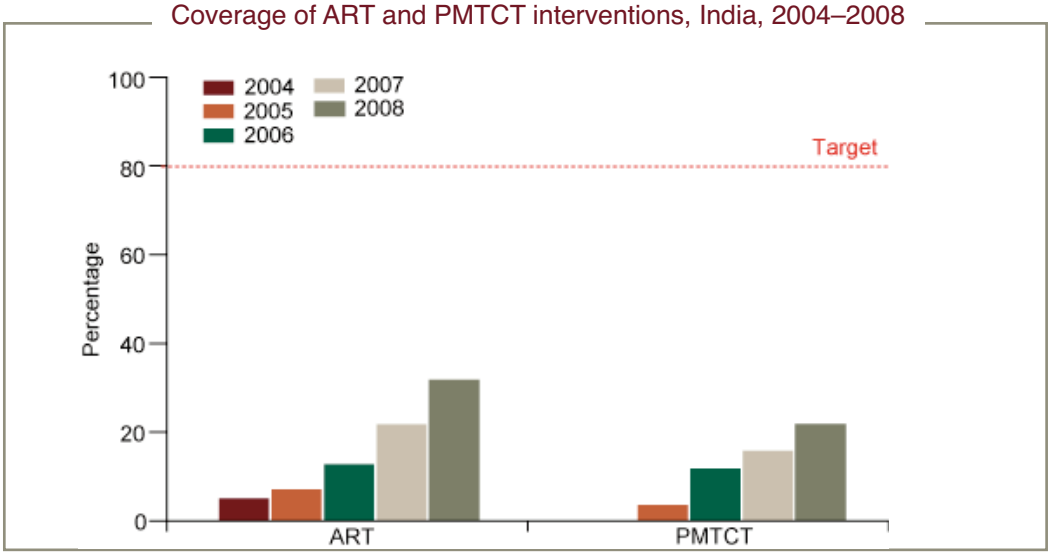
National response

The response to the HIV epidemic is headed by the National AIDS Control Organization (NACO) in the Ministry of Health and Family Welfare. The State AIDS Control Societies are responsible for implementing NACO's policies and programmes at the state and district levels. Prevention interventions are implemented by a large number of national nongovernmental organizations and many international partners, such as the Bill and Melinda Gates Foundation, UK Department for International Development, World Bank, United Nations, United States Agency for International Development, Centers for Disease Control and Prevention, Global AIDS Program and Family Health International, provide technical and financial support.

Programmatic coverage

Prevention interventions: Harm reduction interventions are delivered through 200 needle–syringe programme sites (1.2/1000 IDUs) and 63 opioid substitution therapy sites (0.38/1000 IDUs). In 2008, approximately 5 300 000 needles–syringes were

Coverage of ART and PMTCT interventions, India, 2004–2008



Source: Country reports.
Note: Antiretroviral treatment (ART) is given to individuals with advanced HIV infection as per national treatment protocols. prevention of mother-to-child treatment (PMTCT) interventions include antiretroviral prophylaxis for HIV infected pregnant women.

distributed (32/IDU/year). Sexually transmitted infection (STI) services for sex workers were provided at 234 targeted intervention sites (0.2/1000 sex workers). The coverage of prevention services for IDUs ranges from 10% to 83% across states; approximately 56% of FSWs and 17–97% MSM have been reached by targeted interventions.

Testing and counselling: More than 4000 government health facilities across the country are providing testing and counselling services. In 2008, 8.7 million individuals were tested. Approximately a third of FSWs, IDUs and MSM reported having been tested for HIV in the past 12 months.

Prevention of mother-to-child transmission (PMTCT): By December 2008, 4817 health facilities were providing PMTCT services in the public sector. In 2008, 4 234 401 of 29 087 691 pregnant women (15%) received HIV testing and their results. Currently, only 10 280 (21%) of HIV infected pregnant women receive antiretroviral (ARV) prophylaxis.

Antiretroviral therapy (ART): At 197 facilities located mostly in urban areas, 234 237 patients, including 13 211 children were receiving ART in December 2008. The survival rate for patients who have been on first-line treatment for a year is 80%.

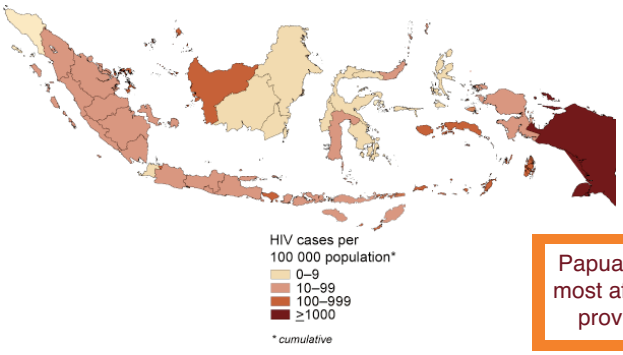
Strategic information: Sentinel sero-surveillance is carried out once a year among high-risk and low-risk populations in more than 1100 sites across the country. Behavioural surveillance survey was done at the state level in 2001 and 2006. STI surveillance and HIV/AIDS case reporting systems are weakly implemented. A strong computerized management information system helps to generate programme data from intervention sites. Recently, additional data have been generated from the integrated biological and behavioural surveillance among high-risk populations and population-based National Family Health Survey-3. Mapping and size estimation of high-risk populations was recently conducted to obtain district level data for high-risk populations.

HIV financing: The total estimated resource requirement for five years (2007–2012) is US$ 2.5 billion. In 2008, of the planned budget of US$ 460 million, 45% were from national funds including a World Bank loan. Global Fund is the largest among external donors.

Programmatic gaps
• Inadequate harm reduction interventions in large cities and areas where IDU epidemics are newly emerging • Inadequate prevention services for MSM • Low coverage of PMTCT services
Data gaps
• Unreliable data on coverage of high-risk populations • Little data on risk of HIV among mobile populations
Priority actions
• Scaling-up prevention services for MSM and harm reduction interventions for IDUs; sustaining the coverage of sex worker interventions • Increasing access to counselling, testing and PMTCT, and ART services; strengthening linkages between testing and counselling centres and ART facilities • Establish early warning indicators to monitor emergence of ARV drug resistance

Indonesia

Reported HIV/AIDS cases, by Province, Indonesia, 2008

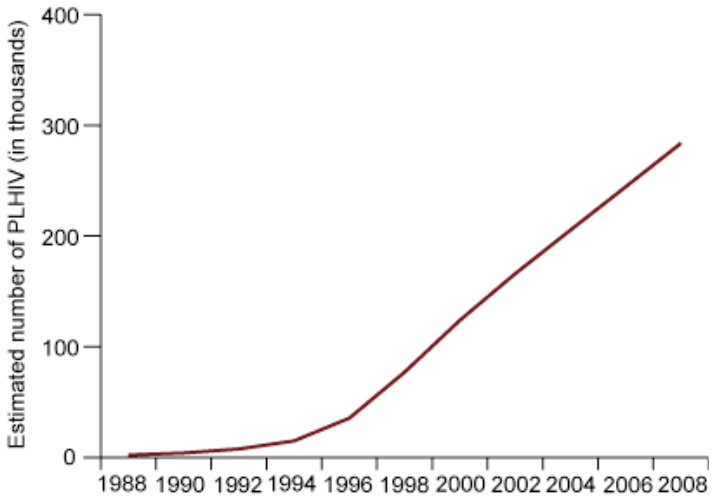


Papua is the most affected province

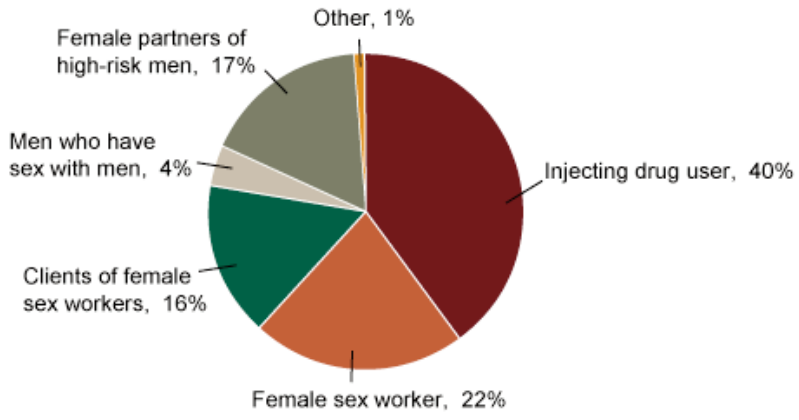
HIV burden		Population size	
First case reported:	1987	Total:	227 million
Adult HIV prevalence:	0.17%	Female sex workers:	221 000
Estimated PLHIV:	270 000	IDUs:	220 000
% women:	28%	MSM:	766 000
		Waria:	28 000
		Male prisoners:	96 000

Estimated number of people living with HIV/AIDS, Indonesia, 1988–2008

Rapidly growing epidemic



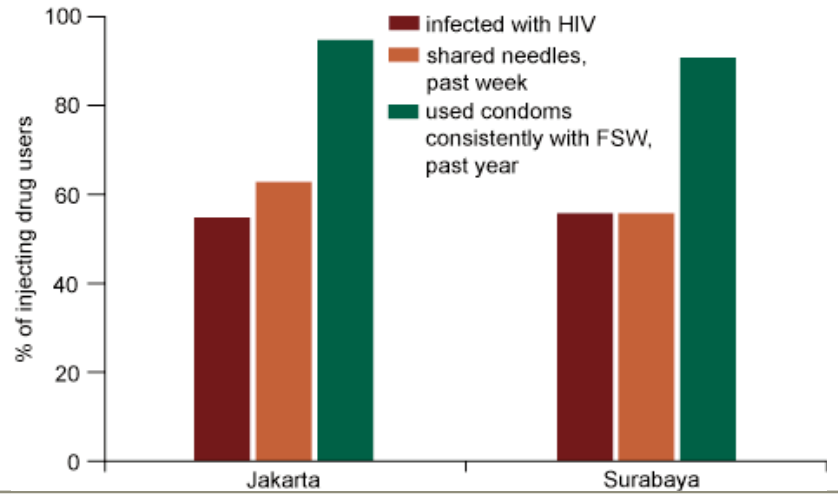
Distribution of HIV infections, by population group, Indonesia, 2008



Nearly two-thirds of all new infections are among IDUs and sex workers

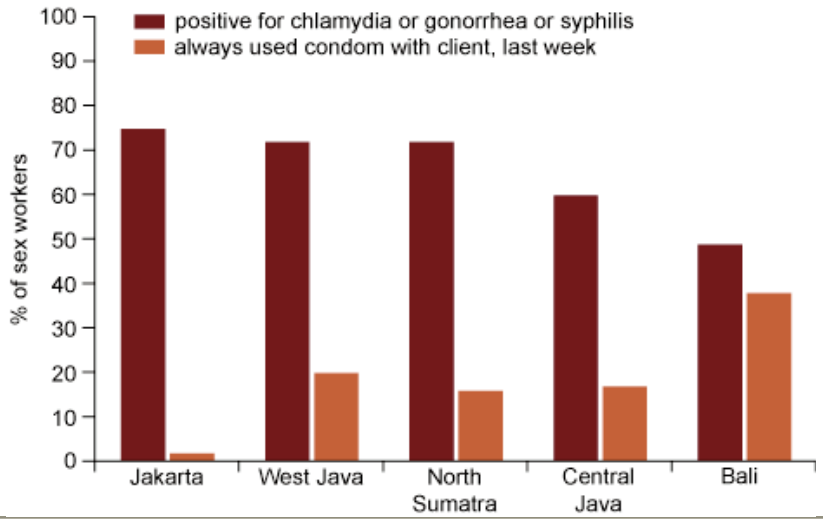
Source: Surveillance reports, National AIDS Programme, Ministry of Health, Indonesia.
PLHIV = people living with HIV; FSW = female sex worker; MSM = men who have sex with men; IDU = injecting drug user.

Prevalence of HIV and risk behaviours among injecting drug users, Indonesia, 2007



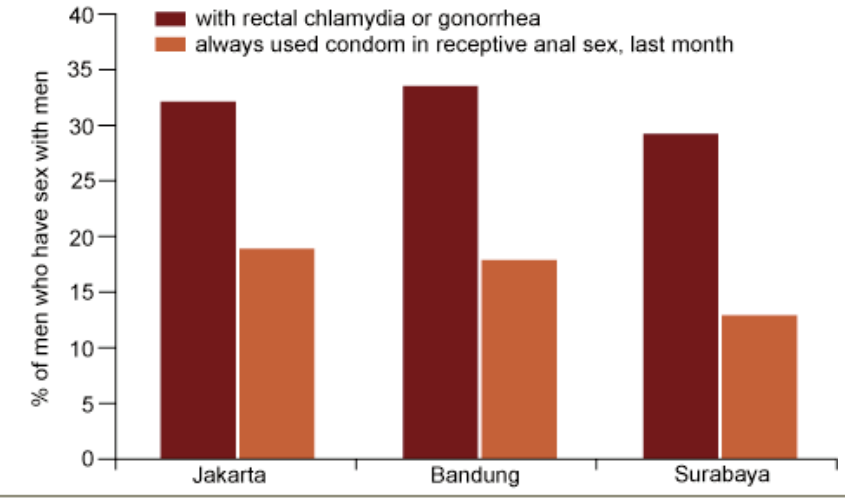
Many IDUs are infected. Risky injecting and sexual risk behaviours are common

Prevalence of sexually transmitted infections and condom use among female sex workers, Indonesia, 2007



Half to three-quarters of sex workers have STIs; condom is infrequently used

Prevalence of sexually transmitted infections and condom use among men who have sex with men, Indonesia, 2007



High prevalence of STIs and low condom use among MSM

Source: Surveillance reports, National AIDS Programme, Ministry of Health, Indonesia.
STI = sexually transmitted infection; FSW = female sex worker; MSM = men who have sex with men.

