

HIV/AIDS

in the South-East Asia Region



progress report

2010

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FOREWORD

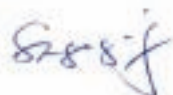
This annual 2010 progress report on “HIV/AIDS in the South-East Asia Region” presents key achievements in prevention and control of HIV in the Region and highlights areas where further work is needed.

The Region is home to nearly 3.5 million people living with HIV/AIDS of whom nearly half are likely to be co-infected with TB. A large number of new HIV infections are still occurring each year which places HIV prevention at the top of the agenda for national AIDS programmes.

Overall, good progress has been made in reducing heterosexual transmission of HIV through 100% condom use programmes and community-based peer led interventions. There has also been noteworthy success in ensuring safe blood transfusion services averting hundreds of thousands of infections every year. Just a few years ago, access to treatment was a dream for most people living with HIV in the Region. Today, more than half a million people living with HIV in the South-East Asia Region are on treatment, living longer and contributing to society.

Despite these successes, there are important shortfalls that need urgent attention. Countries in the South-East Asia Region have made genuine efforts in expanding HIV testing and counselling facilities yet a vast majority of infected people remain unaware of their HIV status. Two of three HIV-infected pregnant women do not benefit from antiretrovirals resulting in a large number of children being born with HIV. Effective implementation of the prevention of mother-to-child transmission (PMTCT) of HIV programme in Thailand, documented in this report, has demonstrated that it is possible to eliminate HIV among children. We call upon our Member States to join the efforts of WHO and other UN organizations in targeting the elimination of perinatal transmission of HIV from the Region. Scaling up of PMTCT services will be possible only with effective collaboration between HIV programmes and the maternal and child services and by increasing the implementation capacity of the health systems for delivery of HIV interventions.

Stigma, discrimination and marginalization of people living with HIV, sex workers, men who have sex with men, transgenders and people who inject drugs are other important hurdles in combating HIV/AIDS. Unless concerted actions are taken to wipe out stigma from health care and community settings, we will not succeed in providing health services to the affected populations. Finally, shortfalls in funds still exist in almost every country to achieve the targets for meeting the Millennium Development Goals. In these times of economic recession, we urge national governments and all developmental partners to sustain their commitment to fight the HIV/AIDS battle.



*Dr Sangay Thinley, MD, MPH
Director, Communicable Diseases
World Health Organization
Regional Office for South-East Asia*

ACRONYMS

3TC	lamivudine	NACO	National AIDS Control Organization
ACTG	AIDS Clinical Trials Group	NAP	National AIDS Programme
AIDS	acquired immunodeficiency syndrome	NASP	National AIDS/STD Programme
ANC	antenatal clinic	NFHS	National Family Health Survey
ART	antiretroviral therapy/treatment	NGO	nongovernmental organization
ARV	antiretroviral	NTP	National Tuberculosis Programme
AZT	zidovudine	NVP	nevirapine
BBS	biological and behavioural survey	NYSC	National Youth Services Council
CBO	community-based organizations	OPD	out-patient department
CCC	Community Care Centres	OST	opioid substitution therapy
DPR Korea	Democratic People's Republic of Korea	PHL	Public Health Laboratory
FSW	female sex worker	PLHIV	people living with HIV
GAVI	Global Alliance for Vaccines and Immunization	PMTCT	prevention of mother-to-child transmission
GoB	Government of Bangladesh	SACS	State AIDS Control Society
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria	PWID	people who inject drugs
HBV	hepatitis B virus	SEAR	South-East Asia Region
HCV	hepatitis C virus	STD	sexually transmitted disease
HIV	human immunodeficiency virus	STI	sexually transmitted infection
HMIS	Health Management Information System	T&C	testing and counselling
HSV-2	herpes simplex virus-2	TB	tuberculosis
IBBS	Integrated Biological and Behavioural Surveillance	TG	transgender
ICTC	Intergrated Counselling and Testing Centre	THC	Township Health Centre
IHC	Integrated HIV Care	TRG	Technical Resource Groups
IPT	isoniazid preventive therapy	UNAIDS	the joint United Nations Program on HIV/AIDS
MARP	most-at-risk populations	UNFPA	United Nations Population Fund
MOPH	Ministry of Public Health	UNODC	United Nations Office on Drugs and Crime
MSM	men who have sex with men	USAID	United States Agency for International Development
NAC	National AIDS Committee	WHO	World Health Organization
		YFHS	Youth Friendly Health Services

Executive Summary

The HIV epidemic remains a serious public health concern globally with a large number of preventable new HIV infections occurring each year and millions of people dying prematurely of AIDS. In 2009, an estimated 33.3 million people were living with HIV in the world.

HIV epidemic situation in the South-East Asia Region

- An estimated 3.5 million people were living with HIV/AIDS in the South-East Asia Region in 2009. Women account for 37% of the total number of people living with HIV.
- Annually, there are an estimated 220 000 new HIV infections and 230 000 AIDS deaths.
- Five countries (namely India, Indonesia, Myanmar, Nepal and Thailand) account for the majority of HIV infections. No case of HIV has been reported from the Democratic People's Republic of Korea. Bangladesh, Bhutan, Maldives, Sri Lanka and Timor-Leste together represent less than 1% of all HIV infections in the Region.
- The number of new infections every year is showing a downward trend in four of the five high HIV burden countries (namely India, Myanmar, Nepal and Thailand). In Indonesia, the HIV epidemic is still on the rise.
- The majority of HIV infections are transmitted sexually; injecting drug use is the second most common mode of HIV transmission.
- The South-East Asia Region accounts for nearly 15% of the global burden of new HIV-positive tuberculosis (TB) cases. HIV prevalence among new TB patients is 5.7%.
- The overall HIV prevalence among the adult population is very low (0.3%) in the Region, but sex workers and their clients, men who have sex with men, transgenders and people who inject drugs are disproportionately affected by HIV.
- In some areas, HIV prevalence has decreased among female sex workers; however, there is evidence of continuing high transmission among people who inject drugs, men who have sex with men and transgenders.
- Prevalence of sexually transmitted infections is very high particularly among sex workers, men who have sex with men and transgender populations.

Health sector response to the HIV epidemic

- Consistent condom use is reaching high levels among sex workers; however, men who have sex with men and transgenders have low rates of condom use. Coverage of a comprehensive package of HIV interventions for people who inject drugs continues to be low.
- A programme for the elimination of congenital syphilis is being scaled up in many of the Region's Member countries. Reported screening of pregnant women for syphilis is over 50% in India and Myanmar, and 80% in Sri Lanka.

- Resistance to ciprofloxacin (an antimicrobial to treat gonorrhoea) is very high, ranging from 75% in Thailand to 92% in Sri Lanka.
- Based on 2008 data, 10.5 million units of blood were collected against a total requirement of 17 million units. About 71% blood was collected from voluntary non-remunerated donors. Overall, 0.32% of screened blood units were found to be positive for HIV antibody.
- A large number of facilities provide testing and counselling services resulting in approximately 15.1 million people being tested in 2009 across the Region. Access to testing and counselling services for most-at-risk populations is still far below optimal levels.
- Barely 18% of pregnant women have access to HIV testing and counselling. Of the estimated HIV-infected pregnant women, 34% received antiretroviral prophylaxis.
- Currently, 577 000 people with advanced HIV infection are receiving antiretroviral treatment. But these numbers represent only 32% of those in need of treatment as per latest WHO criteria. Of those started on treatment, 65–92% are alive and on treatment 12 months after start of therapy.
- Countries with HIV–TB dual epidemics have made substantial progress in implementing collaborative activities; however, detection of HIV–TB coinfecting patients is still low.
- Substantial progress has been made in expanding surveillance systems in the Region leading to a better understanding of the national epidemics. There is scope to improve routine programme monitoring systems to better track progress towards programme goals.
- HIV drug resistance surveys completed in three countries — India, Indonesia and Thailand — indicate a low level of transmitted drug resistance.

Challenges and future priorities

Key challenges in achieving universal access to HIV prevention, care and treatment services include: continuing stigma and discrimination faced by people living with HIV and most-at-risk populations; limited capacity of health systems; still high prices of antiretroviral drugs; and lack of sustained finances. The critical priorities for the future in light of these challenges are listed below.

1. Reducing HIV transmission among most-at-risk populations. Minimizing HIV-associated stigma and discrimination in community and health care settings.
2. Reducing perinatal HIV transmission by increasing access to prevention of mother-to-child treatment services for pregnant women by integrating HIV services with related health services.
3. Decentralizing HIV testing and counselling services further to enable more people to know their status.
4. Ensuring timely access to treatment and improving the quality of antiretroviral treatment. Providing treatment adherence support and close monitoring to “slow” the development of HIV drug resistance.
5. Continuing advocacy for reducing prices of antiretroviral drugs.
6. Investing in building health systems and human resources to increase the implementation capacity for scaling-up HIV interventions.
7. Strengthening epidemiologic capacity at the country level and undertaking research on priority topics.

HIV Epidemiologic Situation

“ Approximately, 33 million people are currently living with HIV in the world. ”

The Global HIV Epidemic

Globally, the HIV epidemic continues to remain a serious public health problem with an estimated 33.3 million (31.4–35.3 million) people currently living with HIV [1]. While 0.8% of the adult population is infected with HIV, Region-wise differentials exist. In recent times, globally a stable trend in HIV prevalence is being noted.

In 2009, an estimated 2.6 million (2.3–2.8 million) people were newly infected with HIV. The majority of new infections occurred in low- and middle-income countries. The number of new HIV infections decreased by approximately 16% from 2001 to 2009. In 2009, an estimated 1.8 million (1.6 million–2.1 million) people died due to AIDS related illnesses.

Women account for 51% of people living with HIV (PLHIV), although this proportion varies among the various WHO Regions. An estimated 2.5 million (1.6 million–3.4 million) children under 15 years are currently living with HIV in the world.

HIV Epidemic in the South-East Asia Region

The WHO South-East Asia Region comprises 11 countries — Bangladesh, Bhutan, Democratic

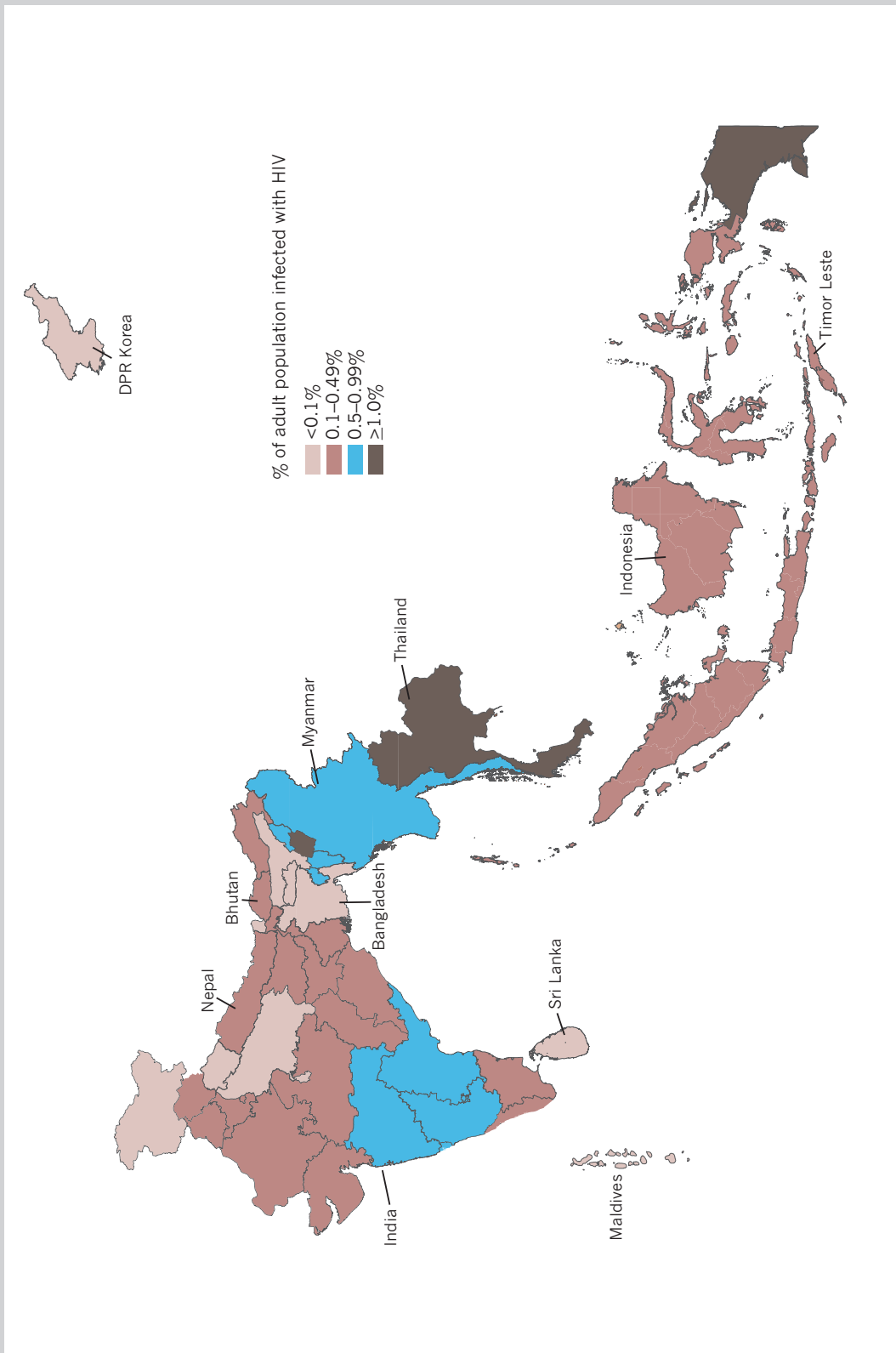
People's Republic of Korea (DPR Korea), India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, Timor-Leste — and is home to a population of 1.8 billion. Tables A1–A3 in the Annex provide selected information on the demographic, socio-economic and health infrastructure profiles of each of the WHO South-East Asia Region Member countries.

Magnitude and Trends in HIV Infection

In the South-East Asia Region the overall adult HIV prevalence is 0.3% with an estimated 3.5 million (3.2 million–4.0 million) PLHIV. The magnitude of HIV infection differs greatly between countries in the Region. Five countries account for majority of the burden, namely 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 estimated number of PLHIV ranges widely from <100 in Maldives to 2.4 million in India (see Figure 1 on page 2 and Table 1 on page 5). Majority of the countries in the Region have low level or concentrated epidemics; however, adult HIV prevalence above 1% is noted in Thailand, north-east India, and the Papua Province in Indonesia.

During 2009, an estimated 220 000 (190 000–260 000) people were newly

Fig. 1: Estimated HIV burden in the South-East Asia Region, 2009



Source: Country reports, national AIDS programmes, Member countries, South-East Asia Region.

“ Five countries — India, Indonesia, Myanmar, Nepal, and Thailand — account for the majority of the HIV burden in the South-East Asia Region. ”

infected with HIV and 230 000 (200 000–270 000) died due to AIDS related illnesses. The estimated number of new infections dropped by 31%, from 320 000 in 2001 to 220 000 in 2009, indicating that the HIV epidemic is declining in the South-East Asia Region. Country-wise differences in incidence exist (Figure 2). Thailand was the first country to record a drop in HIV incidence in the early 1990s, followed by India, Myanmar and Nepal in the late 1990s to early 2000. HIV incidence is still on the rise in Indonesia.

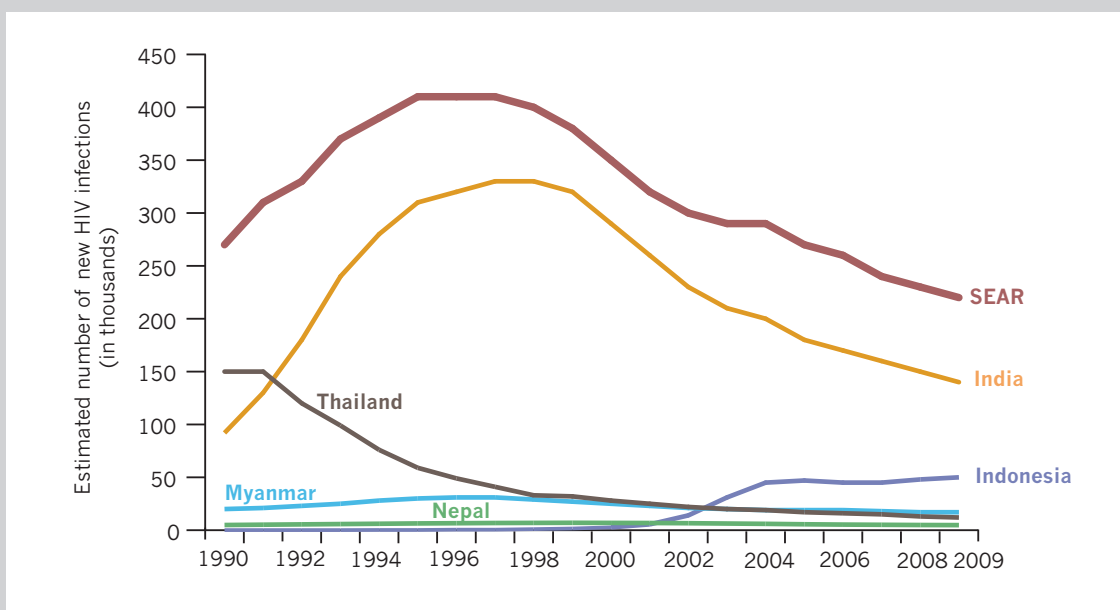
Overall, the estimated number of PLHIV (both male and female) is decreasing in the Region (data not shown). Within countries, HIV prevalence is higher among urban than rural areas. A large household survey conducted in six states of India found HIV prevalence to be 40% higher in urban than in rural areas (61% for women and 28% for men) [2]. In

countries with a low HIV burden, such as Bangladesh, Sri Lanka and Timor-Leste, HIV is mainly concentrated in large urban areas. In Timor-Leste, majority of the HIV positive cases were detected in the capital city Dilli, during the sentinel surveillance [3]. In Myanmar, HIV prevalence among antenatal clinic attendees was 1.3% (104/7766) among urban surveillance sites and much lower (0.4%; 23/5367; P<.001) among rural sites [4].

Modes of Transmission

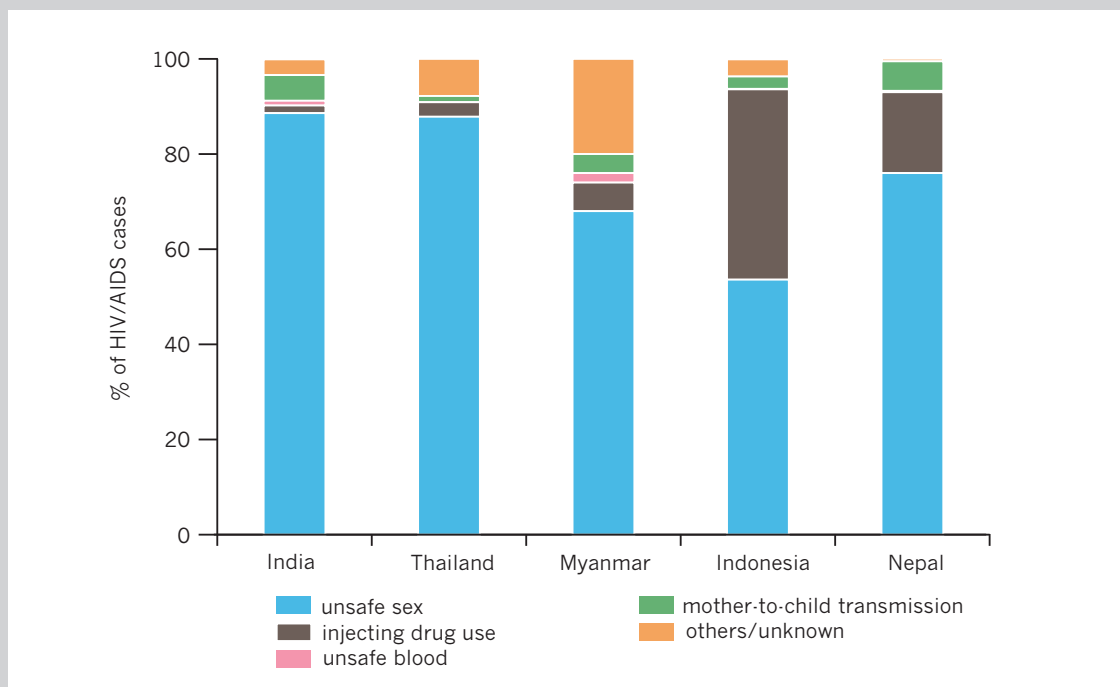
While there is much diversity in the HIV epidemic among countries of the Region, unsafe sex and injecting drug use are the main drivers (Figure 3). Sexual transmission accounts for the majority of the cases in Bhutan, India, Myanmar, Sri Lanka, Thailand and Timor-Leste. In Bangladesh and Indonesia injecting drug use epidemics are significant. Maldives has a growing threat of HIV epidemic due to injecting drug use.

Fig. 2: Estimated number of new HIV infections in the South-East Asia Region, 1990–2009



Note: Number of new infections estimated by Spectrum model using surveillance data reported by national AIDS programmes, Member countries, South-East Asia Region.

Fig. 3: Distribution of reported HIV/AIDS cases by mode of transmission, South-East Asia Region, 2009



Source: Country reports, national AIDS programmes, Member countries, South-East Asia Region.

There is also diversity in epidemics within the countries of the Region. Indonesia has two different epidemics: Papua has a heterosexual epidemic with HIV prevalence above 1% in the general population, while in the rest of Indonesia, the epidemic that began among people who inject drugs spread through the sexual networks of people who inject drugs to sex workers and their clients. In India, the north-eastern states bordering Myanmar still have significant epidemics among people who inject drugs and new areas in the north are emerging with high injecting drug use epidemics. However, in southern India, HIV is predominantly driven by heterosexual as well as same sex risky behaviours.

HIV-TB Coinfection

Globally, there were an estimated 1.2 million incident HIV-positive TB cases in 2009; the WHO South-East Asia Region accounts for nearly 15% of

the global burden [5]. Five countries in the Region with the highest HIV burden also have a high TB burden (Table 1). The incidence rate of HIV-positive TB cases was the highest in Myanmar, followed by Thailand, India and Indonesia. The incidence rate of HIV-positive TB cases was below 1 per 100 000 population in Bangladesh, Maldives, Sri Lanka and Timor-Leste. India accounted for the majority of new HIV-positive TB cases in the Region.

Overall, HIV prevalence among TB cases is 5.7%, but it varies widely among countries. Regular HIV surveillance among new TB patients has been conducted in Myanmar since 2006. In 2009, across 15 sites where surveillance was carried out, HIV prevalence was 9.2%, ranging from 2% in Loikaw to 26% in Monywa [4]. In 2010, a sentinel surveillance conducted among 266 TB patients in Timor-Leste, showed 1.13% (0.29–3.04%) to be positive for HIV [3].