Epidemic situation

Indonesia has one of the fastest growing HIV epidemics in Asia. HIV is disproportionately high among injecting drug users (IDUs; 43–56%), female sex workers (FSWs; 6–16%), and men who have sex with men/transgender persons (MSM/TG; 2–34%). Injecting drug users account for 40% of new infections. In two Provinces of Papua, the epidemic is affecting the general population with 2.4% of the surveyed adult population being infected with HIV. High rates of sexually transmitted infections (STIs) and low condom use are important biological and behavioural risk factors for the continuing sharp increases in HIV infections particularly among sex workers and their clients who constitute a large "bridge" population. It is projected that in the coming years HIV incidence will continue to rise and high-risk populations, namely IDUs, FSW and their clients and MSM, will account for nearly 85% of all new infections.

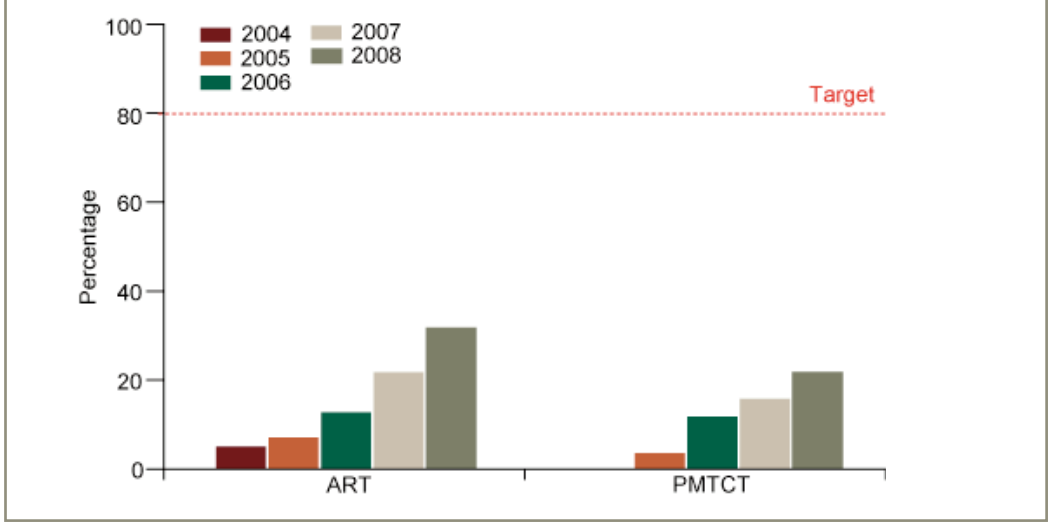
National response

The National AIDS Commission established in 1987 oversees the national response to HIV. The national HIV/AIDS strategic plan 2007–2010 serves as a national guideline for implementers of the HIV programme. Numerous nongovernmental organizations and community-based organizations are implementing HIV activities. Key international partners include the Global Fund, Australian Agency for International Development, Family Health International and United Nations agencies.

Programmatic coverage

Prevention interventions: Harm reduction interventions are delivered through 323 needle–syringe programme sites (1.47/1000 IDUs) and 46 opioid substitution therapy sites (0.21/1000 IDUs). In 2008, approximately 800 000 needles–syringes were

Coverage of ART and PMTCT interventions, Indonesia, 2004–2008



Source: Country reports.
Note: Antiretroviral treatment (ART) is given to individuals with advanced HIV infection as per national treatment protocols. prevention of mother-to-child treatment (PMTCT) interventions include antiretroviral prophylaxis for HIV infected pregnant women.

distributed (4/IDU/year). STI services were provided at 245 targeted intervention sites (1.1/1000 sex workers). The coverage of IDUs, FSW, and MSM by prevention services is 45%, 40% and 40%, respectively.

Testing and counselling: Testing and counselling services are provided at 475 public and 72 private facilities across the country. In 2008, 109 544 individuals were tested for HIV. The percentage of FSW, IDU and MSM who were tested for HIV in the past 12 months and received their results was 31%, 36% and 32%, respectively.

Prevention of mother-to-child transmission (PMTCT): By end 2008, 21 health facilities were providing PMTCT services. In 2008, 5335 of 5 256 203 pregnant women (0.1%) received HIV testing and their results. Only 165 (7.2%) of HIV infected women received antiretroviral prophylaxis.

Antiretroviral therapy (ART): At 150 facilities, 10 616 patients were receiving ART in December 2008. The survival rate for patients who have been on first-line treatment for a year is 65%.

Strategic information: Second generation surveillance includes reporting of HIV/AIDS cases by mode of transmission and integrated bio-behavioural surveillance among IDUs, MSM, FSW, waria and high-risk men. Sentinel surveillance was done at selected prison sites. Province-wise size estimation of high risk populations and national estimates and projection of HIV prevalence, incidence and mortality were made in 2008. STI surveillance is weak and programme monitoring and evaluation systems are generally fragmented.

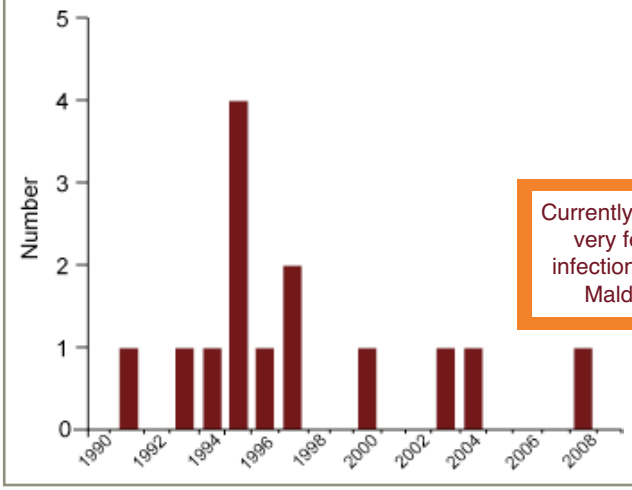
HIV financing: In 2006, the total AIDS expenditure was about US$ 56.6 million of which 27% was funded by central and local governments. Of the total international funds, bilateral partners contributed to 68% of funds.

Programmatic gaps
• Low coverage of prevention services for high-risk populations • Low coverage of testing and counselling, prevention of mother-to-child transmission and ART services
Data gaps
• Inadequate data on coverage of prevention services for high-risk populations
Priority actions
• Urgent scaling up of harm-reduction interventions in priority Provinces • Controlling sexually transmitted infections • Scaling up of prevention, care and treatment services • Streamlining monitoring and evaluation systems

Maldives

HIV burden		Population size	
First case reported:	1991	Total:	0.3 million
Adult HIV prevalence:	<0.1%	Sex workers:	900–4000
Estimated PLHIV:	<1000	IDUs:	300–2000
		MSM:	1600–4100
		Sea men:	10 000–14 000
		Resort workers:	15 000–18 000

Reported number of HIV/AIDS cases, Maldives, 1990–2008

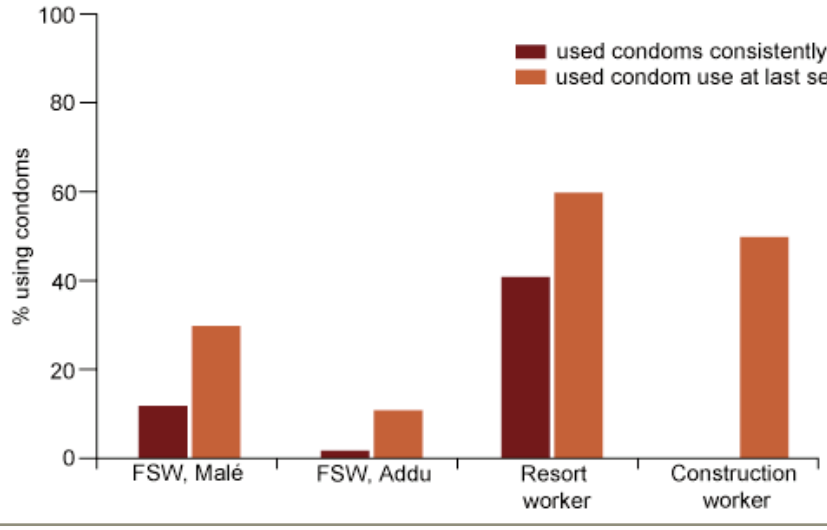


Currently, there are very few HIV infections among Maldivians

Risky sexual behaviours among resort and construction workers, Maldives, 2008

Commercial sex, casual sex and male-to-male sex exists in Maldives

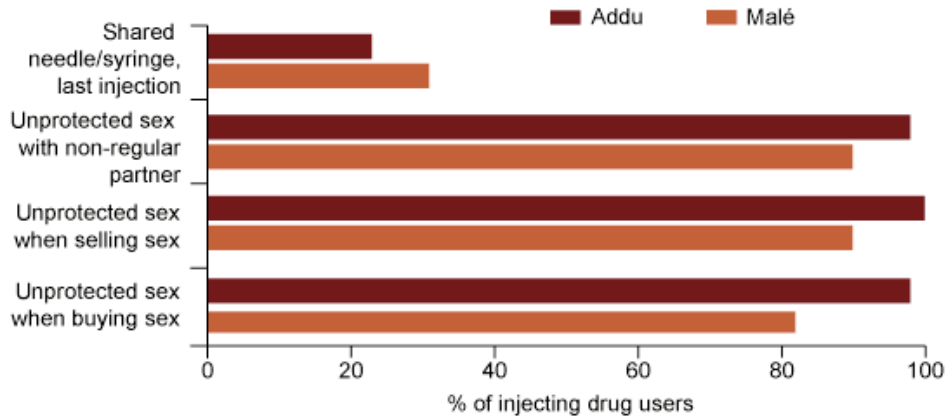
Condom use among sex workers and clients, Maldives, 2008



Sex workers and clients rarely use condoms

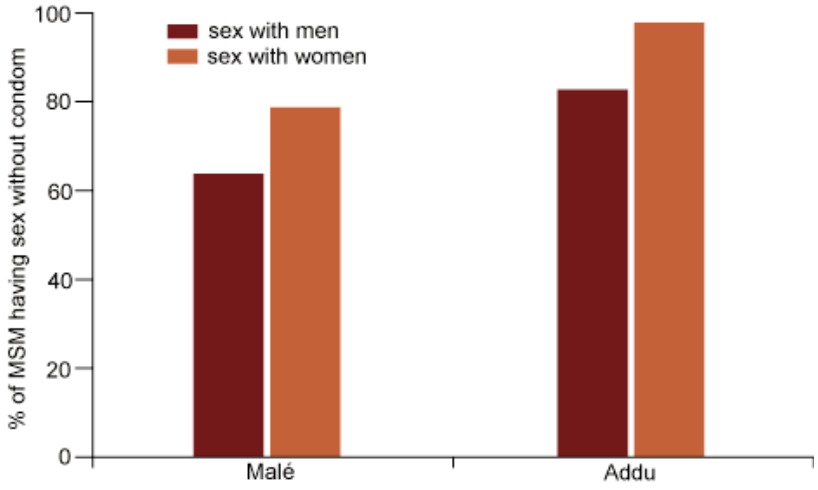
Source: Surveillance reports, National AIDS Programme, Ministry of Health and Family, Maldives.
PLHIV = people living with HIV; FSW = female sex worker; MSM = men who have sex with men; IDU = injecting drug user.

Sexual and injecting risk behaviours among injecting drug users in Malé and Addu, 2008



Sharing of injection equipment and unprotected sex among IDUs is common

Unprotected sex among men who have sex with men, by type of sexual partner in Malé and Addu, Maldives, 2008



Sex without condoms is the norm among MSM

Epidemic situation

Though the current levels of HIV and sexually transmitted infections (STI) are very low, numerous factors prevail for the potential rapid spread of HIV. Increasing injecting drug use is the most important risk factor for HIV. Moreover, injecting drug users (IDUs) engage in risky injecting and sexual behaviours. A significant proportion of the adult male population engages in commercial sex and casual sex, frequently without condoms. Men who have sex with men (MSM) usually engage in unprotected sex both with male and female partners. Pre-marital and group sex are common among youth. In general, youth have a low risk perception for acquiring HIV. The other vulnerability factors in Maldives are high internal and external mobility, dispersed population and large number of immigrant workers.

Source: Surveillance reports, National AIDS Programme, Ministry of Health and Family, Maldives.
IDU = injecting drug user; MSM = men who have sex with men

National response

The National AIDS Council, a multi-sectoral agency with representatives from different sectors and nongovernmental organizations (NGOs), coordinates the HIV prevention and control programme. There are few NGOs operating in Maldives. UN agencies are the main international partners for technical support.

Programmatic coverage

Prevention interventions: Targeted prevention services for high-risk populations are currently limited and poorly defined. Harm reduction interventions are delivered through one opioid substitution therapy site treating 30 IDUs. There are no needle–syringe programmes. Services for MSM and sex workers are limited.

Testing and counselling: Testing and counselling services are provided at eight health facilities across the country.

Prevention of mother-to-child transmission: More than 90% pregnant women attend antenatal clinic, and hence, almost all the pregnancies are screened. There has been routine testing of all the antenatal clinic attendees. No pregnant woman has been found to be infected with HIV so far.

Antiretroviral therapy: At one facility two patients were receiving treatment in December 2008.