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

Table 1: HIV–TB burden, South-East Asia Region, 2009

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	Adult population infected with HIV	Number	Rate per 100 000 population		Number	Rate per 100 000 population
Bangladesh	7 000	<0.1%	690 000	426	0.2%	580	<1
Bhutan	<1 000	0.1%	1 300	179	<0.1%	36	5.1
DPR Korea	NA	NA	100 000	423	NA	200	<1
India	2 400 000	0.3%	3 000 000	249	6.4%	130 000	11
Indonesia	190 000	0.2%	660 000	285	2.8%	12 000	5.4
Maldives	<100	<0.1%	150	47	<0.1%	<10	<1
Myanmar	240 000	0.6%	300 000	595	9.2%	22 000	44
Nepal	64 000	0.4%	71 000	241	2.4%	1 100	3.8
Sri Lanka	3 000	<0.1%	20 000	101	0.1%	32	<1
Thailand	610 000	1.4%	130 000	189	17.0%	16 000	23
Timor-Leste	<1 000	0.1%	8 400	743	1.1%	<10	<1
Total	3.5 million	0.3%	5 million	278	5.7%	180 000	10

Source: Country reports, national AIDS programmes; Global TB Control WHO Report, 2010.

Note: Figures are rounded off. Data shown are the best available estimates.

TB=tuberculosis; NA=not available.

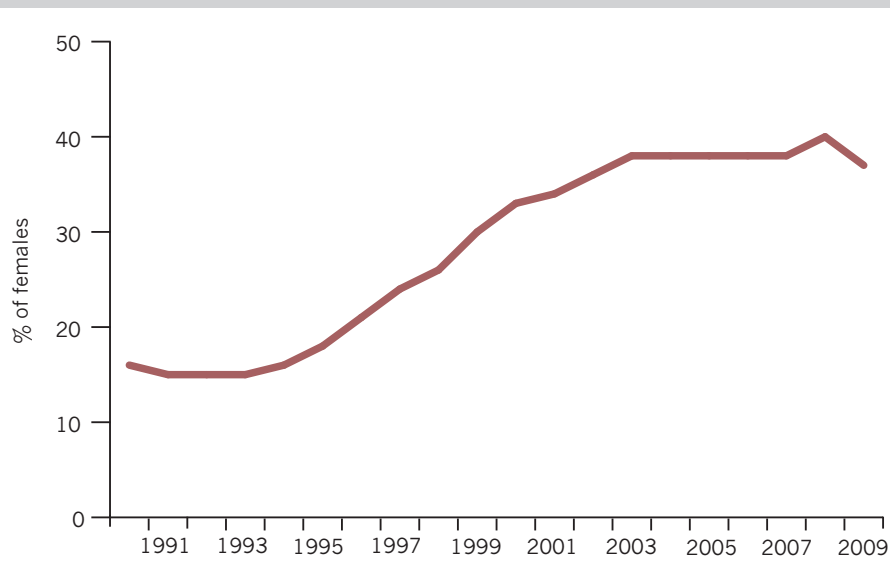
HIV Among Women and Children

An estimated 1.3 million (1.2–1.6 million) women (aged 15 years and above) are currently living with HIV in the South-East Asia Region. The proportion of women with HIV in the Region (37%) is lower than the global average (51%). In all countries

in the Region, except Bhutan and Timor-Leste, female-to-male ratio for HIV infection is less than 1; in Bhutan, approximately 50% of the HIV cases are among women. Of the 168 HIV/AIDS cases cumulatively reported in Timor-Leste, 52% are women.

Over time, the proportion of females among the reported HIV/AIDS cases

Fig. 4: Percentage of females among reported AIDS cases, South-East Asia Region, 1990–2009



Source: Country reports, national AIDS programmes, Member countries, South-East Asia Region.

gradually increased in all countries, although this proportion has stabilized in the past few years (see Figure 4 on previous page). Gender inequality, male dominance, stigma, low literacy and barriers to health care services are some of the key issues for higher vulnerability of women to HIV in the Region.

The estimated number of children living with HIV increased from 89 000 in 2001 to 130 000 in 2009, a 46% increase. Due to low coverage of the prevention of mother-to-child transmission (PMTCT) programme in the South-East Asia Region, a large number of babies born of HIV-positive mothers acquire HIV infection perinatally.

HIV Among Most-at-Risk Populations

Although the overall HIV prevalence in the Region is only 0.3%, certain population groups are highly affected.

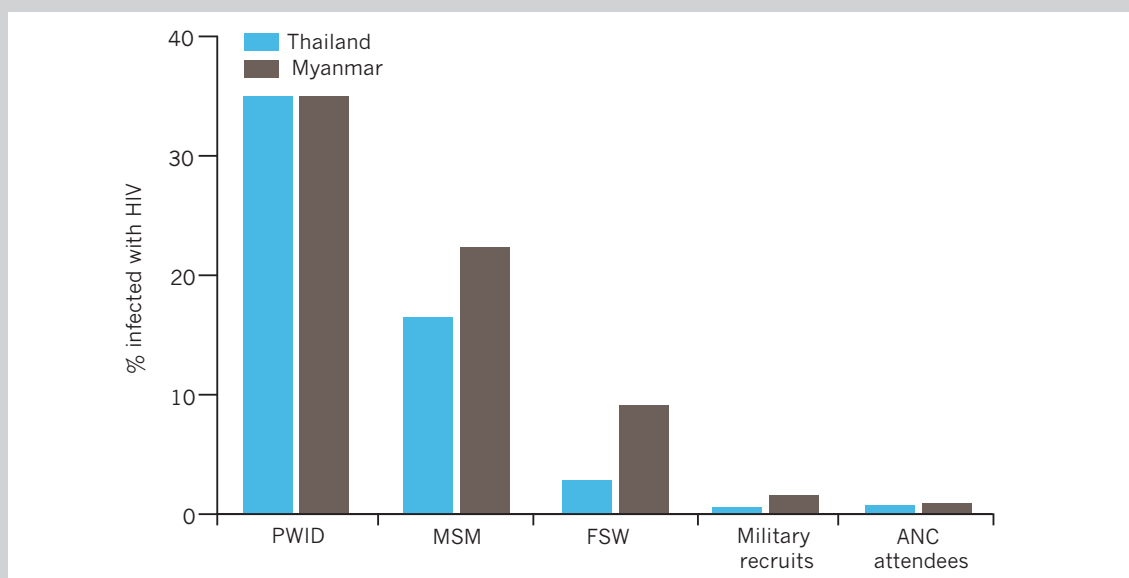
These include female sex workers, people who inject drugs, men who have sex with men (Figure 5) and transgenders. The following section presents the magnitude and trends of HIV infection in these population groups, e.g. in Myanmar and Thailand, men who have sex with men and people who inject drugs have 20–40 times higher HIV prevalence than the general population [4,6].

Female sex workers

HIV prevalence data for female sex workers, available from 281 sentinel surveillance sites from nine of 11 countries in the Region (except Bhutan and DPR Korea) for 2007–2009 showed that prevalence varied widely across the Region (Figure 6). In 33% sites, HIV prevalence among female sex workers was <1%, in 39% sites it was 1–5%, and in a quarter of the sites it was 5–20%. The highest HIV prevalence among female sex workers is noted in southern India with six sites having HIV prevalence above 20% —

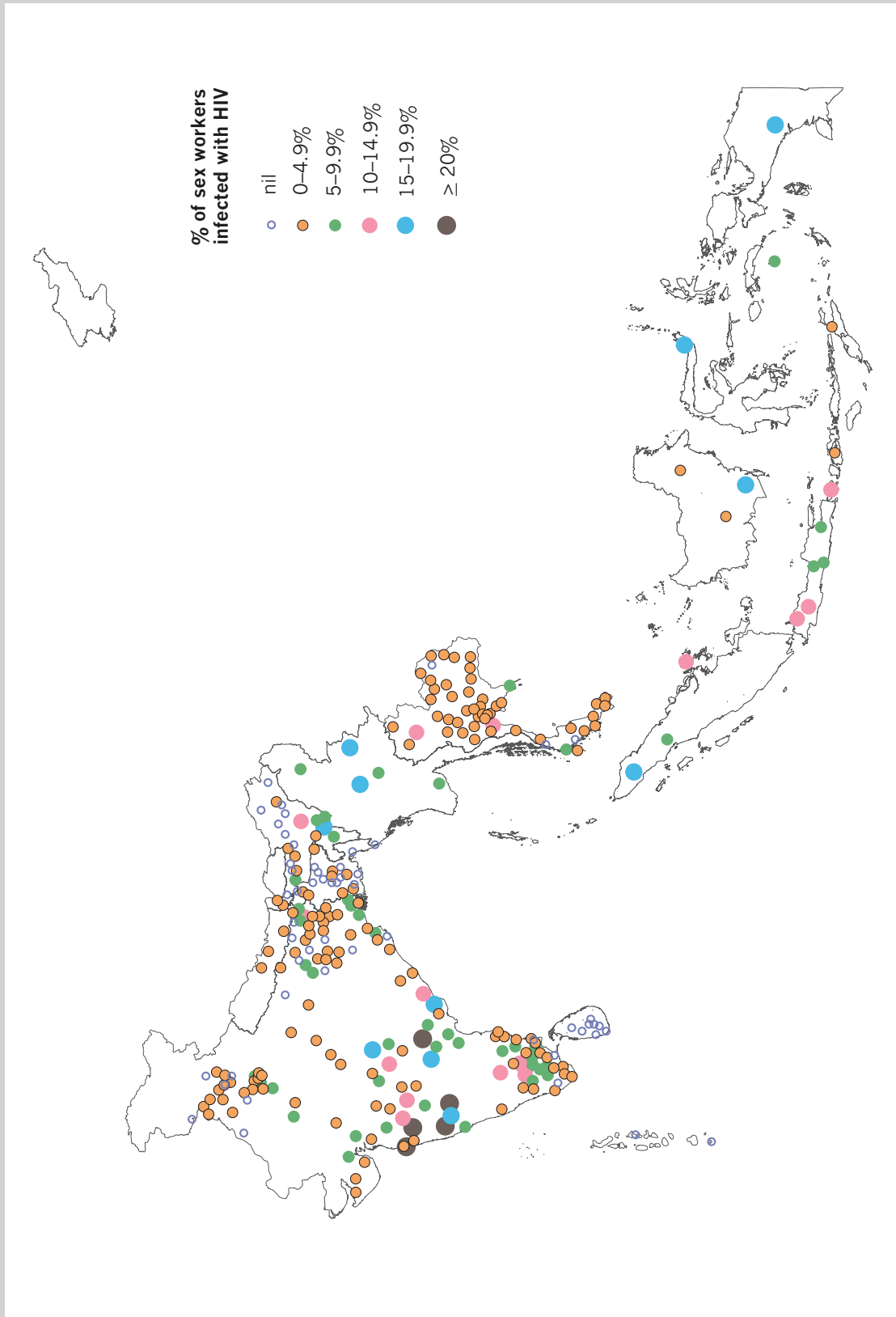
“ Female sex workers, persons who inject drugs and men who have sex with men have unacceptably high HIV infection rates. ”

Fig. 5: HIV prevalence by population group, Myanmar and Thailand, 2009



Sources: 2009 HIV sentinel surveillance report, National AIDS Programme, Ministry of Health, Myanmar; 2009 HIV sentinel surveillance report, National AIDS Programme, Ministry of Public Health, Thailand. PWID=people who inject drugs; MSM=men who have sex with men; FSW=female sex workers; ANC=antenatal clinic

Fig. 6: Percentage of female sex workers infected with HIV, South-East Asia Region, 2007–2010



Source: Sentinel surveillance reports of national AIDS programmes, South-East Asia Region. The latest available surveillance data is used from each country: Bangladesh and Indonesia-2007; Maldives and India-2008 and Nepal, Myanmar, Sri Lanka and Thailand-2009, Timor-Leste-2010.

Namakkal in Tamil Nadu (22%); Kolhapur in Maharashtra (26%); Warangal in Andhra Pradesh (27%); Mumbai in Maharashtra (30%); Bagalkot in Karnataka (34%); and Pune in Maharashtra (41%) [7]. In Indonesia the highest HIV prevalence was recorded in Tanah Papua (16%) followed by Bali (14%) and Batam (12%) [8]. Myanmar also has significant HIV prevalence among female sex workers with all five sites showing HIV prevalence above 5% [4]. In Thailand, HIV prevalence among female sex workers was below 5% in all except four of 51 sites. In Bangladesh, Maldives, Nepal and Timor-Leste HIV prevalence among female sex workers was below 5% in all sites [3,9–11]. In Sri Lanka, HIV was undetected among female sex workers in all eight sentinel sites [12].

Available trend data analysed from seven countries showed that HIV prevalence among female sex workers significantly decreased in India,

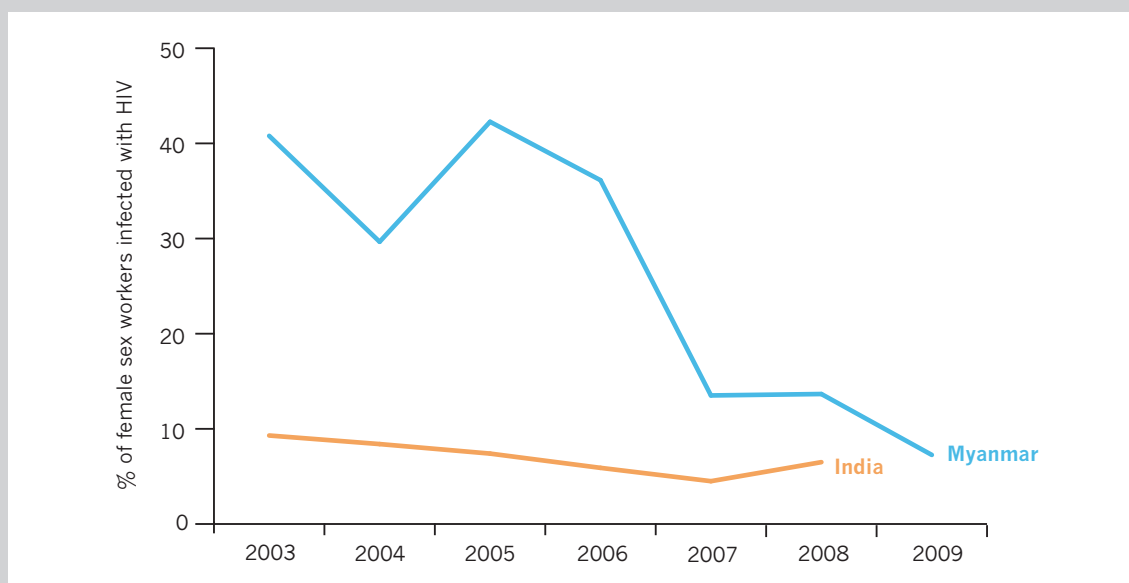
Myanmar and Thailand, and remained consistently below 5% in Bangladesh, Nepal and Sri Lanka. In India, HIV prevalence decreased by a third from 10.2% in 2003 to 6.6% in 2008 at consistent sentinel surveillance sites. Analyses of trends among young female sex workers available from India and Myanmar indicate a slow but steady decline in HIV prevalence in the past years (Figure 7). However, HIV prevalence is increasing in Papua, Indonesia, and has remained consistently very high in some sites in India during the past five years (e.g. Mumbai).

In conclusion, while HIV prevalence among female sex workers has generally declined in many countries, pockets of high transmission still persist.

Transgenders and men who have sex with men

Surveillance conducted at 88 sentinel sites in seven countries among men

Fig. 7: HIV prevalence among female sex workers aged 15–24 years, India and Myanmar, 2003–2009



Sources: Sentinel surveillance reports, National AIDS Programme, Myanmar; Sentinel surveillance reports, National AIDS Control Organization, India.

“ There is ongoing high HIV transmission among men who have sex with men. ”

who have sex with men and transgenders showed a high HIV prevalence in this group in four countries (India, Indonesia, Myanmar and Thailand). The highest HIV prevalence was found in Mandalay (32%), Kadappa (33%) and Warangal (27%) in Andhra Pradesh state in India, Bangkok (25%), and Thiruvallur (22%) in Tamil Nadu, India. In Andhra Pradesh state in India all five men-who-have-sex-with-men surveillance sites had HIV prevalence above 10% [7]. HIV prevalence was below 5% in Nepal and Sri Lanka [12,13]. HIV was undetected among men who have sex with men in Bangladesh and Maldives [9,11].

HIV prevalence is even higher among the transgender population. The 2008 sentinel surveillance in Mumbai showed HIV prevalence among the transgender population (16%) to be approximately double that in the men who have sex with men group in Mumbai (9.2%). In Indonesia, HIV

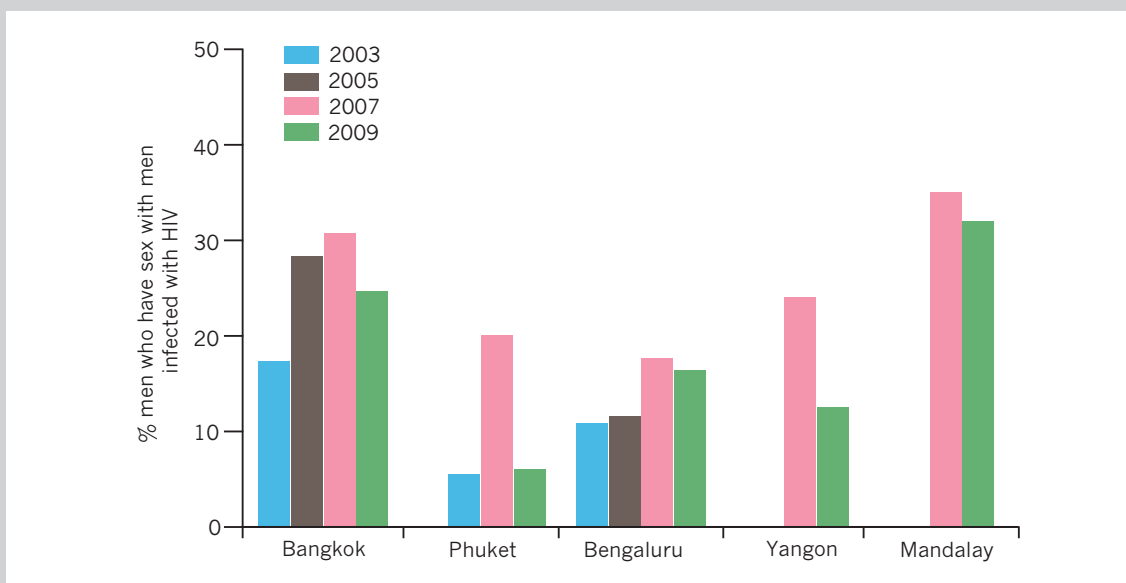
prevalence ranged from 14% to 34% among Warias (Bandung 14%; Surabaya 25%; Jakarta 34%); this was four to seven times higher than among men who have sex with men (Bandung 2.0%; Surabaya 5.6%; Jakarta 8.1%) [13].

Analyses of trends show that there is ongoing HIV transmission among men who have sex with men. In fact, an increase in HIV transmission is noted in several urban locations (Figure 8). In Bangkok, HIV prevalence among men who have sex with men increased from 17% in 2003 to 25% in 2009 [6]. In Bengaluru, India HIV prevalence showed an increasing trend — 11% in 2003 to 16% in 2009 [7]. In Nepal, however, HIV prevalence among men who have sex with men remained consistently below 5% in the past five years [14].

People who inject drugs

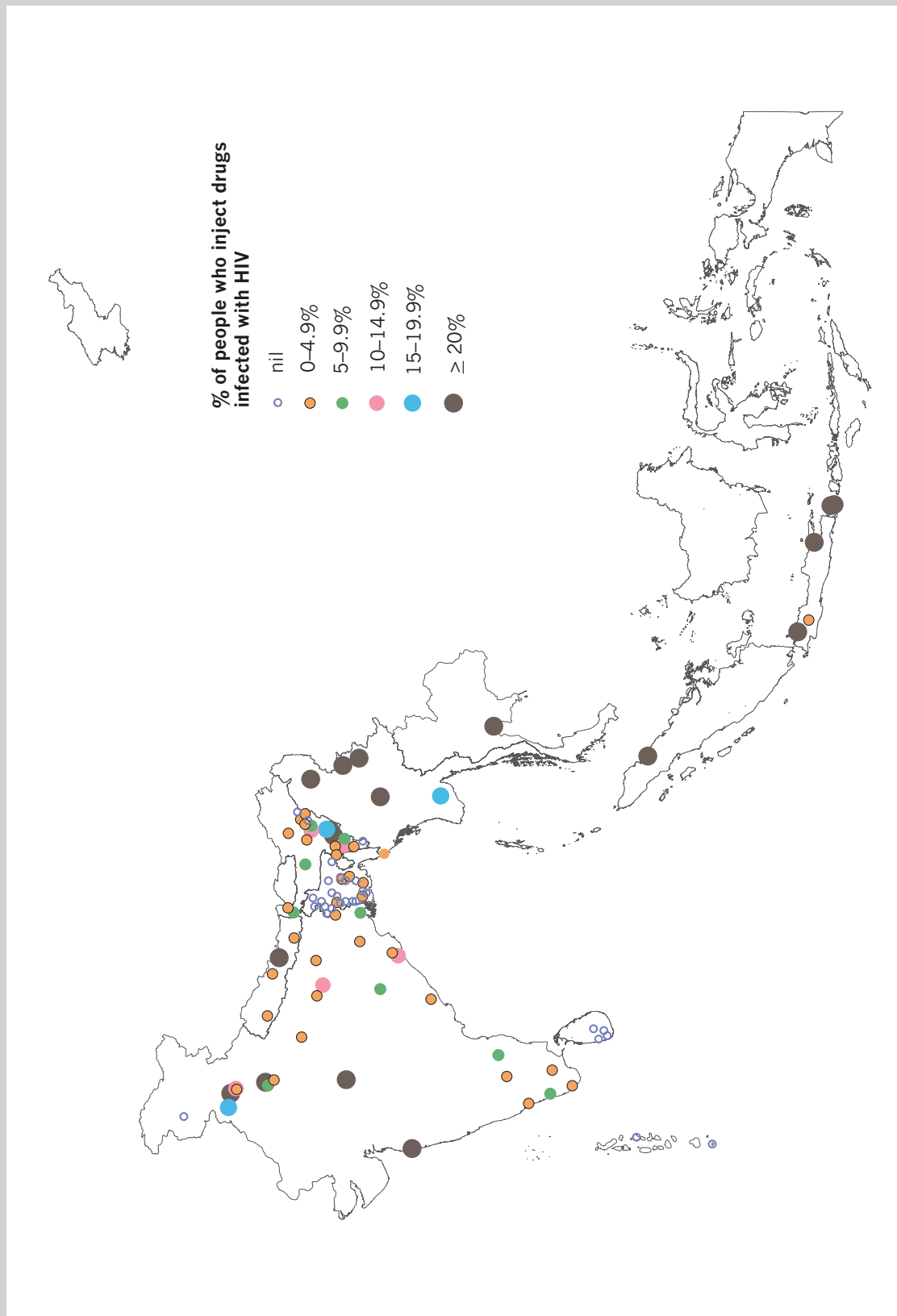
HIV surveillance undertaken during 2007–2009 in 99 sentinel sites

Fig. 8: HIV prevalence among men who have sex with men, selected cities, South-East Asia Region, 2003–2009



Source: Sentinel surveillance reports, national AIDS programmes, South-East Asia Region.