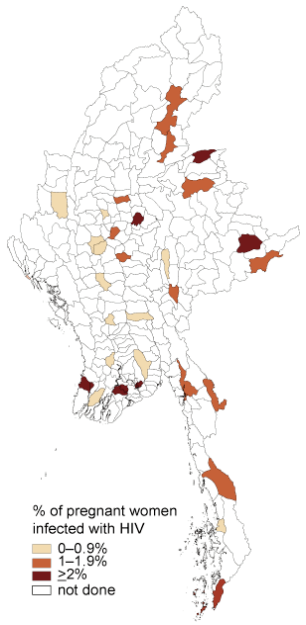
Strategic information: There is a nationwide system of reporting of HIV and sexually transmitted infections. In 2008, after mapping, the first bio-behavioural survey was undertaken among high-risk populations in the capital city Malé and a large atoll, Addu. Also, a behavioural survey was conducted among youth in Malé and Laam.

Programmatic gaps
• Inadequate targeted prevention interventions for high-risk populations
Data gaps
• Inadequate data on coverage of HIV prevention services to high-risk populations • Absence of a system for monitoring of testing and counselling as well as prevention services
Priority actions
• Establishing prevention services for high-risk populations • Improving the monitoring and evaluation system for testing and counselling, and HIV prevention services

Myanmar

HIV burden		Population size	
First case reported:	1988	Total:	50 million
Adult HIV prevalence:	0.67%	Sex workers:	60 000
Estimated PLHIV:	242 000	IDUs:	75 000
% women:	42%	MSM:	240 000

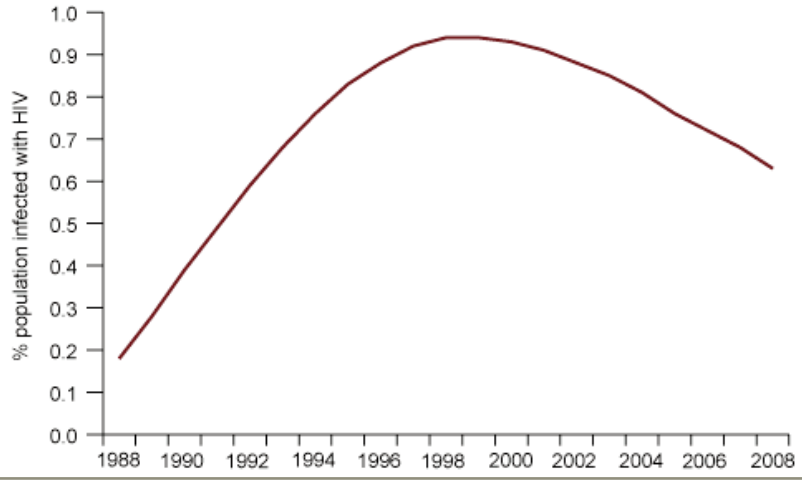
HIV prevalence among antenatal clinic attendees, by district, Myanmar, 2008



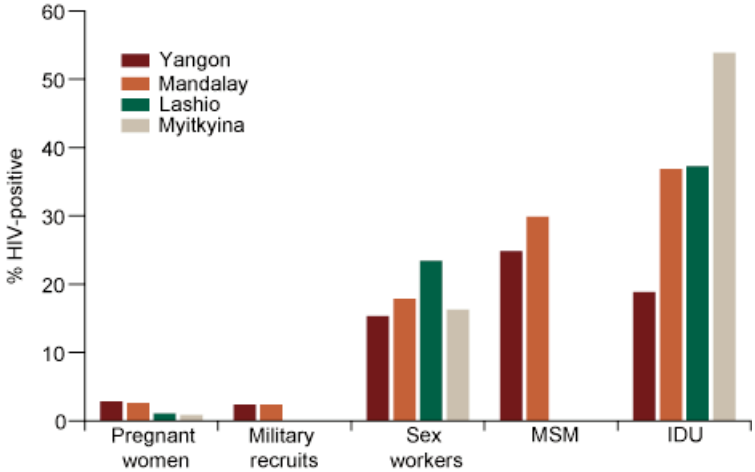
HIV infection is highest in the north and north-eastern parts

HIV prevalence in adult population, Myanmar, 1988–2008

HIV prevalence is steadily decreasing



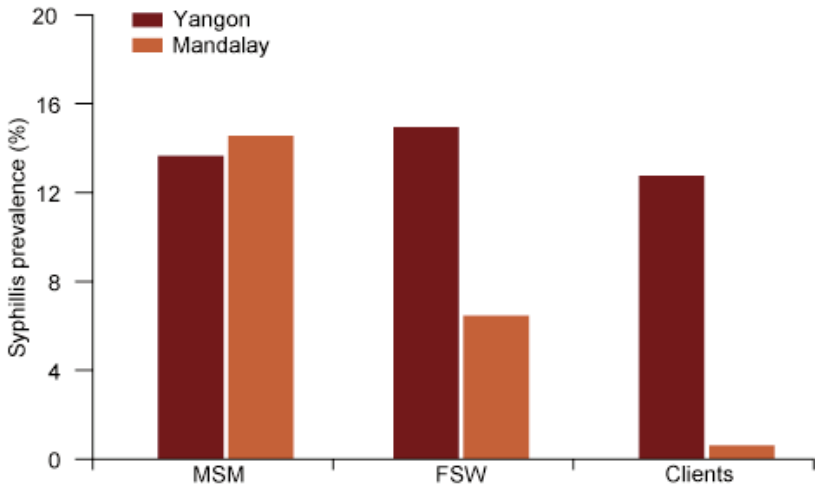
HIV prevalence among different population groups, by city, Myanmar, 2008



HIV infection among sex workers, MSM and IDUs is very high

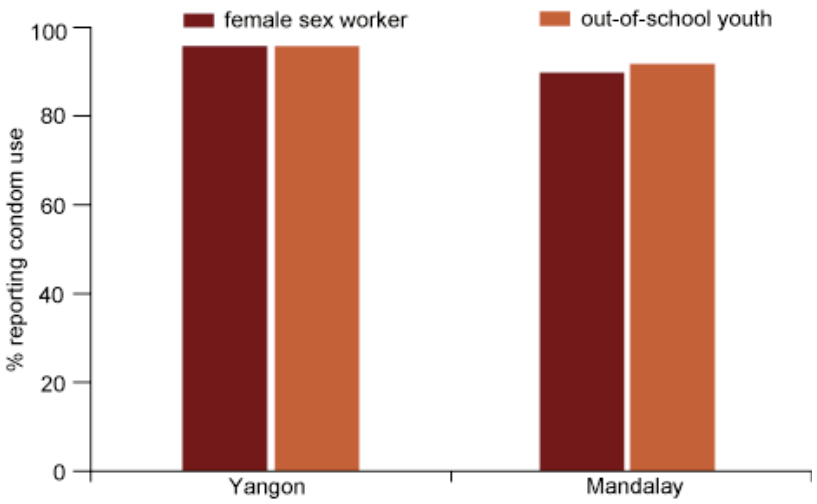
Source: Surveillance reports, National AIDS Programme, Ministry of Health, Myanmar.
PLHIV = people living with HIV; FSW = female sex worker; MSM = men who have sex with men; IDU = injecting drug user.

Prevalence of syphilis among high-risk populations in Yangon and Mandalay, Myanmar, 2008



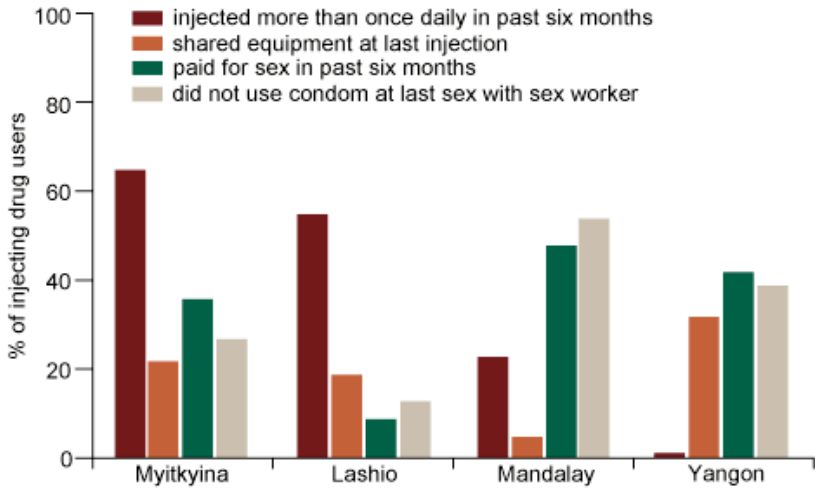
STIs are common among high-risk populations

Percentage of sex workers and youth reporting condom use at last high-risk sex, in Yangon and Mandalay, Myanmar, 2008



Reported condom use in paid sex is almost 100%

Risky behaviours among injecting drug users, by city, Myanmar, 2008



IDUs commonly engage in risky injecting and sexual behaviours

Source: Surveillance reports, National AIDS Programme, Ministry of Health, Myanmar.
STI = sexually transmitted infection; IDU = injecting drug user.

Epidemic situation

The two-decade long HIV epidemic is on the decline. However, a large number of preventable new infections continue to occur due to unsafe sex and injecting practices. There is a sizeable high-risk population (female sex workers [FSWs] and their clients, men who have sex with men [MSM] and injecting drug users [IDUs]) with very high HIV prevalence: 16–24% in FSW, 13–54% in IDUs and 25–33% in MSM. Condom use in paid sex with FSWs is becoming a norm but unprotected sex among MSM and IDUs is common. High rates of sexually transmitted infection (STI) among high-risk populations is an important risk factor for the spread of HIV.

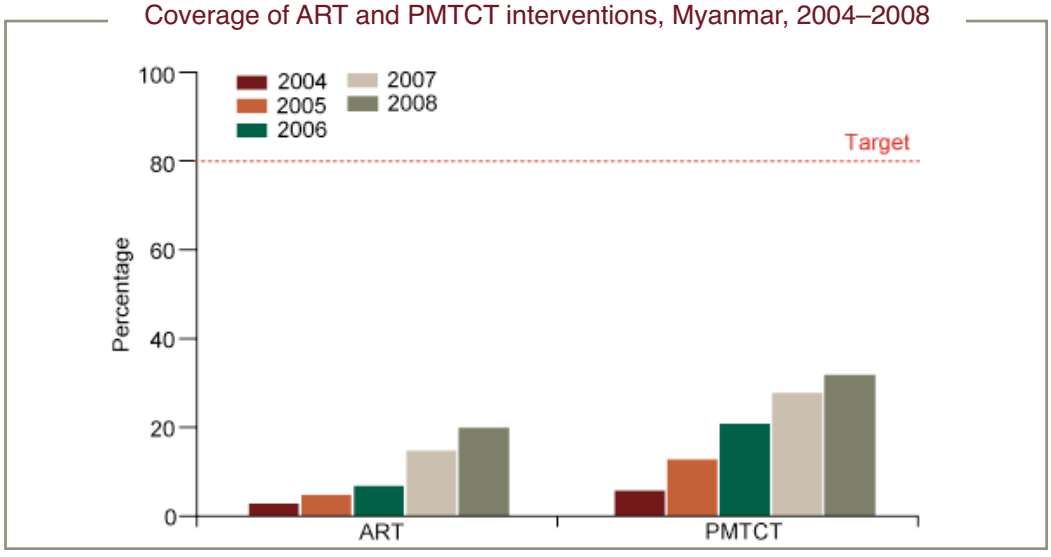
National response

The National AIDS Programme in the Department of Health is responsible for designing and implementing HIV prevention and control programmes in accordance with the national strategic plans (2006–2011). Key international partners include Médecins Sans Frontières, Save the Children USA, Care International, Medecins du Monde, Population Services International, HIV/AIDS Alliance, Marie Stopes International, Asian Harm Reduction Network, Association Francois-Xavier Bangnoud and the United Nations agencies.

Programmatic coverage

Prevention interventions: Targeted interventions for FSW are being implemented in 122 townships. STI services are provided at 89 sites (1.5 sites/1000 sex workers). Services for MSM remain inadequate. Of the 30 townships with sizeable IDU population, 18 have established harm reduction services. Harm reduction interventions are delivered through 18 needle–syringe programme sites (0.24/1000 IDUs). In 2008, approximately 3 500 000 needles–syringes were distributed (47 needles/ IDU/year). The methadone programme is still in the pilot phase with seven

Coverage of ART and PMTCT interventions, Myanmar, 2004–2008



Source: Country reports.
Note: Antiretroviral treatment (ART) is given to individuals with advanced HIV infection as per national treatment protocols. prevention of mother-to-child treatment (PMTCT) interventions include antiretroviral prophylaxis for HIV infected pregnant women.

opioid substitution therapy sites (0.09 sites/1000 IDUs) reaching approximately 500 IDUs.

Testing and counselling: Testing and counselling services are provided at 143 public and 56 private facilities across the country. In 2008, 257 158 individuals (including pregnant women) were tested for HIV and received their results. According to a community survey, 27% IDUs and 71% FSWs mentioned having received an HIV test and results in the past 12 months.

Prevention of mother-to-child transmission (PMTCT): PMTCT services are provided at 2900 health facilities. In 2008, 178 722 of 1 200 000 pregnant women (15%) received HIV testing and their results, and 1377 (27%) HIV infected pregnant women received antiretroviral prophylaxis.

Antiretroviral therapy (ART): At 23 public and 30 nongovernmental organization clinics, 15 191 patients including 966 children, were receiving ART in December 2008, covering 20% of those in need. The survival rate for patients who have been on first-line treatment for a year is 81% and for two years is 75%.