Fig. 9: HIV prevalence among people who inject drugs, South-East Asia Region, 2007–2009



Source: Sentinel surveillance reports of national AIDS programmes, South-East Asia Region. The latest available surveillance data is used from each country: Bangladesh and Indonesia–2007; Maldives and India–2008 and Nepal, Myanmar, Sri Lanka and Thailand–2009.

“ More than 20% of people who inject drugs are infected with HIV in many cities. ”

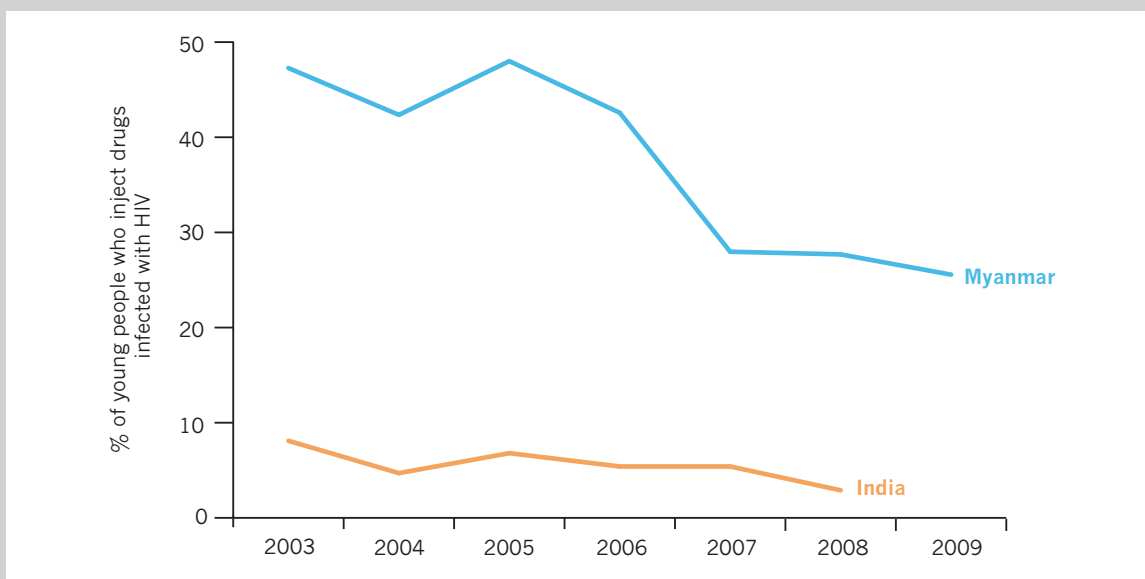
showed that HIV prevalence among people who inject drugs varied from less than 1% in 39 sites to above 20% in 18 sites (see Figure 9 on facing page). Indonesia has the most severe injecting drug use epidemics; in all four sites >40% of people who inject drugs were infected with HIV [15]. In both Thailand and Myanmar, HIV prevalence among people who inject drugs was 35%. In Bangladesh, HIV among people who inject drugs was undetected in 20 of 27 sites, but one neighbourhood in Dhaka city had an HIV prevalence of 7%. No HIV case was detected in Maldives. Bhutan, Sri Lanka and Timor-Leste have insignificant injecting drug use epidemics.

A wide variation in HIV prevalence was noted within countries. For example, in Myanmar, HIV prevalence among people who inject drugs ranged from 19% in Yangon to 54% in Myitkyina. In India, HIV prevalence ranged from 0% in some sites to 56% in Amritsar,

Punjab. Seventeen of 50 sentinel sites in India had HIV prevalence >10 among people who inject drugs — most of these sites are in the north and north-eastern states.

Analyses of trends reveal an overall decline in HIV prevalence among young people who inject drugs in India and Myanmar (Figure 10). However, several old HIV epidemics have remained uncontrolled over many years even in countries where HIV has been otherwise controlled. For example in Bangkok, HIV prevalence remained above 30% in the past 20 years although HIV is successfully controlled in Thailand. In Tamil Nadu state in India, the overall HIV prevalence has significantly declined, but among people who inject drugs in Chennai city (the state capital) HIV increased from 27% in 2000 to 36% in 2008. In India, HIV prevalence among people who inject drugs in some cities has been above 20% in the past 10 years. In Manipur, where

Fig. 10: HIV prevalence among people who inject drugs aged 15–24 years, India and Myanmar, 2003–2009



Sources: Sentinel surveillance reports, National AIDS Programme, Myanmar; Sentinel surveillance reports, National AIDS Control Organization, India.

injecting drug use epidemics first started in India, HIV prevalence was 26% in 2003 and 29% in 2008 at consistent sentinel sites. Moreover, new pockets of high HIV transmission have emerged in the northern states of India — Amritsar (56%), Bhopal (40%) in Madhya Pradesh, Ropar (36%) in Punjab and Delhi (19%). Nepal is the only country where consistent declines in HIV prevalence are noted. In Kathmandu, HIV prevalence declined from 68% in 2003 to 21% in 2009 [16].

HIV Among the General Population

Military recruits

Data among military recruits reflects HIV prevalence among the young male general population. Long-term trends in HIV infection among military recruits from surveillance data are available from Myanmar and Thailand. In 2009, HIV prevalence among

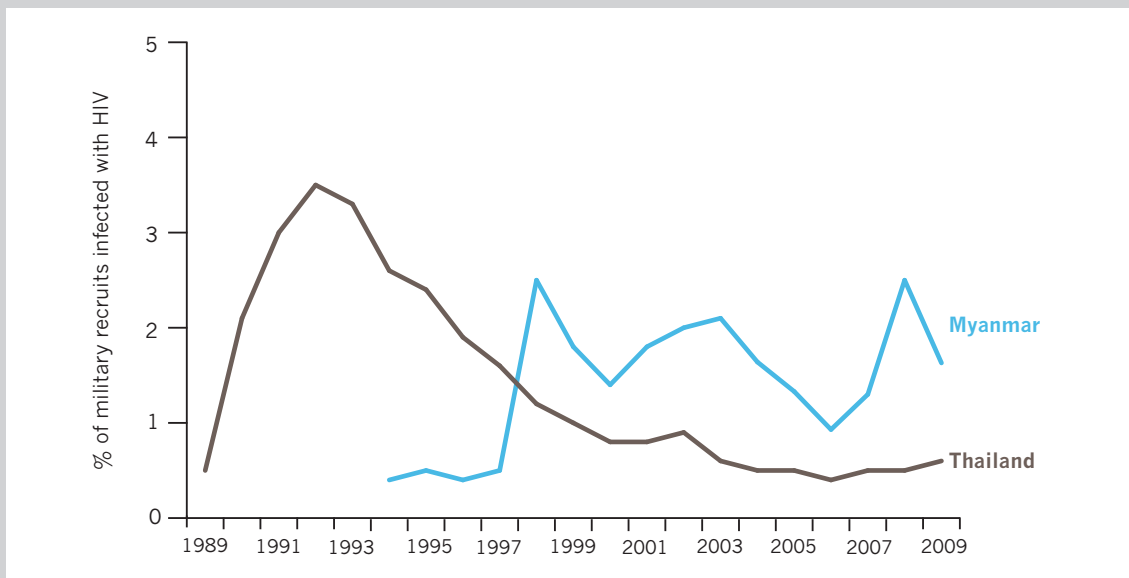
military recruits was 1.6% and 0.57% in Myanmar and Thailand, respectively. In Thailand, a distinct drop in HIV prevalence was noted in the early 1990s, consistent with the decline in the overall epidemic at the same time (Figure 11). In Myanmar too, HIV prevalence among young military recruits seems to have stabilized for the past few years. HIV data among uniformed personnel is unavailable from other countries.

Antenatal clinic attendees

Antenatal clinic (ANC) attendees are the largest population under surveillance in the South-East Asia Region as this group is relatively easy to access and it is inexpensive to conduct surveillance for this group. For practical convenience, surveillance in the ANC attendees group is used as a proxy for HIV in the general population with some adjustments. ANC attendee surveillance is largely carried out in India (643 sites), Myanmar (34 sites) and Thailand (67 sites). In 2009, the

“ HIV infection rates have consistently declined among antenatal clinic attendees. ”

Fig. 11: HIV prevalence among military recruits, Myanmar and Thailand, 1989–2009



Sources: Sentinel surveillance reports, National AIDS Programme, Myanmar; Sentinel surveillance reports, National AIDS Programme, Thailand.

average HIV prevalence in Myanmar, Thailand and India was 0.96% (range: 0–4%), 0.77% (range: 0–3.2%) and 0.6%, (range: 0–3.9%) respectively. Wide variations are noted within countries. For example, in India, HIV was undetected in 38% of the sites (246 of 643 sites), while nearly 20% of 643 sites (134 of 643 sites) had HIV prevalence above 1% and six sites had HIV prevalence above 3%. Sites in Manipur and Nagaland in the north-east, Maharashtra, as well as Karnataka and Andhra Pradesh in the south showed an HIV prevalence above 3%.

Analyses of trends show that HIV is declining in three countries — India, Myanmar and Thailand (Figure 12). Increasing trends are noted in some states of India, namely Gujarat, Orissa, Rajasthan and West Bengal.

Sexually Transmitted Infections

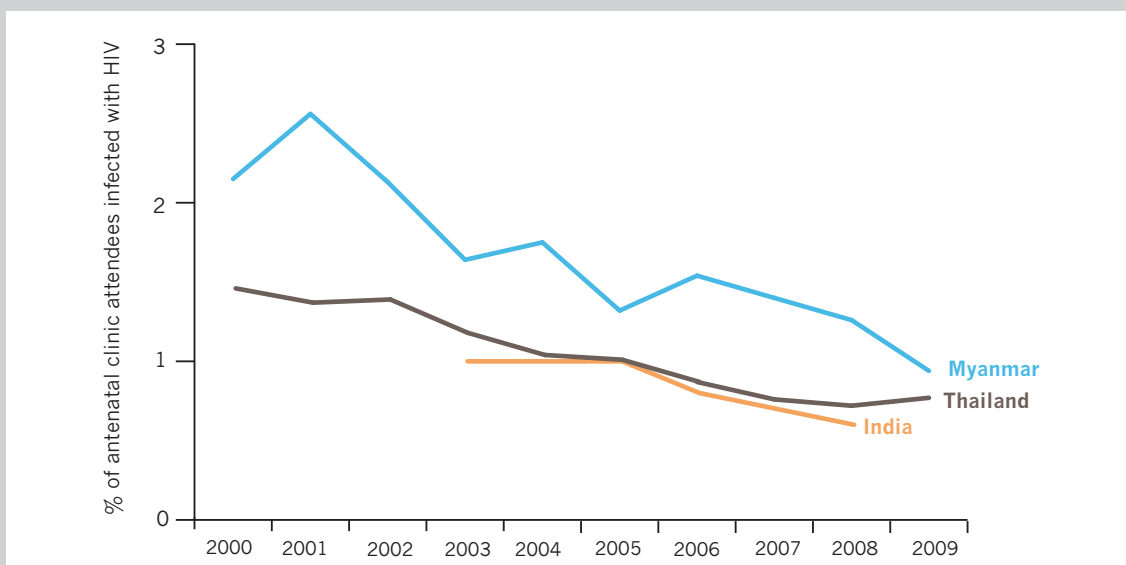
Of the 448 million sexually transmitted infections cases (mostly

four — chlamydia, gonorrhoea, syphilis and trichomonas) present globally in 2005, 71 million were in the South-East Asia Region. Of these, infection due to trichomonas was most prevalent (38.6 million), followed by gonorrhoea (22.7 million) whereas chlamydia (6.6 million) and syphilis (2.9 million) infections were relatively lower [17].

Sexually transmitted infections are disproportionately high among most-at-risk populations, particularly among female sex workers and their clients, and men who have sex with men due to a high turnover of partners (Figure 13).

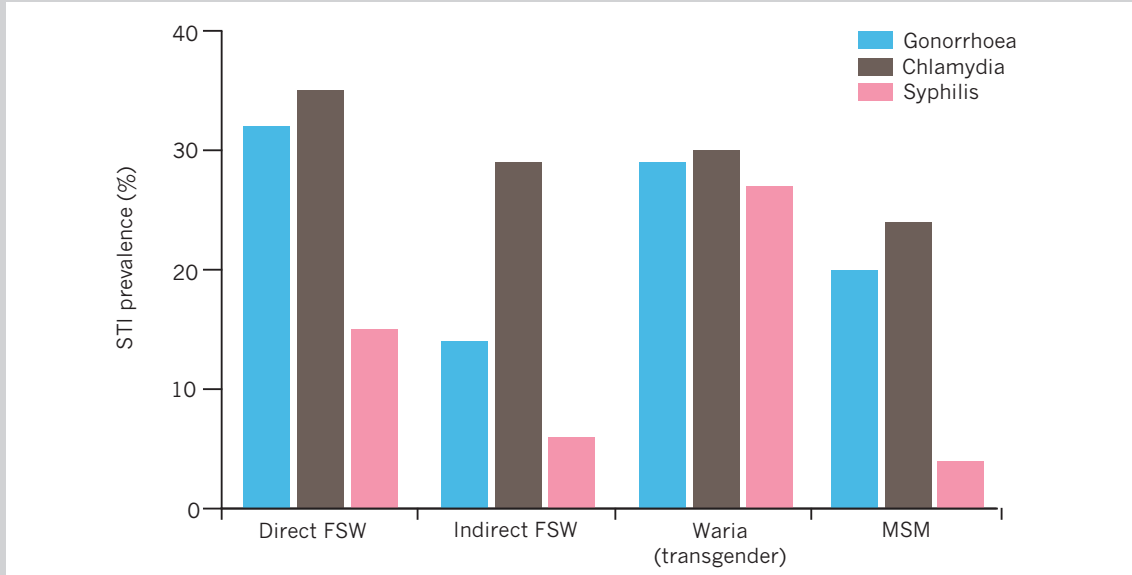
In Indonesia, prevalence of one or more sexually transmitted infections (active syphilis, chlamydia or gonorrhoea) ranged from 38% to 75% among direct sex workers in seven cities. Among indirect sex workers, prevalence of one of the three sexually transmitted infections was relatively lower (29–39%) [8]. The

Fig. 12: HIV prevalence among antenatal clinic attendees in high HIV burden countries, South-East Asia Region, 2000–2009



Sources: Sentinel surveillance reports, National AIDS Programme, Myanmar; Sentinel surveillance reports, National AIDS Control Organization, India; Sentinel surveillance reports, National AIDS Programme, Thailand.

Fig. 13: Prevalence of sexually transmitted infections, by population group, Indonesia, 2007



Source: *Integrated Biological and Behavioural Survey 2007, Ministry of Health, Indonesia.*
 FSW=female sex worker; MSM=men who have sex with men.

prevalence of any sexually transmitted infection (syphilis, gonorrhoea or chlamydia) among female sex workers in India ranged from a low of 7.6% in Prakasam District, Andhra Pradesh to a high of 58% in Yevatmal District of Maharashtra [18]. Syphilis was the predominant bacterial sexually transmitted infection in most of the districts across five high burden states (3.1–51%). Prevalence of gonorrhoea (0–9.3%) and chlamydia (0.9–14.2%), were generally on the lower side. The prevalence of herpes simplex virus-2 (HSV-2) antibody among female sex workers was very high and ranged from 34% in Chennai and Thane to 96% in Pune.

Similarly, a very high prevalence of HSV-2 among men who have sex with men was noted in the Region: 15–78% in India [19]; 40% in Bangkok [20]. In men who have sex with men hepatitis B virus prevalence is also high: 73% among HIV-positive men who have sex with men in Bangkok; 13% among men who have sex with men in Timor-

Leste; and 6% among men who have sex with men in Addu, Maldives [9,20, 21]. Syphilis prevalence among men who have sex with men ranged from 3.5% to 18% in India, 3.2% to 5.6% in Indonesia and 5.5–7% in Myanmar [4,18,22]. Syphilis prevalence data for transgenders, where available, are also high: 25–29% in Indonesia, 17% in India and 8% in Bangladesh [11,14,18]. Chlamydia and gonorrhoea infections are high among men who have sex with men and transgender populations. In Indonesia, prevalence of rectal chlamydia among transgenders (23–35%) is relatively higher than that among men who have sex with men (19–22%) [14,22].

In men who have sex with men in Nepal the prevalence of rectal gonorrhoea and chlamydia was 13% and 5%, respectively and that of urethral gonorrhoea and chlamydia infections was 0.8% and 2.5%, respectively.

Among the general population, syphilis prevalence among ANC

“ Sexually transmitted infections are unacceptably high among sex workers, men who have sex with men and transgenders. ”

attendees was 0.24% ranging from 0 in Maldives to 1.2% in Indonesia¹.

Decreasing trends in syphilis among ANC attendees were reported from several states in India and Myanmar.

In many countries, overall trends in sexually transmitted infection rates have remained stable or declined. In

Sri Lanka, incidence of bacterial sexually transmitted infections have remained stable at very low levels for the past 10 years.

In Thailand, the reported sexually transmitted infection cases remained constant at about 20 per 100 000 population for many years².

¹ Universal access, country reports, 2009.

² Thailand Poster, National AIDS Programme, Ministry of Public Health, Thailand. Presented at the South-East Asia Region Programme Managers Meeting, New Delhi, India, 26–28 October 2010.

Health Sector Response to the HIV Epidemic

The health sector response to the HIV epidemic is spear-headed by the national AIDS programmes of health ministries of Member countries in conjunction with national and international nongovernmental organizations (NGOs), the United Nations and other developmental partners. The following sections present the status and progress in the health sector response to the HIV epidemic.

Prevention of HIV Transmission in Most-at-Risk Populations

Given that certain population groups, namely female sex workers and their clients, men who have sex with men, and people who inject drugs are disproportionately affected and contribute significantly to the transmission of new HIV infections, prevention interventions for these populations is a priority for national AIDS programmes. However, providing health services to these populations is a daunting task due to lack of enabling environment, as well as stigma and discrimination.

Interventions for Sex Workers

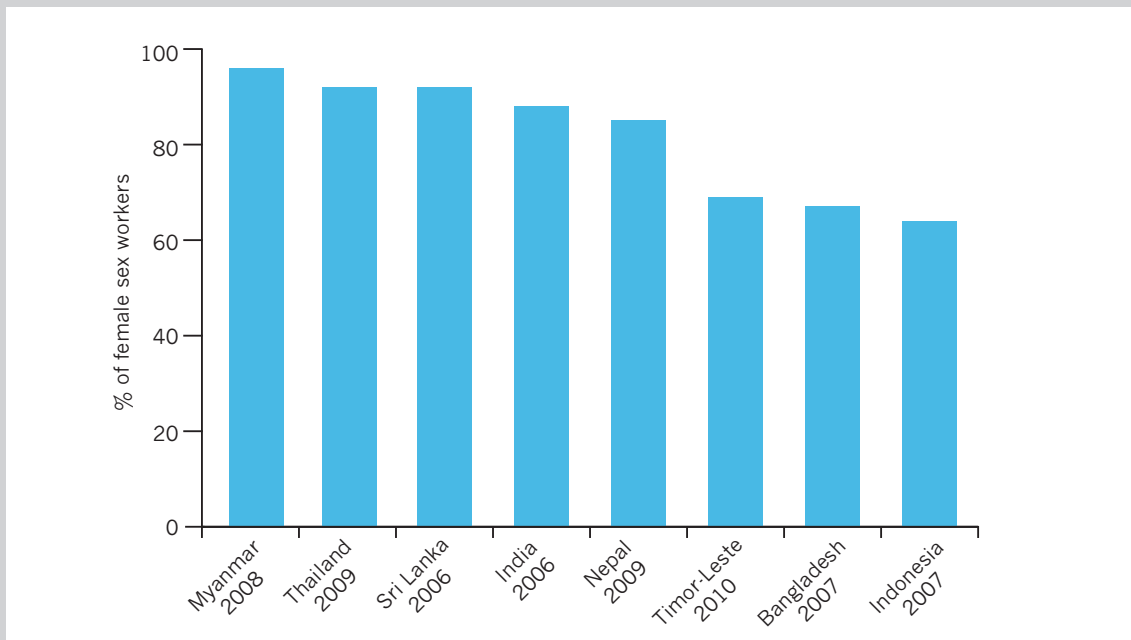
Three key objectives of interventions for sex workers include (i) increasing condom use, (ii) reducing curable sexually transmitted infections, and (iii) improving access to HIV testing, counselling, care and treatment services.

Good progress has been reported towards these objectives in the Region. Half the countries in the region reported high levels (>80%) of condom use by sex workers with their recent clients (Figure 14).

With regards to control of sexually transmitted infections, there is continuing evidence from research and evaluation studies that prevention interventions for sex workers are working and have helped reduce sexually transmitted infections and HIV. A comprehensive programme among 580 brothel-based sex workers in Indonesia showed doubling of condom use and a steady and significant decline in prevalence of gonorrhoea and chlamydia infections over the period of interventions [23]. Pre- and post-intervention cross-sectional surveys in areas where Avahan interventions were implemented in Karnataka state in India showed notable improvements in condom use and significant decline in HIV, syphilis, gonococcal and chlamydia infections [24]. Similarly, in Bangladesh, prevalence of active syphilis decreased consistently among brothel-based female sex workers at all sites [25]. Analyses of trends among female sex workers in Nepal, showed a reduction in sexually transmitted infection rates in 22 Terai highway districts. Prevalence of gonorrhoea decreased significantly from 13.5% to 1.2% and that of chlamydia from 10% to 8.3% during 2003–2009 [10]. Increased condom use was reported during the same time (Figure 15).