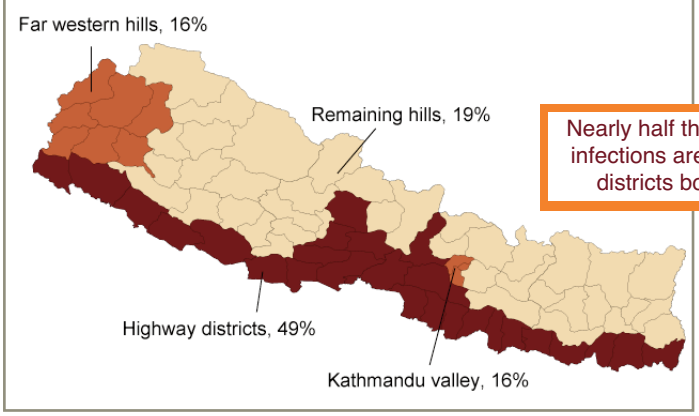
Strategic information: Every year, HIV sentinel surveillance is carried out at a limited number of sites for core high-risk populations and a large number of sites for pregnant women. Behavioural sentinel survey has been carried out periodically among the general population and youth and recently among FSW and IDUs. Facility based AIDS case surveillance and STI surveillance systems are passive and capture a small proportion of all cases. Nationally representative mapping and size estimation of high-risk populations has not been undertaken. Routine programme monitoring is being strengthened with UN support.

HIV financing: The total estimated budget for 2007 was US$ 32.4 million with the government contributing US$ 1.2 million. Limited availability of funds is a major constraint in the expansion of essential HIV prevention, care and treatment services.

Programmatic gaps
• Inadequate coverage of prevention services for high-risk populations • Limited access to testing and counselling, PMTCT and ART services • Limited capacity of the health systems
Data gaps
• Inadequate data on size estimates and coverage of prevention services to most-at-risk populations • Lack of routine monitoring data on programme interventions
Priority actions
• Undertaking nationwide mapping and size estimation of high-risk populations • Expanding prevention services for high-risk populations • Scaling up testing and counselling, PMTCT and ART services • Establishing a countrywide monitoring and evaluation system for HIV interventions • Investing in health systems including timely procurement of supplies, laboratories and human resource capacity

Nepal

Distribution of HIV infections, by Region, Nepal, 2007

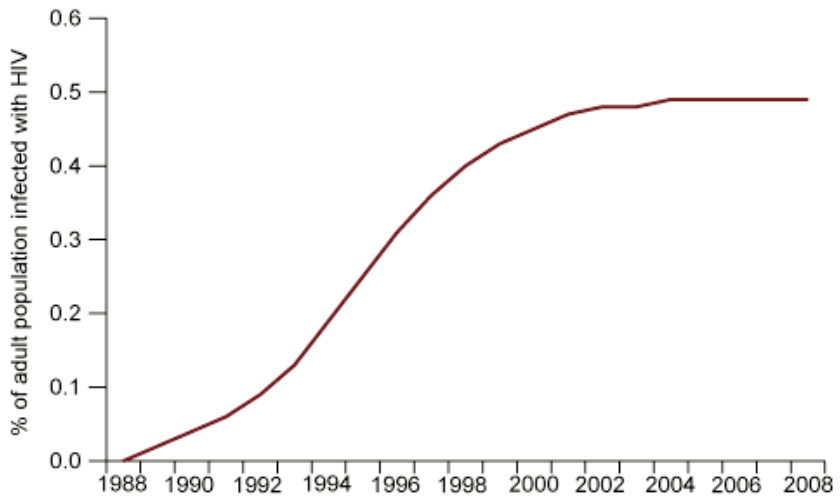


Nearly half the estimated HIV infections are in the highway districts bordering India

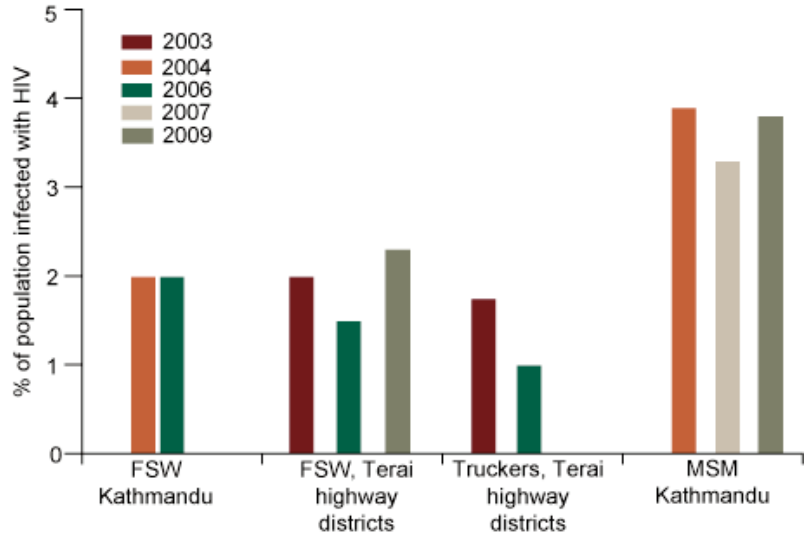
HIV burden		Population size	
First case reported:	1988	Total:	29 million
Adult HIV prevalence:	0.5%	Sex workers:	31 000
Estimated PLHIV:	70 000	IDUs:	28 000
% women:	26%	MSM:	135 000

HIV prevalence among adult population, 1988–2008

Overall, the HIV epidemic is stabilizing



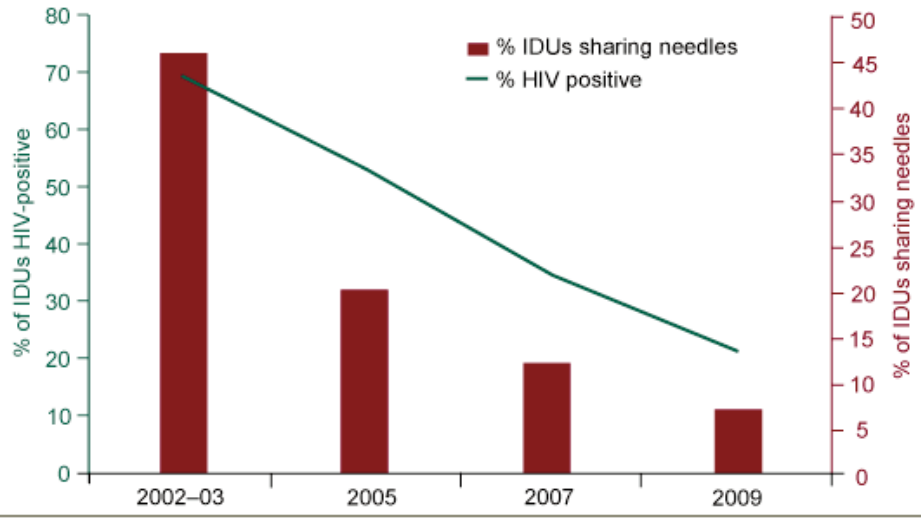
HIV prevalence among high-risk populations, Nepal, 2003–2009



HIV prevalence is maintained below 5% among sexual high-risk populations

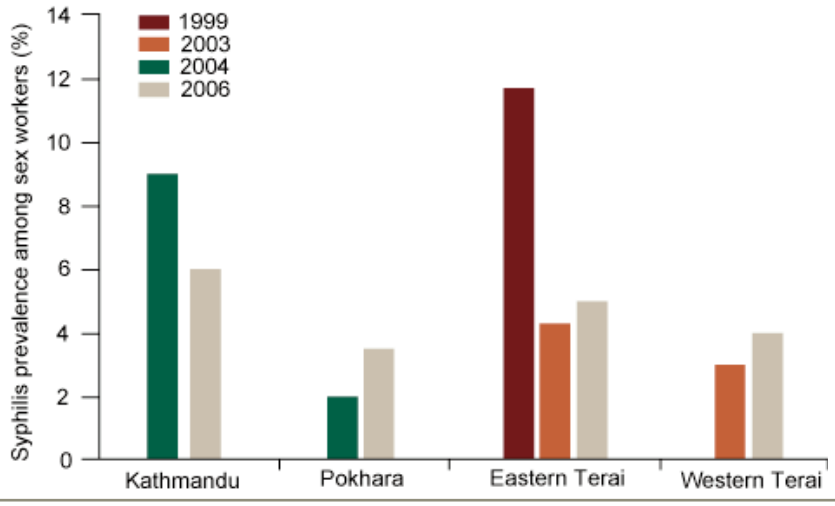
Source: Surveillance reports, National Centre for AIDS and STD control, Nepal.
PLHIV = people living with HIV; FSW = female sex worker; MSM = men who have sex with men; IDU = injecting drug user.

HIV prevalence and needle sharing among injecting drug users, Nepal, 2002–2009



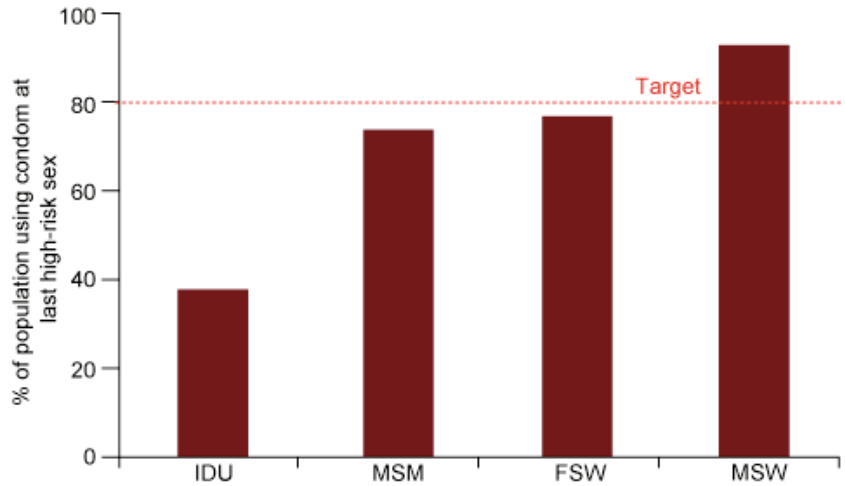
Decline in injecting risk behaviours and HIV among IDUs

Syphilis prevalence among sex workers and clients, by location, Nepal, 1999–2006



Variable progress in control of STIs in sex workers

Condom use at last high-risk sex, by population group, Nepal, 2007–2009



Condom use reaching optimal levels except among IDUs

Source: Surveillance reports, National Centre for AIDS and STD control, Nepal.
STI = sexually transmitted infection; FSW = female sex worker; MSM = men who have sex with men; IDU = injecting drug user.

Epidemic situation

The HIV epidemic in Nepal is driven by injecting drug use, sex work and migration. While there are signs that overall the epidemic has begun to plateau, the potential of HIV spread is still high. While needle sharing among injecting drug users (IDUs) seems to be decreasing, risky sexual behaviours are widely prevalent in this group. Prevalence of sexually transmitted infections (STIs) is still high among female sex workers (FSWs) and men who have sex with men (MSM) in some areas. High population mobility and migration within the country and to neighbouring India is an important factor for the spread of HIV in Nepal. Studies show that HIV prevalence ranges from 2% to 10% among labor migrants returning from Mumbai. Trafficking of women also contributes significantly to the transmission of HIV in Nepal.

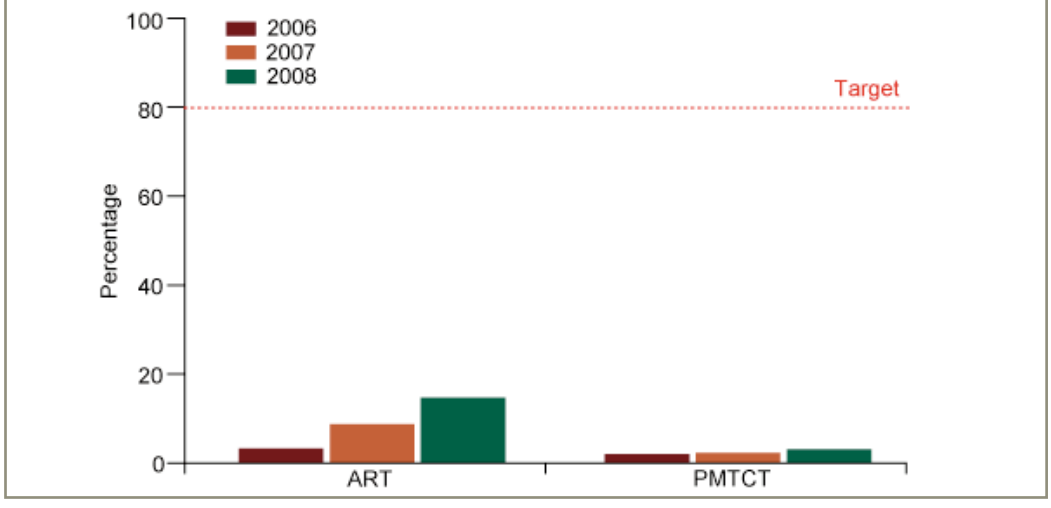
National response

The National Centre for AIDS and STD Control in the Ministry of Health and Population is the main governmental agency responsible for designing and implementing HIV prevention and control programmes guided by the national strategic plans (2006–2011). More than 200 nongovernmental organizations are providing HIV services in Nepal. Key international technical partners include UK Department for International Development (DFID), Family Health International, United States Agency for International Development (USAID), and the United Nations agencies.

Programmatic coverage

Prevention interventions: Harm reduction services are mostly provided through referral. In 2008, approximately 690 000 needles–syringes were distributed (25/IDU/year) through 36 needle–syringe programme sites (1.29/1000 IDUs). There

Coverage of ART and PMTCT interventions, Nepal, 2006–2008



Source: Country reports.
Note: Antiretroviral treatment (ART) is given to individuals with advanced HIV infection as per national treatment protocols. prevention of mother-to-child treatment (PMTCT) interventions include antiretroviral prophylaxis for HIV infected pregnant women.

are just two opioid substitution therapy sites (0.07/1000 IDUs). STI services for sex workers were provided at 28 targeted intervention sites (0.9/1000 sex workers). The prevention services coverage for IDUs, FSW and MSM is 31%, 41% and 23%, respectively.

Testing and counselling: Testing and counselling services are provided at 38 public and 99 private facilities across the country. In 2008, 86 567 individuals were tested for HIV. The percentage of FSW, IDU and MSM who were tested for HIV in the past 12 months and who received their results was 32%, 21%, and 30%, respectively.

Prevention of mother-to-child transmission (PMTCT): By end 2008, 15 health facilities were providing PMTCT services. In 2008, 45 733 of 750 000 pregnant women (6%) received HIV testing and their results. Only 47 (3%) HIV infected women received ARV prophylaxis.

Antiretroviral therapy (ART): At 23 facilities located mostly in urban areas, 2536 patients, including 119 children were receiving ART by December 2008. The survival rate for patients who have been on first-line treatment for a year is 82%.

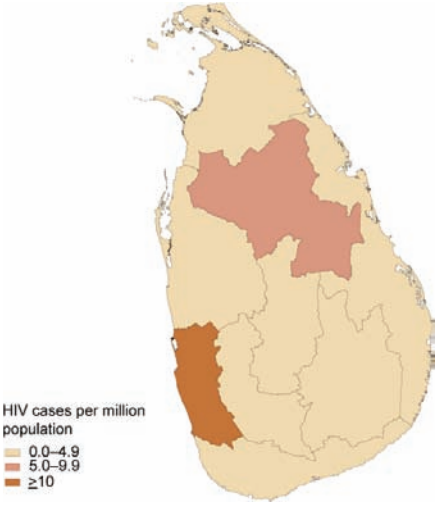
Strategic information: Every two years, an integrated bio-behavioural surveillance survey is carried out among high-risk populations and migrants. The size of high-risk populations is updated periodically. Routine monitoring and evaluation systems for ART and PMTCT programmes have been introduced.

HIV financing: In 2007–08, the Government of Nepal's annual spending for the HIV programme was US$ 136 000. The Global Fund was the biggest external donor contributing US$ 7.9 million followed by DFID (US$ 4.1 million) and USAID (US$ 3.9 million). Major shortfalls in resources are expected from 2010 onwards when developmental partners (i.e. DFID, USAID) phase out their programmes.

Programmatic gaps
• Low coverage of testing and counselling, PMTCT and ART services • Inadequate coverage of prevention services for high-risk populations including for migrants
Data gaps
• Inadequate data on availability and coverage of prevention services to most-at-risk populations • Lack of systematic data collection on testing and counselling, PMTCT and ART
Priority actions
• Scaling up prevention services • Increasing access to testing and counselling, PMTCT and ART services • Setting up a countrywide monitoring and evaluation system for prevention, care and treatment interventions

Sri Lanka

Reported HIV cases, by district, Sri Lanka, 2008

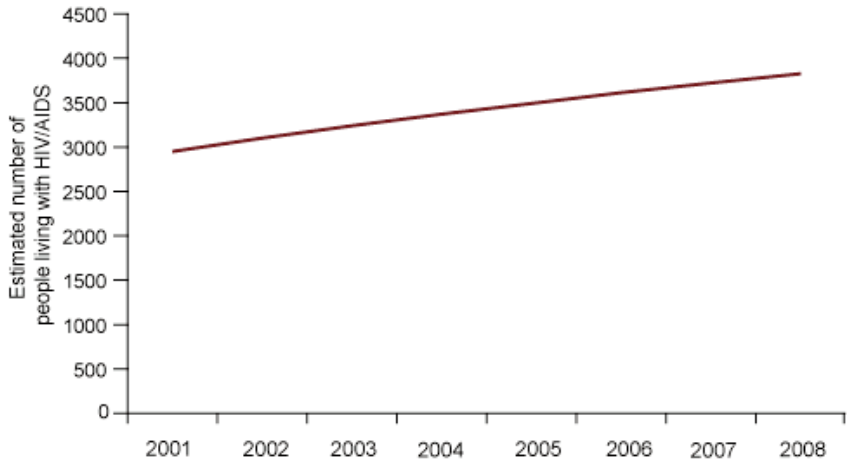


HIV is mainly concentrated in major urban areas

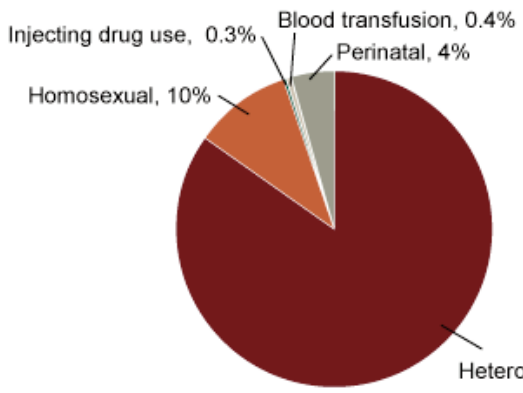
HIV burden		Population size	
First case reported:	1987	Total:	20 million
Adult HIV prevalence:	< 0.1%	Sex workers:	6 000
Estimated PLHIV:	4000	Heroin users:	40 000
% women:	36%	IDUs:	400
		MSM:	12 000
		Prisoners:	30 000

HIV prevalence among adult population, Sri Lanka, 2008

Overall, the HIV epidemic is stabilizing



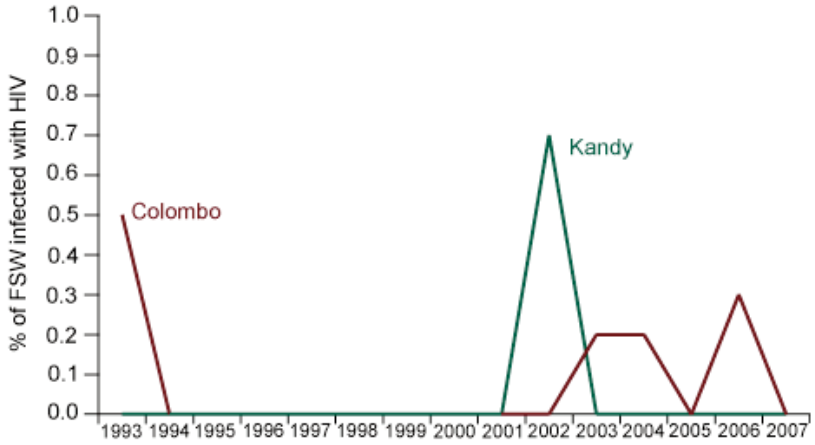
Distribution of HIV infections, by route of transmission, 2008



HIV is predominantly transmitted by sexual route

Source: National STD/AIDS Control Programme, Sri Lanka.
PLHIV = people living with HIV; FSW = female sex worker; MSM = men who have sex with men; IDU = injecting drug user.

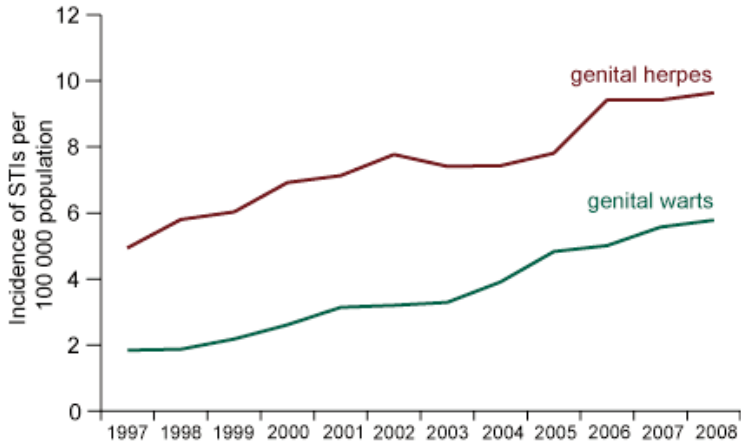
HIV prevalence among sex workers in Colombo and Kandy, 1993–2007



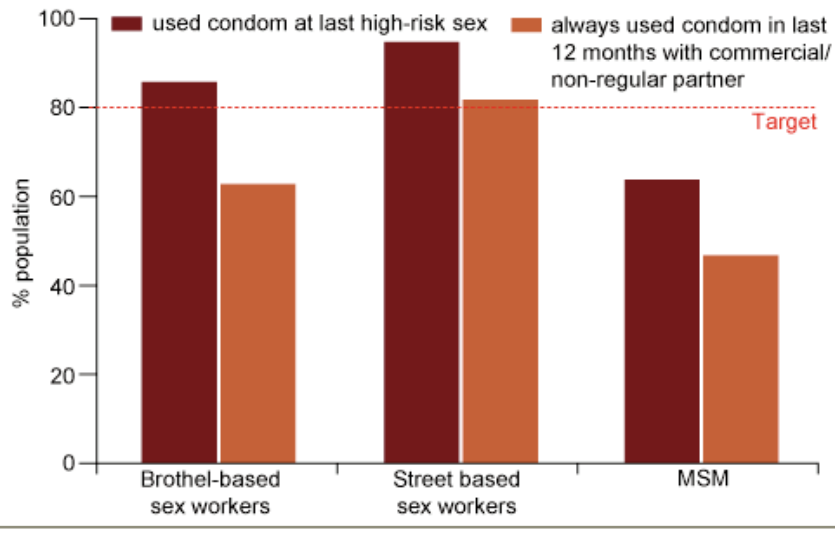
HIV has consistently remained below 1% among sex workers in major urban areas

Incidence of sexually transmitted infections, Sri Lanka, 1997–2008

Viral sexually transmitted infections are showing an upward trend



Condom use among high-risk populations, Sri Lanka, 2006



Condom use is suboptimal among MSM

Source: National STD/AIDS Control Programme, Sri Lanka.
STI = sexually transmitted infection; FSW = female sex worker; MSM = men who have sex with men; IDU = injecting drug user.

Epidemic situation

Sri Lanka continues to have very low levels of HIV — below 1% even among high-risk populations (female sex workers [FSW], men who have sex with men [MSM] and clients of sex workers). There is little HIV outside major urban areas. Unsafe heterosexual paid sex and unprotected anal sex among MSM are the main drivers of sexually transmitted infections (STIs) and HIV. Sri Lanka has a significant number of heroin users but few currently inject. However, there is a high potential of HIV spread due to unsafe sexual practices in prison settings. Other important vulnerability factors include internally displaced populations and separation of families due to urbanization and overseas employment.

National response

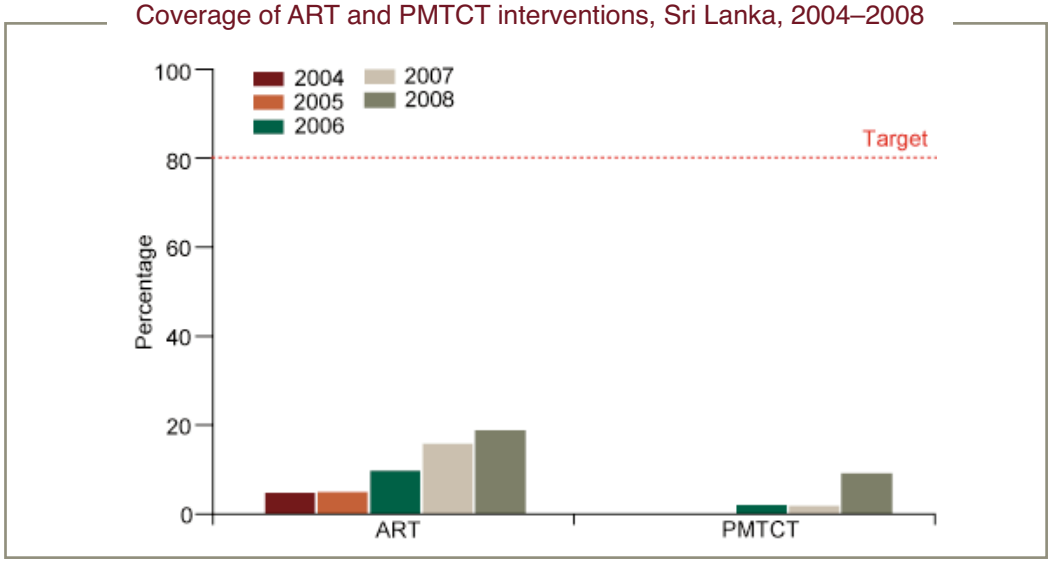
The National STD/AIDS Control Programme is responsible for mobilizing, coordinating and supporting the national response for the prevention and control of HIV in the country. It is guided by the national strategic plan (2007–2011). A limited number of civil society groups are working in the HIV/AIDS programme. Key international partners include the World Bank and United Nations agencies.

Programmatic coverage

Prevention interventions: The coverage of FSW and MSM by prevention services is 44% and 14%, respectively. STI services are provided to sex workers through 29 targeted intervention sites (4.1/1000 sex workers). Additionally, STI services for the general population are provided through sexually transmitted disease clinics in each of the 26 districts. There are limited services for drug users.

Testing and counselling: In all, 29 public health facilities are providing testing and counselling services across the country. In 2008, 432 individuals were tested for HIV.

Coverage of ART and PMTCT interventions, Sri Lanka, 2004–2008



Source: Country reports.
Note: Antiretroviral treatment (ART) is given to individuals with advanced HIV infection as per national treatment protocols. Prevention of mother-to-child treatment (PMTCT) interventions include antiretroviral prophylaxis for HIV infected pregnant women.

Approximately, 44% FSW and 14% MSM were tested in the past 12 months and received their results.

Prevention of mother-to-child transmission (PMTCT): As HIV prevalence among women is very low, only three health facilities are providing PMTCT services. In 2008, 12 239 (3%) pregnant women received HIV testing and their results and 9% (5/54) HIV-infected pregnant women received ARV prophylaxis.

Antiretroviral therapy (ART): At five public facilities, 146 patients (19% of those who need treatment), including seven children were receiving ART in December 2008.