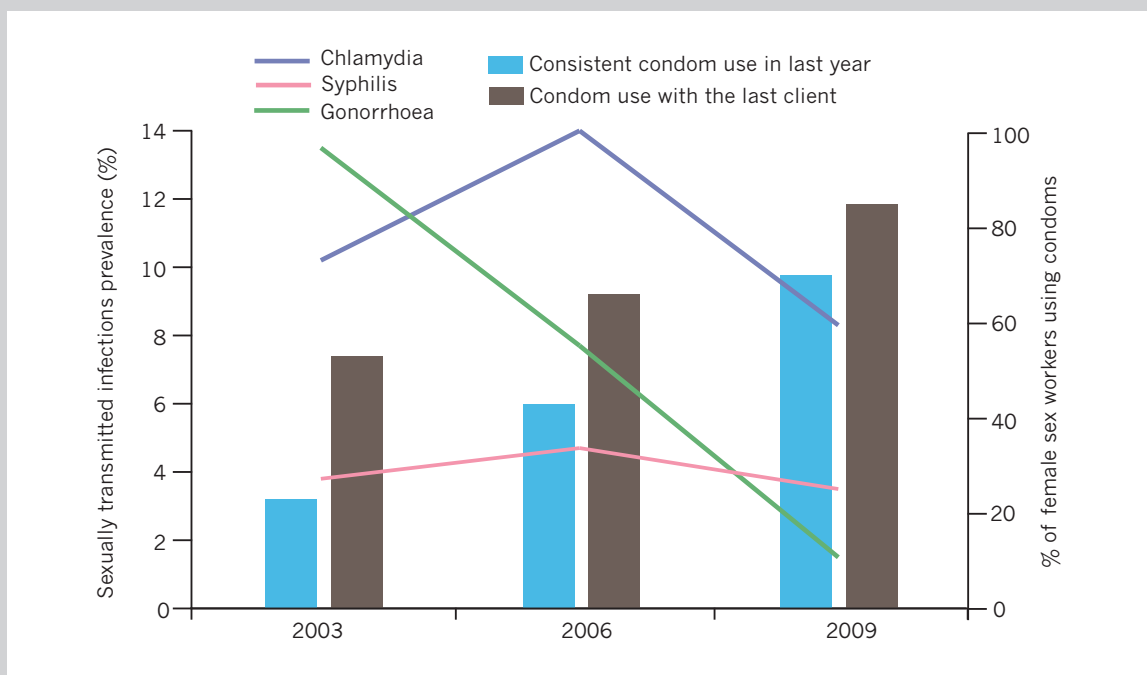
“ Reported condom use by female sex workers is high in most countries. ”

Fig. 14: Percentage of female sex workers reporting condom use with their most recent client, South-East Asia Region



Source: Reports of behavioural surveys, national AIDS programmes, Member countries, South-East Asia Region.
 Note: The latest available data for each country was used.

Fig. 15: Prevalence of sexually transmitted infections and condom use among female sex workers, Terai Region, Nepal, 2003–2009



Source: Integrated biological and behavioural survey among female sex workers in 22 Terai Highway Districts of Nepal 2009, National Centre for AIDS and STD Control, Nepal.

Limited data are available on access to care and treatment among sex workers.

Interventions for Men who Have Sex with Men¹

Creating an enabling environment and providing access to essential services for the men who have sex with men population remains a challenge in the Region. Removal of all legal barriers that interfere with HIV prevention, treatment and care activities is a key aspect of an enabling environment, yet in only two countries (Indonesia and Thailand) is sex between consenting same-sex adults not a criminal offence. Other countries have criminal sanctions against “homosexual behaviour” that present substantial obstacles to HIV prevention for men who have sex with men. In 2009 in India, the Delhi High Court ruled that consensual same-sex relations between adults in private cannot be criminalized. Soon after that judgment, appeals in the Indian Supreme court objecting to the ruling were lodged. In Timor-Leste, the Constitution does not specify if sex between adult males is legal.

Most countries in the Region have some interventions for men who have sex with men, male sex workers and transgender populations, which are primarily implemented through NGOs and community-based organizations. Most interventions operate only in major urban centres, or one urban centre, leaving semi-urban and rural areas with few, or no targeted interventions. Lack of data, funding and appropriate agencies to implement interventions outside urban centres remains a significant response gap. Interventions provided in national plans include: peer outreach education; promotion and distribution of condoms and water-

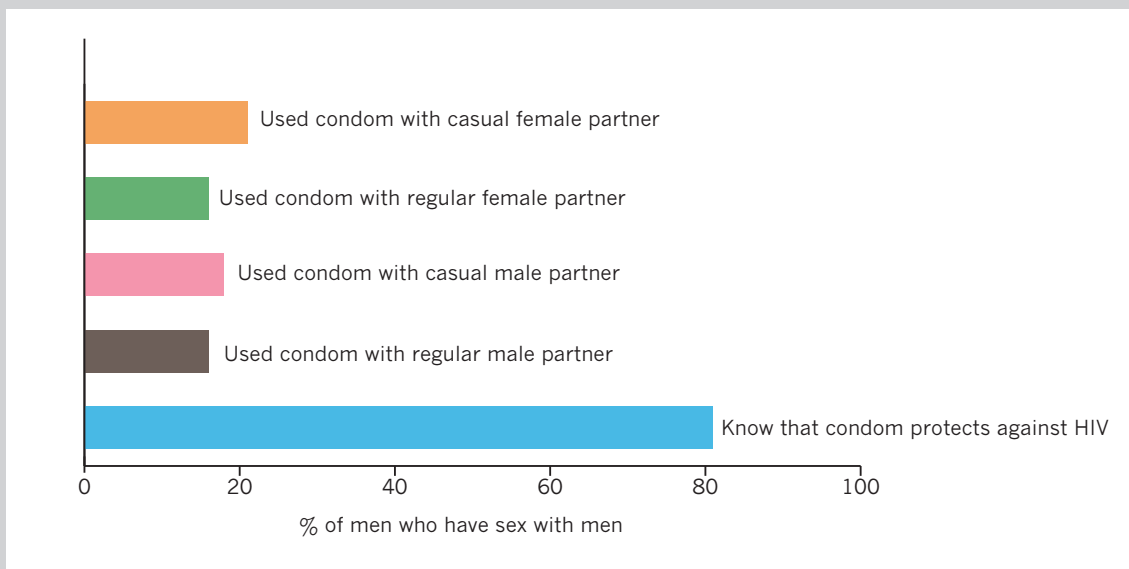
based lubricants; and referrals to HIV and sexually transmitted infections screening and treatment. From the available information, only India seems to have relatively comprehensive operational guidelines for implementing HIV prevention interventions among men to have sex with men.

The WHO, Joint United Nations Programme on HIV/AIDS (UNAIDS) and United Nations Children’s Fund (UNICEF) “Towards universal access progress report 2010” indicates a median coverage rate of 49% by HIV prevention programmes for men who have sex with men in the 12 months preceding the survey in East, South and South-East Asia, which is well short of the 80% expected coverage to reverse the HIV epidemic. The low coverage of men who have sex with men and transgender populations for receiving HIV prevention and treatment programmes indicates the need to better understand where they can be reached, using the most appropriate approach to meet their needs, and to accelerate the scale up and quality of HIV prevention and care interventions. The proportion of men who have sex with men reporting condom use in various south-east Asian countries remains below the expected target. There is a wide gap between the knowledge that condom use protects against HIV and the actual use of condoms among men who have sex with men (Figure 16).

Harm Reduction Interventions for People Who Inject Drugs

Harm reduction has been endorsed globally by the United Nations and is increasingly viewed with understanding and greater acceptance in the Region. However, despite a regional expansion of harm reduction measures to address the HIV epidemic

Fig. 16: Knowledge and use of condoms among men who have sex with men, Timor Leste, 2010



Source: Integrated bio-behavioral survey, National AIDS Programme, Ministry of Health, Timor-Leste, 2010.

“ Wide gap between knowledge and use of condoms among men who have sex with men. ”

among people who inject drugs (PWID), the response and coverage of interventions remains insufficient to have a significant impact on the ongoing HIV epidemics among PWID in majority of the countries in the Region. A comprehensive package of HIV prevention, treatment and care programmes for PWID is advocated to address the HIV epidemic among PWID and comprises nine essential interventions. The package has the greatest beneficial impact when all interventions are delivered together but it is advised that in countries with limited resources at least five of the nine interventions be delivered, i.e. needle and syringe programmes, opioid substitution therapy (OST), condoms, HIV testing and counselling, and antiretroviral treatment (ART).

Needle-Syringe Programmes

The majority of countries in the Region have implemented needle and syringe programmes (excluding Bhutan, DPR Korea, Maldives, Timor-

Leste) and these sites have increased in number. In Indonesia, the site numbers increased from 159 in 2008 to 281 in 2009 while in Myanmar sites increased from 19 in 2008 to 40 in 2009. The number of syringes and needles distributed also increased in various countries: Bangladesh from 4 million in 2008 to 6.5 million in 2009; India had a substantial rise from 639 801 in 2007–2008 to 15 million in 2009. Myanmar witnessed a ten-fold increase in needle and syringe distribution between 2004 (245 000) and 2009 (5 095 301). Despite an increase in needle-syringe programme sites and needles and syringes distributed, the coverage is low (i.e. ≤100 needles and syringes distributed per PWID per year) as determined by the WHO, UN Office on Drugs and Crime (UNODC) and UNAIDS Technical guide: India (N = 81), Indonesia (N = 8), Myanmar (N = 67) and Nepal (N = 53). Bangladesh reported the highest distribution of needles and syringes

per PWID per year at 161. In 2009, in India, Nepal, Bangladesh and Indonesia the number of needle-syringe programme sites per 1000 PWID was reported as 1.1, 1.3, 2.3 and 2.7, respectively.

The reach of needle-syringe programmes remains highest in Bangladesh. In 2008, the proportion of PWID accessing needle-syringe programmes was reported to be 44–88%, increasing to 93% in 2009. In Nepal, the proportion of PWID accessing needle-syringe programmes in a year was reported to be 46%, while in Thailand it was reported to be less than 1%.

Information on the frequency and regularity of contact with needle-syringe programmes is not available and the quality of services is rarely documented. As in previous years the 2009 data continue to show that far too few needles and syringes are reaching the PWID in the Region. As a result needle sharing is still

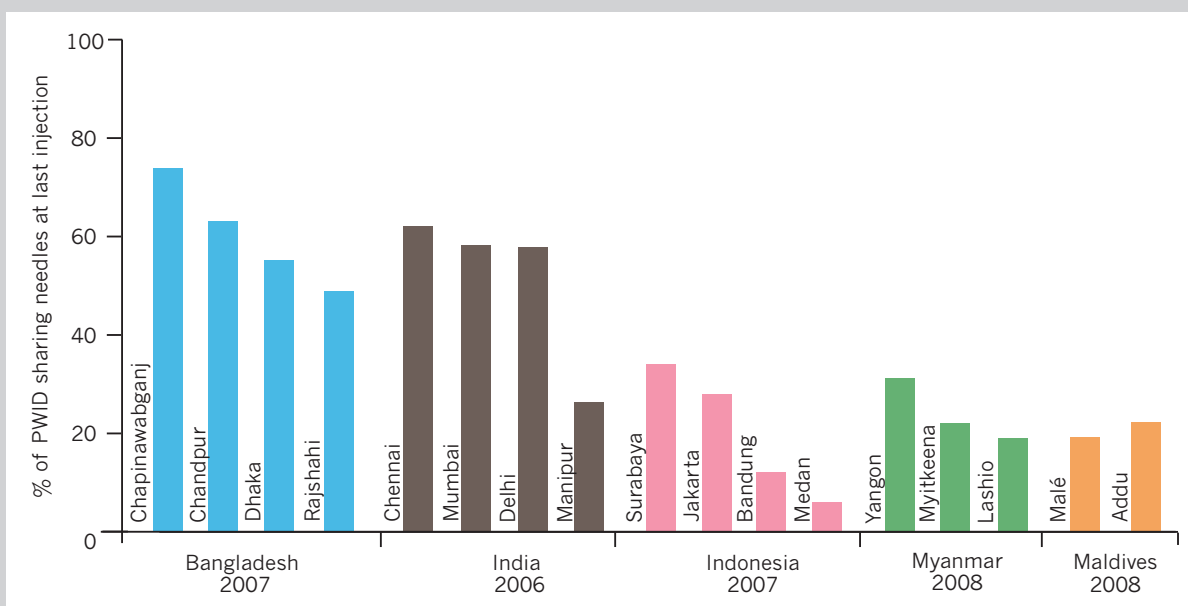
common in many areas (Figure 17). To halt and reverse the ongoing HIV epidemic among PWID a sufficient number of needles and syringes need to be distributed, and this substantial challenge remains unresolved.