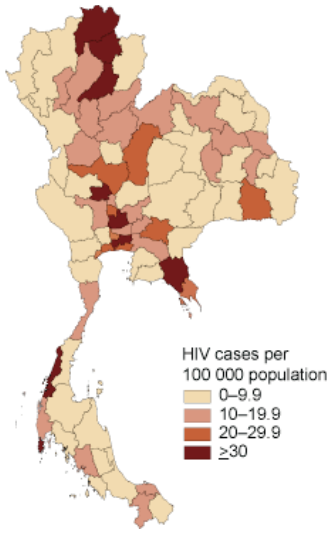
Strategic information: Second generation surveillance includes HIV/AIDS case reporting, biennial sero surveillance in selected high-risk populations and STI surveillance; one round of behavioural sentinel surveillance was also conducted. National size estimations of the key populations at high risk is planned in 2009. A national monitoring and evaluation plan for years 2007–2011 has been developed to strengthen routine programme monitoring as well as the collection, analysis and dissemination of information.

HIV financing: The total planned resources for HIV in 2008 was US$ 6 109 000. The government is the largest contributor (US$ 4 613 000) followed by International Development Association/World Bank (US$ 1 070 000).

Programmatic gaps
• Low coverage of targeted interventions for high-risk populations • Limited services for prison populations • Limited access to testing and counselling, PMTCT and ART services
Data gaps
• Lack of reliable data on the size and location of high-risk populations • Limited data on coverage of HIV services
Priority actions
• Undertaking mapping and size estimations of high-risk populations • Scaling up a comprehensive package of targeted interventions for high-risk populations, particularly for FSW and MSM • Setting up sexual health services for prison populations • Increasing access to testing and counselling, PMTCT and ART services • Strengthening programme monitoring and evaluation of HIV interventions

Thailand

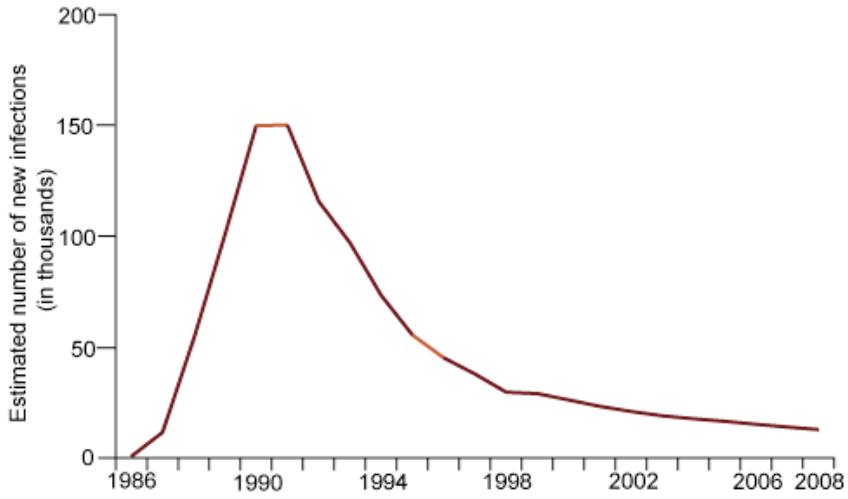
Reported AIDS cases, by district, Thailand, 2008



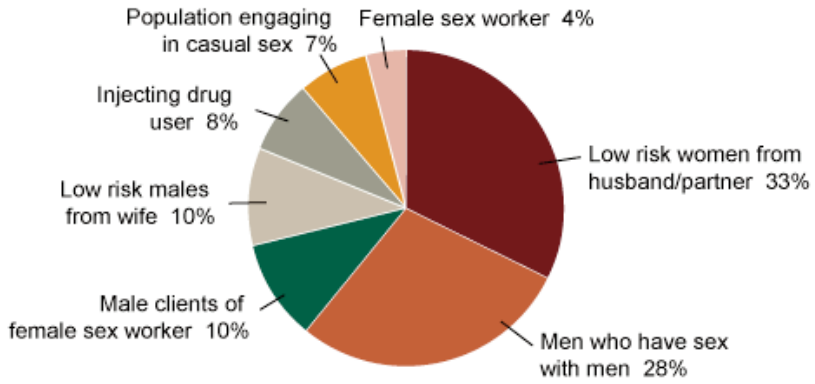
HIV burden		Population size	
First case reported:	1984	Total:	67 million
Adult HIV prevalence:	1.4%	Sex workers:	145 000
Estimated PLHIV:	547 000	IDUs:	40 000
% women:	41%	MSW:	10 000
		MSM:	560 000

Estimated HIV incidence, Thailand, 1986–2008

New HIV infections decreasing since the early 1990s



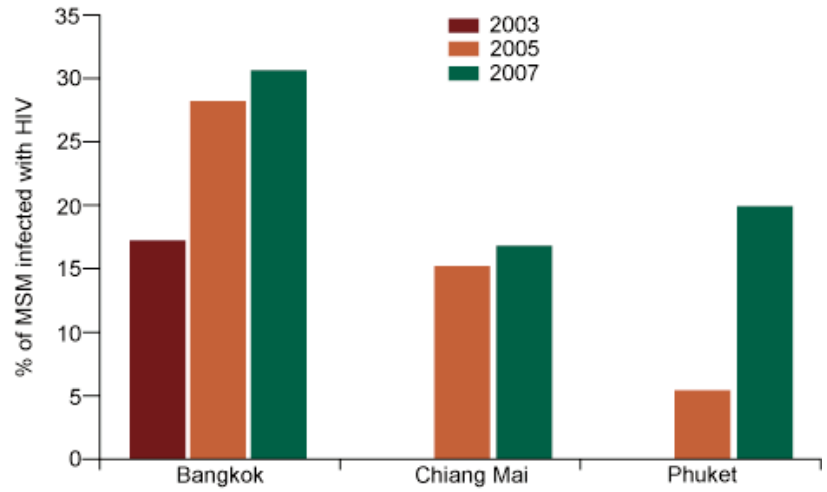
Distribution of new infections, by population group, Thailand, 2008



A third of new infections are in low-risk women from husbands or partners

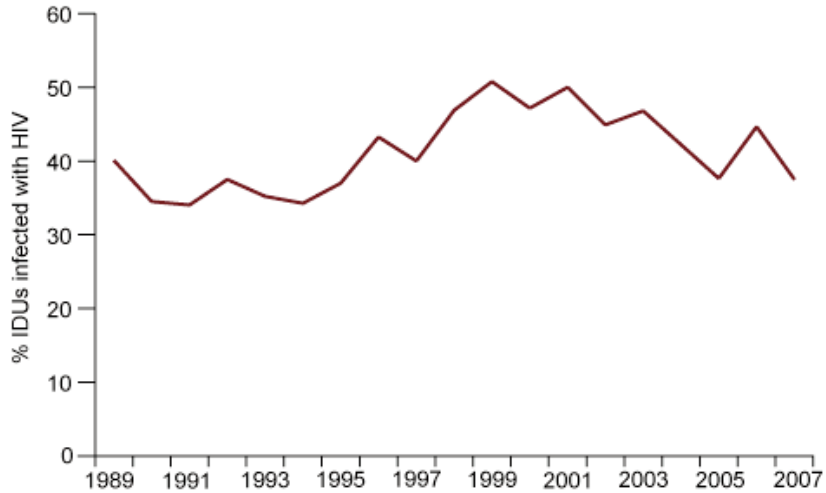
Source: Bureau of AIDS, TB and STI, Department of Disease control, Ministry of Public Health, Thailand.
PLHIV = people living with HIV; FSW = female sex worker; MSM = men who have sex with men; IDU = injecting drug user.

HIV prevalence among men who have sex with men, by city, 2003–2007



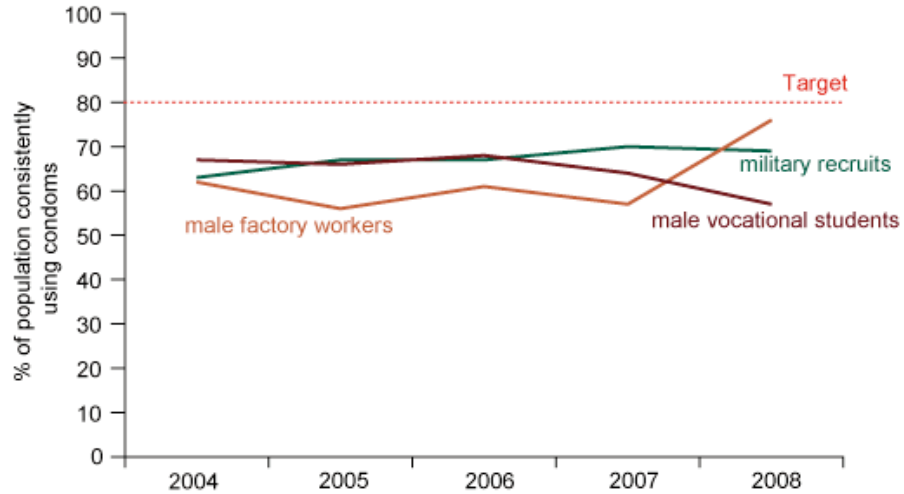
Increasing HIV prevalence among MSM is a serious concern

HIV prevalence among injecting drug users, Thailand, 1989–2008



HIV prevalence among IDUs continues to be high

Percentage of males consistently using condom during paid sex in the past year, Thailand, 2004–2008



Condom use in paid sex needs improvement

Source: Bureau of AIDS, TB and STI, Department of Disease control, Ministry of Public Health, Thailand.
STI = sexually transmitted infection; FSW = female sex worker; MSM = men who have sex with men; IDU = injecting drug user.

Epidemic situation

Although the overall HIV epidemic has been reversed, Thailand has a long-standing injecting drug user (IDU) epidemic and a rapidly increasing men who have sex with men (MSM) epidemic in some areas. An upward trend in HIV incidence among sex workers is also of concern. Rates of condom use among during paid sex is suboptimal. A large number of new infections are now seen among low-risk women who get infected through husbands/regular partners.

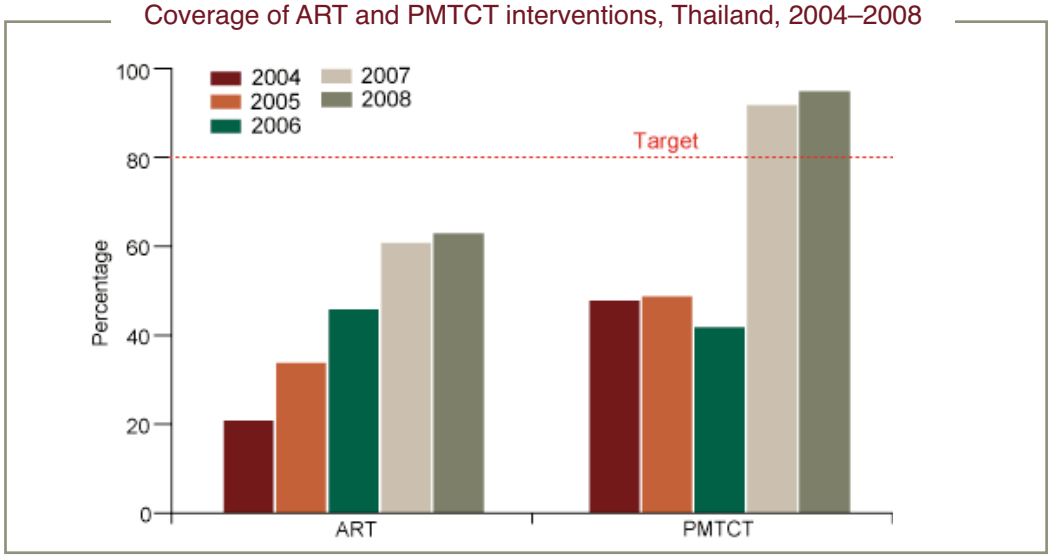
National response

Thailand has successfully controlled HIV through a strong and early national response. The current response, guided by the national plan (2007–2011), includes four strategies: (1) improved management to integrate HIV/AIDS responses in all sectors; (2) integration of prevention, care, treatment and impact mitigation for each population group; (3) human rights protection; and (4) monitoring and evaluation with research to guide public policy. The government's response is supplemented by the numerous national nongovernmental organizations, community-based organizations and academic institutions. The United Nations agencies, Centers for Disease Control and Prevention, and Family Health International are the key international technical partners.

Programmatic coverage

Prevention interventions: Thailand has been successfully implementing the 100% condom use programme as a targeted prevention programme for female sex workers (FSWs). In 2008, sexually transmitted infection (STI) services were provided at 96 targeted intervention sites (0.62/1000 sex workers). Harm reduction interventions are delivered through 10 needle–syringe programme sites (0.25/1000 IDUs) and 147

Coverage of ART and PMTCT interventions, Thailand, 2004–2008



Source: Country reports.
Note: Antiretroviral treatment (ART) is given to individuals with advanced HIV infection as per national treatment protocols. Prevention of mother-to-child treatment (PMTCT) interventions include antiretroviral prophylaxis for HIV infected pregnant women.

opioid substitution therapy sites (3.7/1000 IDUs). In 2008, approximately 47 000 needles–syringes were distributed (1.0/IDU/year).

Testing and counselling: Testing and counselling services are provided at 911 public and 103 private facilities across the country. In 2008, 959 899 individuals were tested. In the past 12 months, 52% FSW and 35% MSM were tested and received their results.

Prevention of mother-to-child transmission (PMTCT): By end 2008, 1014 health facilities were providing PMTCT services. In 2008, 797 047 (100%) pregnant women received HIV testing and their results. Nearly 95% infected pregnant women received antiretroviral prophylaxis.

Antiretroviral therapy (ART): At 1014 facilities across the country, 176 747 patients, including 8736 children were receiving ART in December 2008. Thus, 71% of those who need treatment are receiving it. A large proportion of those who need treatment but are not receiving it are asymptomatic. The survival rate for patients who have been on first-line treatment for a year is 80%.

Strategic information: Thailand has a well-established second generation HIV surveillance system. Incidence surveillance among pregnant women and sex workers has been conducted. However, mapping and size estimation of high-risk populations has not been updated. The existing monitoring and evaluation system needs to be reviewed and made user-friendly so that information can be easily retrieved and used for programmatic decisions at local and national levels.

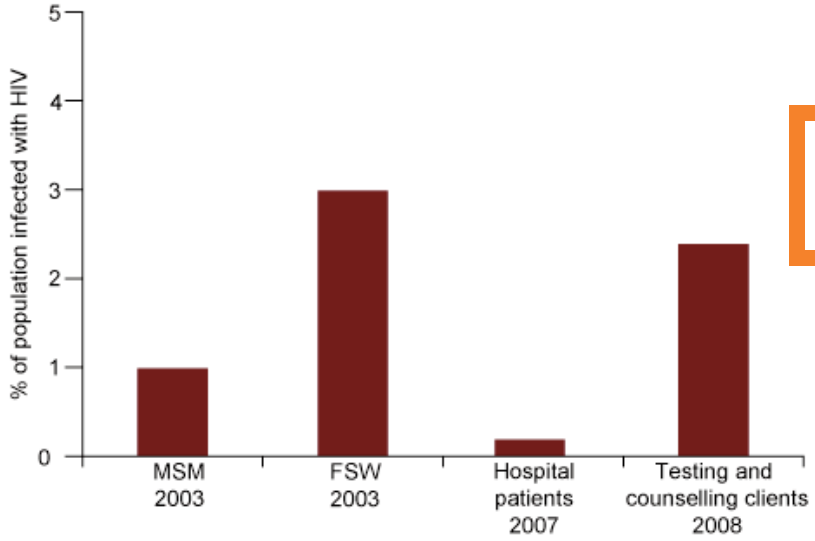
HIV financing: In 2007, the total expenditure on HIV/AIDS was US$ 210 million. Domestic funds accounted for 83% of the total expenditure. The bulk of expenditure is on care and treatment (72%). External donors include Global Fund, United Nations agencies and Centers for Disease Control and Prevention.

Programmatic gaps
• Inadequate and delayed response to the IDU and MSM epidemic • Lack of services for migrants / refugees • Large number of infected and affected people needing support, care and treatment including HIV orphans
Data gaps
• Inadequate data on mapping and size estimates of IDU and MSM population • Routine programme monitoring data not easily available
Priority actions
• Strengthening/scaling up of prevention interventions for MSM, IDU, indirect sex workers and mobile populations • Strengthening routine programme monitoring system at the national level

Timor-Leste

HIV burden		Population size	
First case reported:	2002	Total:	1.1 million
Adult HIV prevalence:	<0.1%	FSW:	400–1000
Estimated HIV burden:	<1000	MSM	350–2000
		Uniformed personnel:	5600

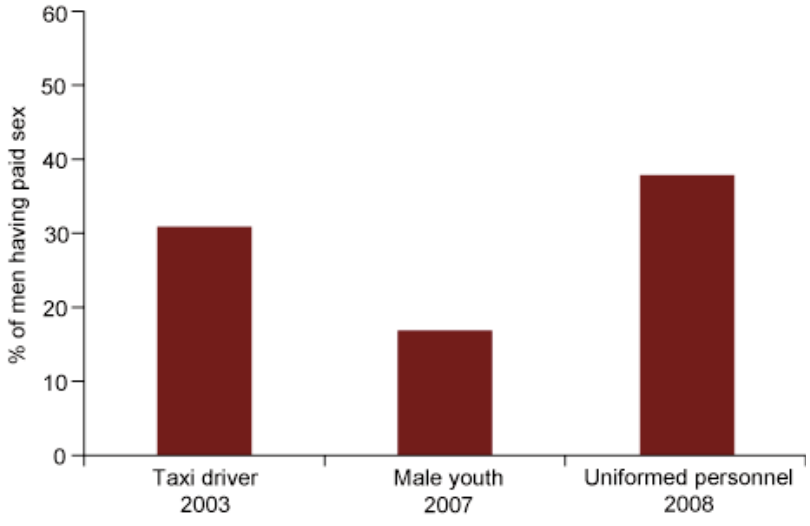
HIV prevalence among different population groups, Timor-Leste, 2003–2008



HIV prevalence is consistently below 5% in all population groups

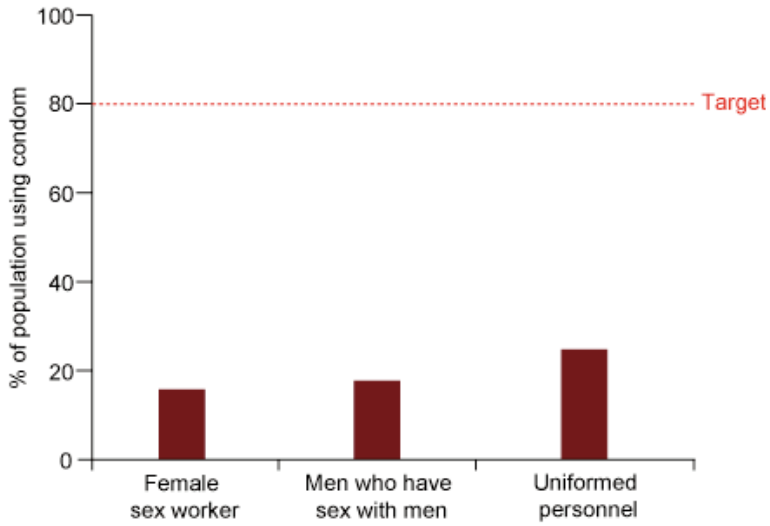
Percentage of males having paid sex in the last one year, Timor-Leste

A large proportion of Timorese men have paid sex



Source: University of New South Wales, Australia and Ministry of Health, Timor-Leste.
STI = sexually transmitted infection; FSW = female sex worker; MSM = men who have sex with men; IDU = injecting drug user.

Consistent condom use during high-risk sex in the past year, Timor-Leste, 2008



Source: University of New South Wales, Australia and Ministry of Health, Timor-Leste.

Condom use is far below target levels

Epidemic situation

Timor-Leste is currently experiencing a low level HIV epidemic. However, sexually transmitted infection (STI) rates are very high particularly among high-risk populations — female sex workers (FSWs) and men who have sex with men (MSM). Many Timorese men have paid sex but few use condoms. Only 16% of FSWs used condoms consistently with their clients in the past 12 months and 65% used it at last sex. MSM have high STI rates and often do not use condoms. Paying or being paid for sex by regular partners is common amongst MSM. In the 2008 behavioural sentinel surveillance, a fifth of men had paid for sex with their regular male partner in the past year, whilst 91% had been paid for sex by their regular partner in the same time period. The youth also engage in high-risk sexual behaviours. A majority (94%) of MSM had sex with a woman in the past 12 months. A 2007 survey among educated young people showed that 17% of the youth had sex with a sex worker and majority did not use condoms. Extreme poverty, low literacy, gender inequality, large internal migrations and low access to health services are the other risk/vulnerability factors that can fuel the HIV epidemic in Timor-Leste.

National response

The response of the Timorese government is multi-sectoral, and guided by the National AIDS Commission which was constituted by the Prime Minister in 2003.

There is a national HIV/AIDS and STI Strategic Plan for 2006–2010 which is implemented by the National HIV/AIDS Programme within the Ministry of Health in close collaboration with United Nations agencies, civil society and other national and international agencies — Family Health International, Fundasaun Timor Harii, Cruz Vermelha de Timor-Leste, Catholic Relief Services and Marie Stopes International.

Programmatic coverage

Prevention interventions: Syndromic management of STIs are being provided at 37 community and district health centres. Enhanced syndromic management of STIs with laboratory testing facilities are available at all six national and referral hospitals. HIV services are being provided at Dili, Baucau, Maliana, Suai, Maubisse and Oecussi. HIV and STI prevention interventions are targeted at FSW, MSM, clients of sex workers, and uniformed personnel.

Testing and counselling: HIV testing and counselling services have been expanded from Dili to six other districts. Testing and counselling services are provided at six public and nine private facilities across the country. Provider initiated testing and counselling for HIV are being piloted at three health centres. In 2008, 661 individuals were tested for HIV.

Antiretroviral therapy (ART): At two facilities, 29 patients, including three children were receiving ART in December 2008.

Strategic information: Except for a few ad hoc surveys, there is no systematic data collection method. The Ministry of Health is currently strengthening the HIV and STI surveillance system. This effort includes developing surveillance systems and guidelines, providing training and undertaking integrated behavioural sentinel surveillance for HIV among high-risk populations in selected locations.

Programmatic gaps
• Limited access to testing and counselling services • Limited coverage of prevention interventions for high-risk populations
Data gaps
• Lack of data on size and location of high-risk populations • Lack of recent data on HIV and STI prevalence
Priority actions
• Mapping high-risk populations and conduct surveillance • Establishing/scaling up targeted interventions for sex workers and MSM including STI services • Increasing access to testing and counselling services

Annex

Annex 1: Tables

Table A1: Population by Age and Sex, South-East Asia Region, 2008

Country	Total	Total <15 years	Male <15 years	Female <15 years	Total 15 years and above	Male 15 years and above	Female 15 years and above
Bangladesh	160 000 129	51 267 774	26 087 677	25 180 097	88 500 871	44 777 493	43 723 378
Bhutan	686 787	214 892	108 759	106 133	379 447	205 147	174 300
DPR Korea	23 818 755	5 290 984	2 708 487	2 582 497	13 009 741	6 618 972	6 390 769
India	1 181 411 912	374 759 163	195 435 954	179 323 209	625 410 805	325 286 619	300 124 186
Indonesia	227 345 081	62 185 859	31 669 147	30 516 712	126 574 569	63 568 603	63 005 966
Maldives	305 025	88 483	44 911	43 572	182 418	91 754	90 664
Myanmar	49 563 015	13 421 502	6 743 400	6 678 102	27 878 883	13 637 319	14 241 564
Nepal	28 809 526	10 718 191	5 503 722	5 214 469	14 614 583	7 202 298	7 412 285
Sri Lanka	20 060 639	4 867 658	2 480 125	2 387 533	10 585 730	5 230 448	5 355 282
Thailand	67 386 383	14 797 730	7 561 163	7 236 567	37 578 839	18 570 741	19 008 098
Timor-Leste	1 098 385	496 371	253 769	242 602	489 683	250 697	238 986
Total	**1 760 485 637**	**538 108 607**	**278 597 114**	**259 511 493**	**945 205 569**	**485 440 091**	**459 765 478**

Source: United Nations, Department of Economic and Social Affairs, Population Division (2009). World Population Prospects: The 2008 Revision, CD-ROM Edition.

Table A2: Selected Socio-economic Indicators, South-East Asia Region, 2006–2008

Country	Population in urban areas	Adult literacy rate	Gross national income per capita (US$)	Human Development Index (rank)
Bangladesh	26%	51%	1230	140
Bhutan	12%	53%	4000	133
DPR Korea	62%	NA	NA	NA
India	29%	64%	2460	128
Indonesia	50%	91%	3310	107
Maldives	31%	97%	4740	100
Myanmar	32%	NA	NA	132
Nepal	17%	54%	1010	142
Sri Lanka	15%	NA	3730	9
Thailand	33%	94%	7440	78
Timor-Leste	27%	NA	NA	150

Sources: *% population in rural areas: UN Population Division, 2007.*
Adult literacy rate %: UNESCO, 2006.
Gross national income per capita (US$): World Bank, 2006.
Human development index (rank): UNDP, 2007–2008.

NA = not available.

Table A3: Selected Health Infrastructure Indicators, South-East Asia Region, 2008

Country	Number of administrative units		Number of health facilities			Per capita expenditure on health (US$)[a]	Government expenditure on health as % of total[a]
	Regions/ Provinces/ States	Districts or local administrative units	Public	Private	Total		
Bangladesh	6	64	1 967	3 194	5 161	57	5.5%
Bhutan	_	20	201	–	201	85	6.5%
DPR Korea	NA	NA	NA	NA	NA	47	6.0%
India	35	625	173 464		173 464	100	3.5%
Indonesia	33	496	9 738	883	10 621	78	5.1%
Maldives	20	20	194	1	195	878	18%
Myanmar	17	325	9 817	56	9 873	38	1.1%
Nepal	5	75	15 548	423	15 971	76	8.4%
Sri Lanka	9	25	623	288	911	189	7.8%
Thailand	76	1 057	1 033	328	1 361	323	11%
Timor-Leste	–	13	251	4	255	145	19%

[a] *World Health Statistics 2008, WHO (Year — 2005).*
Source: Universal access country reports, 2008.
NA = not available.

Table A4: Estimated Size of High-risk Populations, South-East Asia Region

	Number of female sex workers	Number of men who have sex with men	Number of injecting drug users	Data sources (year)
Bangladesh	60 000–90 000	40 000–150 000	20 000–40 000	Operational Plan 2004–2010, Ministry of Health (2004)
Bhutan	NA	NA	NA	
DPR Korea	NA	NA	NA	
India	800 000–1 200 000	2 500 000	106 000–223 000	National AIDS Control Programme Phase III, Estimates by Expert committee on vulnerable groups (2006)
Indonesia	221 000	766 000	220 000	Mathematic model of HIV epidemic in Indonesia, 2008–2014, Ministry of Health (2008)
Maldives	900–4 000	1 600–4 200	300–2 000	Ministry of Health (2009)
Myanmar	60 000	240 000	75 000	Operational Plan 2008–2010, Ministry of Health (2008)
Nepal	31 000	135 000	28 000	National Estimates of HIV cases, Ministry of Health and Population (2007)
Sri Lanka	6 000	12 000	400	Ministry of Health (2008)
Thailand	145 000	560 000	40 000	The Asian Epidemic model. Projections for HIV/AIDS in Thailand, 2005–2025, (2008)
Timor-Leste[a]	400–1 000	350–2 000		National AIDS Programme (2009)

[a] *Based on mapping in selected urban areas.*
Note: Figures are rounded off.
NA = not available.

Table A5: Status of Harm Reduction Interventions, South-East Asia Region, December 2008

Country	Estimated number of IDUs[a]	Number of needle–syringe programme sites	Number of syringes/needles distributed	Number of syringes/needles distributed per IDU per year	Number of OST sites	Number of IDUs currently enrolled on OST	Number of IDUs currently enrolled on buprenorphine
Bangladesh	30 000	93	4 072 729	136	0	0	0
Bhutan	NA	NA	NA	NA	NA	NA	NA
DPR Korea	NA	NA	NA	NA	NA	NA	NA
India	165 000	200	5 342 069	32	63	0	6 500
Indonesia	220 000	323	797 455	4	46	2 711	500
Maldives	1 200	0	0	-	1	30	0
Myanmar	75 000	18	3 511 232	47	7	500	0
Nepal	28 000	36	692 466	25	2	124	30
Sri Lanka	400	0	0	-	0	0	0
Thailand	40 000	10	47 513	1	147	4 000–5 000	150
Timor-Leste	NA	NA	NA	NA	NA	NA	NA

[a] *Midpoint of range.*
Source: Universal access country reports, 2008.
IDU = injecting drug user; OST = opioid substitution therapy; NA = not available.

Table A6: Components of the Comprehensive Package of HIV Prevention, Treatment and Care Interventions for Injecting Drug Users, South-East Asia Region, 2008

Country	Needle and syringe programmes *(Yes/No)*	Opioid substitution therapy *(Yes/No)*	Other drug dependency treatment *(Yes/No)*	HIV testing and counselling *(Yes/No)*	Antiretroviral therapy *(Yes/No)*	STI prevention and treatment *(Yes/No)*	Condom programme for IDUs and their sexual partners *(Yes/No)*	Targeted IEC *(Yes/No)*	Viral hepatitis diagnosis, treatment and vaccination *(Yes/No)*	Prevention, diagnosis, and treatment of TB among IDUs *(Yes/No)*
Bangladesh	Yes	No	No	Yes	No	Yes	Yes	Yes	No	No
Bhutan	No	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes
DPR Korea	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
India	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Indonesia	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Maldives	No	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
Myanmar	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Nepal	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Sri Lanka	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No
Thailand	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Timor-Leste	No	No	No	No	No	No	No	No	No	No

Source: Universal access country reports, 2008.
STI = sexually transmitted infection; IDU = injecting drug use; IEC = information, education and communication; TB = tuberculosis; NA = not available.

Table A7: Status of Blood Transfusion Services, South-East Asia Region, 2007

Country	Number of blood banks	Number of blood units collected	Voluntary donations	Blood units as whole blood	Blood units screened for HIV	Screened blood units HIV-positive
Bangladesh	114	324 505	29%	97%	100%	0.01%
Bhutan	29	5 993	39%	63%	100%	0.04%
DPR Korea	12	97 810	96%	38%	100%	0
India	2 382	60 80 000	59%	75%	100%	0.28%
Indonesia	211	17 50 000	81%	38%	97%	0.05%
Maldives	19	6 764	14%	88%	100%	0.20%
Myanmar[a]	515	1 38 616	55%	95%	100%	0.51%
Nepal	61	1 21 512	90%	75%	100%	0.09%
Sri Lanka	74	2 46 752	75%	2%	100%	0.17%
Thailand	12	4 99 212	100%	4%	100%	0.27%
Timor-Leste	5	2 898	37%	68%	100%	0.48%

[a] *Data pertains to 2006 and does not represent all blood banks.*
Source: National blood safety reports submitted to global database on blood safety.
NA = not available.

Table A8: Availability of Testing and Counselling Services, South-East Asia Region, 2008

Country	Number tested	Population (15 years plus) per 1000 population	Number tested	Total number of facilities	Population (15 years plus) /number of T&C facilities
Bangladesh	24 101	88 500 871	0.3	83	1 066 276
Bhutan	4 770	379 447	13	34	11 160
DPR Korea	NA	13 009 741	NA	NA	NA
India	8 734 504	625 410 805	14	4 817	129 834
Indonesia	109 544	126 574 569	0.9	547	231 398
Maldives	NA	182 418	NA	8	22 802
Myanmar	257 158	27 878 883	9.2	199	140 095
Nepal	86 567	14 614 583	5.9	137	106 676
Sri Lanka	432	10 585 730	0	29	365 025
Thailand	959 899	37 578 839	26	1 014	37 060
Timor-Leste	661	489 683	1.3	15	32 646

Source: Universal access country reports, 2008.
T&C = testing and counselling; NA = not available.

Table A9: Interventions to Reduce the Risk of Transmission of HIV from Mother to Child, South-East Asia Region, 2008

Country	Total number of facilities providing ANC services	Number of facilities providing ANC services that also provide HIV testing and counselling for pregnant women	Total number of pregnant women tested for HIV	Estimated number of pregnant women	Pregnant women who were tested for HIV	Number of HIV infected pregnant women who received ART	Estimated number of HIV-infected pregnant women	HIV-infected pregnant women who received ART	Number of health facilities that offer paediatric ART
Bangladesh	551	1	62	4 500 000	<0.1%	6	83	7.2%	3
Bhutan	201	34				5	10	50%	2
DPR Korea	NA	NA	NA	NA	NA	NA	NA	NA	NA
India	173 464	4 817	4 234 401	29 087 691	14%	10 280	48 907	22%	197
Indonesia	10 398	21	5 335	5 256 203	0.1%	165	2 299	7.2%	17
Maldives	204	8	3 267	3 267					
Myanmar	9 817	2 900	178 722	1 200 000	15%	1 377	5 193	27%	25
Nepal	4 180	15	43 733	750 000	4.8%	47	1 422	3.3%	15
Sri Lanka	3 860	3	12 239	380 069	3.2%	5	54	9.3%	5
Thailand	1 085	1 014	797 047	797 356	100%	5 769	6 085	95%	1 014
Timor-Leste	250	15	71	50 260	0.1%	1			2
Total	**204 010**	**8 828**	**5 274 877**	**42 021 579**	**13%**	**18 048**	**64 053**	**28%**	**1 280**

Source: Universal access country reports, 2008; Universal Access Report, Geneva, 2008.
ANC = antenatal care; ART = antiretroviral treatment; NA = not available.

Table A10: Reported Number of People Receiving Antiretroviral Treatment, South-East Asia Region, December 2008

	Health facilities providing antiretroviral treatment			Number of adults and children with advanced HIV infection who are currently receiving antiretroviral treatment				Percentage of adults and children with HIV known to be on treatment 12 months after start of antiretroviral treatment	Number of PLHIV on second-line antiretroviral treatment
Country	Public	Private	Total	Total	Adult male	Adult female	Children		
Bangladesh	-	6	6	283			6		
Bhutan	2	-	2	30	14	15	1		1
DPR Korea									
India	187	10	197	234 581	110 501	69 806	13 211	80%	344
Indonesia	123	27	150	10 616			356	65%	178
Maldives	1	-	1	2	2	-	-		
Myanmar	23	30	53	15 191	8 066	6 159	966	81%	
Nepal	21	2	23	2 536	1 433	984	119	82%	8
Sri Lanka	5	-	5	146	74	65	7		5
Thailand	911	103	1 014	179 557			8 641	79%	
Timor-Leste	1	1	2	29	17	9	3		
Total	**1 274**	**179**	**1 453**	**442 971**	**152 688**	**95 410**	**23 405**	**79%**	**536**

Source: Universal access country reports, 2008.
PLHIV = people living with HIV; NA = not available.

Table A11: Number of Surveillance Sites, by Population Group, South-East Asia Region, 2006–2008

Country	Men who have sex with men/ male sex workers/ the transgender population	Female sex workers	Injecting drug users	Other high-risk groups[a]	Antenatal clinic attendees
Bangladesh	6	21	27	9	0
Bhutan	0	0	0	3	0
DPR Korea	0	0	0	0	0
India	42	134	49	250	639
Indonesia	6	19	6	27	6
Maldives	2	2	2	3	0
Myanmar	2	5	6	35	34
Nepal	2	3	4	1	0
Sri Lanka	0	8	1	8	0
Thailand	6	39	1	17	76
Timor-Leste	1	1	0	1	0

[a] *Other high-risk groups include: patients with sexually transmitted infections, truckers, seafarers, taxi drivers, three-wheel auto drivers, resort workers, migrants, rickshaw pullers, uniformed personnel, dockworkers and fisher folk.*

Source: Surveillance country reports, 2006–2008.

Annex 2:

Consensus Statement on the Comprehensive Package of HIV Interventions and Sexual Health Services for Men who have Sex with Men (MSM) and Transgender (TG) in Asia and the Pacific

This Asia Pacific Regional Consensus Meeting recognized that the significant and increasing burden of HIV infections that has been documented among MSM and TG in many countries in the region constitutes an urgent health and development crisis. This Consensus Statement describes the key components of a multi-sectoral, comprehensive package of interventions and sexual health services that will provide a continuum of prevention, care, treatment and support services to reduce the incidence and impact of HIV among the broad range of MSM and TG in Asia and the Pacific.

It is therefore recommended that comprehensive national responses incorporate effective, scaled-up HIV and STI prevention activities, along with care, treatment and support services, all guided by strategic information. The meeting further recognized that enabling environments, strategic partnerships and collaborations that include governments, communities and development partners are essential for the design, costing and implementation of comprehensive responses.

Prevention activities must target the diversity of MSM and TG, including those living with HIV, and address sexual health needs through a variety of approaches and combinations of interventions. Innovative use of mass and targeted media, including the internet, should be an integrated component in the delivery of prevention messages, health promotion and social support services. Commodities, such as condoms and lubricants, should be readily available and widely promoted. Prevention activities should be strengthened using a variety of channels, in locations where high risk behaviour may occur and include structural interventions.

Key issues that should be strongly considered in prevention programming, taking into account legal and policy constraints, include sexual risk-taking linked to recreational drug use among MSM, as well as access to clean needle and syringes programmes for MSM who also inject drugs; along with the availability of prevention programs for male-to-male sexual transmission in prisons and other closed settings.

To maximize service utilization and coverage, access to STI management, HIV counselling and testing and, where appropriate, structured referral mechanisms to health, social services and peer support groups, needs to be increased. This can be achieved through implementation of interventions such as peer outreach, drop-in centres, and mobile clinics that seek to provide services in addition to standard public health settings.

Addressing stigma and discrimination, enhancing the appropriate clinical skills, knowledge, and sensitization of health care workers, removing structural barriers to appropriate services delivery, and increasing health seeking behaviours of MSM and TG are also essential to programme success. Consequently, an increased proportion of MSM and TG living with HIV will realize their right to positive health, including access to existing public health ART services, life saving therapies, and targeted prevention and care through community programs designed and run by and for MSM living with HIV, as well as the provision of clinical management of co-infections such as TB and hepatitis.

The meeting also recognized the potential of existing and emerging bio-medical prevention technologies to increase the impact of prevention programming, and recommends urgent consideration of these developments such as the use of pre- and post-exposure prophylaxis. Similarly, it was recognized that a successful comprehensive response requires specific attention to non-HIV health needs of MSM and TG.

The meeting concluded that strategic information is essential to guide the planning, design and monitoring of appropriate interventions, as well as the allocation of resources. Meeting participants agreed that monitoring and evaluation systems need to be built around programmes in order to provide data that will demonstrate what extent and intensity of coverage of the comprehensive package is required to promote health behaviours and reduce HIV and STI incidence.

While bio-behavioural information is becoming increasingly available, gaps remain in the knowledge base, especially in issues relating to the changing nature of the epidemic, the impacts on affected communities, population size estimates and socio-cultural determinants. Further investment and harmonization of surveillance, socio-behavioural and operational research, with the substantive involvement of MSM and TG or affected communities, are needed.

The meeting supported the recommendation of the report of the Commission on AIDS in Asia that comprehensive interventions on HIV among MSM and TG in Asia Pacific be fully integrated and costed into national plans. Consequently, monitoring and evaluation processes to address the quality, effectiveness and coverage of comprehensive interventions need to be conducted.

The meeting recognized that an enabling environment is essential for an effective and comprehensive response to HIV among MSM and TG in Asia and the Pacific. The meeting also agrees that the establishment of broad based partnerships, mutual recognition of roles and responsibilities, and commitment to rights based approaches are essential to address restrictive legal and regulatory frameworks, stigmatizing and discriminatory social norms, while promoting appropriate policy development and the meaningful engagement and mobilization of affected communities.

Further, increased investment on the development of organizational and technical capacities of all partners, particularly of community based organizations, is necessary to strengthen an effective response.

The Regional Consensus Meeting concluded that effective action on the recommended key components of comprehensive responses can only move forward with the continued synergy of governments, communities and development partners, working together towards a continuum of prevention, care, treatment and support for MSM and TG in Asia and the Pacific.

This report presents a synthesis of historical and current data on HIV epidemiology in the South-East Asia Region. It also provides the latest updates on national responses to the epidemic. Individual country profiles summarize the epidemic situation and list key programmatic and data gaps as well as priority actions. The information is presented using graphs with key messages highlighted, making this report useful to a wide audience including HIV programme managers in Asia and other countries, policy makers, donors and researchers in the field of HIV/AIDS.

World Health Organization
Regional Office for South-East Asia

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