Opioid Substitution Therapy — Methadone and Buprenorphine

Overall few changes have taken place between 2008 and 2009, with regard to OST in the Region: India (63 and 50 sites respectively — decrease due to specific new prerequisites for OST site to be registered), Indonesia (46 and 49 sites, respectively), Maldives (1), Myanmar (7 and 9, sites respectively), Nepal (2 and 9 [3 methadone; 6 buprenorphine] sites, respectively). Currently only Indonesia, Nepal and Thailand allow supplies of methadone and buprenorphine. India will introduce methadone in late 2010, while Bangladesh introduced methadone in July 2010, and is displaying considerable promise. In 2009–2010, the number of PWID

“ Needle sharing among people who inject drugs is still common in many areas. ”

Fig. 17: Percentage of people who inject drugs sharing injecting equipment at last injection, selected cities, South-East Asia Region



Source: Reports of behavioural surveys, national AIDS programmes, Member countries, South-East Asia Region.
 Note: The latest available data for each country was used. PWID=people who inject drugs

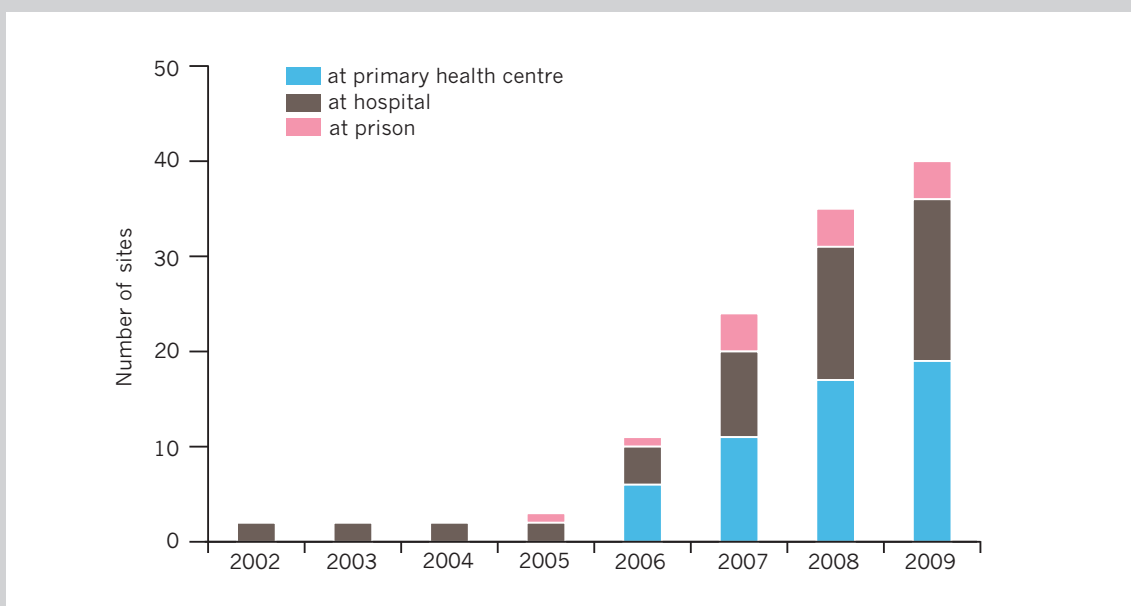
accessing OST in the Region has remained small and no country has witnessed a substantial increase in enrolments to commence OST: Bangladesh (108), India (4 800), Indonesia (2000 methadone; 2000–3000 on buprenorphine), Maldives (32), Myanmar (1000), Nepal (262 methadone; 175 buprenorphine¹) and Thailand (2200). The total number of PWID in the Region is over 500 000 and those reported to be accessing OST is less than 15 000. The proportion of PWID accessing OST in each of the countries in the Region in 2009–2010 is <1% to 4%.

In Indonesia, OST is delivered through health centres, hospitals and prisons/detention centres (Figure 18). Indonesia is the only country in the Region where OST is currently delivered from prisons (N = 6). In India OST is delivered through community-based services. Myanmar is the only country in the Region where a client is required to be an inpatient and hospitalized for two

weeks when commencing methadone during the stabilization period. Take-home doses of OST following the stabilization period, in agreement with a treating doctor, can assist in the process of social and economic reintegration of PWID. However, available data show that take-home doses are not common in the Region. Reports from Indonesia show that the proportion of PWID with take-home doses of OST is 20% in Jakarta and 6% in Bali.

In conclusion, despite a significant shift towards greater acceptance of harm reduction interventions in recent years, public policy and legislative problems with regard to drug use still remain a significant challenge for most countries in the Region. Following the introduction of OST there is a significant reduction in opiate use, injecting practices, physical complaints and improved psychological status and social functioning. However, despite these major benefits methadone and

Fig. 18: Number of sites providing methadone maintenance therapy, by type of facility, 2002–2009



Source: Indonesia Poster, National AIDS Programme, Ministry of Health, Republic of Indonesia. Presented at the South-East Asia Region Programme Managers Meeting, New Delhi, India, 26–28 October 2010.

¹ Duration of buprenorphine is limited to three months only.

buprenorphine are still largely unavailable for the majority of PWID in the Region. Needle-syringe programmes and OST have been in place in most countries for several years and despite good outcomes of small-scale programmes, these have not been expanded to reach effective levels of coverage. Further monitoring and evaluation are required to highlight the effectiveness of various harm reduction interventions. This will assist in tracking the progress towards reaching national HIV target indicators for PWID, and will also contribute towards advocacy efforts for a greater acceptance of harm reduction in the Region.

During 2008–2010, the Regional Office for South East Asia (SEARO) supported national harm reduction programmes by: developing clinical and operational guidelines on the management of opioid dependence and common health problems among drug users; enhancing national staff capacity on care and treatment of HIV-positive people who inject drugs through training; and publishing an advocacy document highlighting the continuing and emerging HIV epidemics among people who inject drugs and the urgency to expand harm reduction interventions in community and closed settings.

Prevention and Control of Sexually Transmitted Infections

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, erythromycin, 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 (see page 63).

In Thailand, the 100% condom use programme enabled sex workers to demand condom use and access sexually transmitted infection care, resulting in drastic reductions in sexually transmitted infection rates. In recent years, however, sexually transmitted infection cases have been detected with increasing frequency among men who have sex with men and young heterosexual populations. Recently, 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.

Enhanced syndromic case management with minimal laboratory

“ Syphilis screening of pregnant women is increasing. ”

tests is the cornerstone of sexually transmitted infection/reproductive tract infection management of the Indian National AIDS Control Programme. 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. Presently, the National AIDS Control Organization (NACO) is supporting 916 designated sexually transmitted infection/reproductive tract infection clinics that are providing services based on enhanced case management [26]. Also, NACO has strengthened seven regional sexually transmitted infection training, reference and research centres to improve etiologic diagnoses of sexually transmitted infection cases, monitor drug resistance to gonococci, and implement syphilis External Quality Assurance Systems. In addition, NACO is strengthening the sexually transmitted infection/reproductive tract infection service delivery through

targeted intervention programmes for most-at-risk populations. The “preferred-provider partnership” scheme was launched in 2009 to improve service utilization of sexually transmitted infection clinics by most-at-risk populations.

During August to October 2009, NACO organized an external mid-term review of the sexually transmitted infection control programme. The process included: a desk review, a review of the implementation of targeted intervention-sexually transmitted infection services in six states and analyses of programme data. Key recommendations of the review were to build capacity of targeted interventions for sexually transmitted infection service delivery to most-at-risk populations; establish a system for supportive supervision; strengthen implementation of 100% syphilis screening in antenatal and sexually transmitted infection clinics for most-at-risk populations, and strengthen capacity of regional resource centres

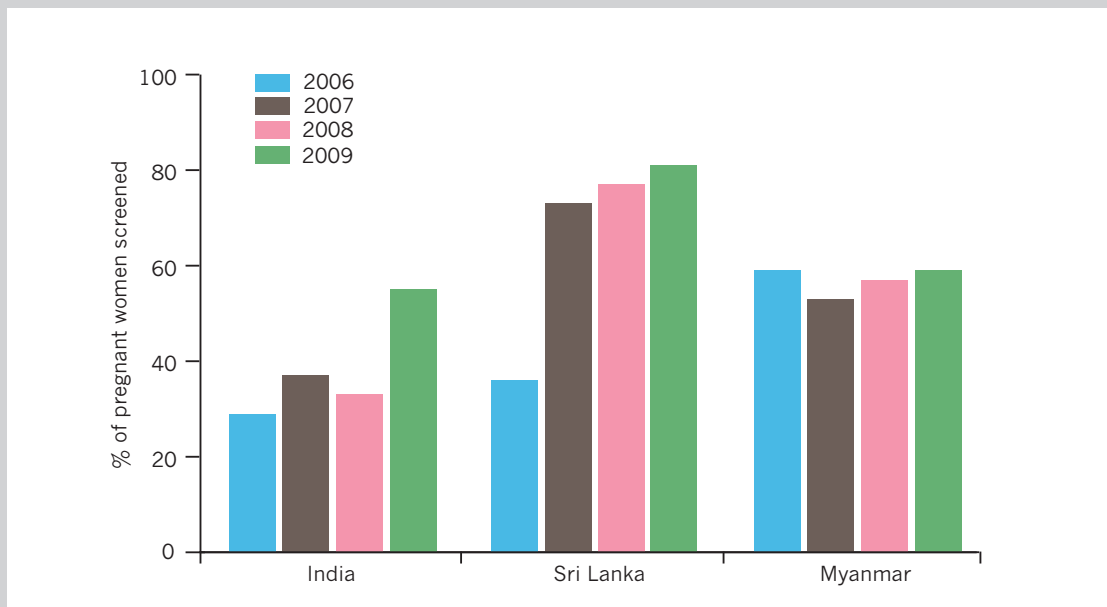
Elimination of congenital syphilis

In 2009, SEARO developed the regional guidelines for elimination of congenital syphilis. At a regional intercountry consultation held in March 2009, all countries renewed their commitment to the elimination of congenital syphilis in the Region (i.e. 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). 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. The regional strategy outlines the guiding principles, key strategies and interventions to achieve the goal of elimination of congenital syphilis. The strategy also proposes initial targets and indicators both at the regional and country level.

Sri Lanka launched the national programme for elimination of congenital syphilis in late 2009. Screening pregnant women for syphilis and treating women who are seropositive, their partners and newborns and increasing access to and quality of maternal and newborn health services constitute the two main strategies in this programme. Rapid treponemal tests for syphilis have been made available at the district level for screening, and information, education and communication materials on elimination of congenital syphilis have been developed. Screening of pregnant women for syphilis infection is increasing in some countries of the Region (Figure 19).

Indonesia revitalized the policy of screening pregnant women for syphilis in 2008 after a gap of 10 years. Antenatal syphilis screening was scaled up to cover six provinces, 12 districts and 75 health centres in 2009. During a three-month period 4104 pregnant women were screened.

Fig. 19: Coverage of syphilis screening among antenatal clinic attendees, selected countries, South-East Asia Region, 2006–2009



Source: Country posters presented at South-East Asia Region Programme Manager Meeting, New Delhi, India, 26–28 October 2010.

to undertake research, conduct surveillance and monitor drug resistance.

In Myanmar, the number of people with sexually transmitted infections receiving treatment during the year increased from 94 000 in 2008 to 135 000 in 2009, a 44% increase [27]. In addition to the 46 AIDS and sexually transmitted diseases (STD) teams of the Department of Health, many NGOs play an important role in implementing, prevention and control of sexually transmitted infections.

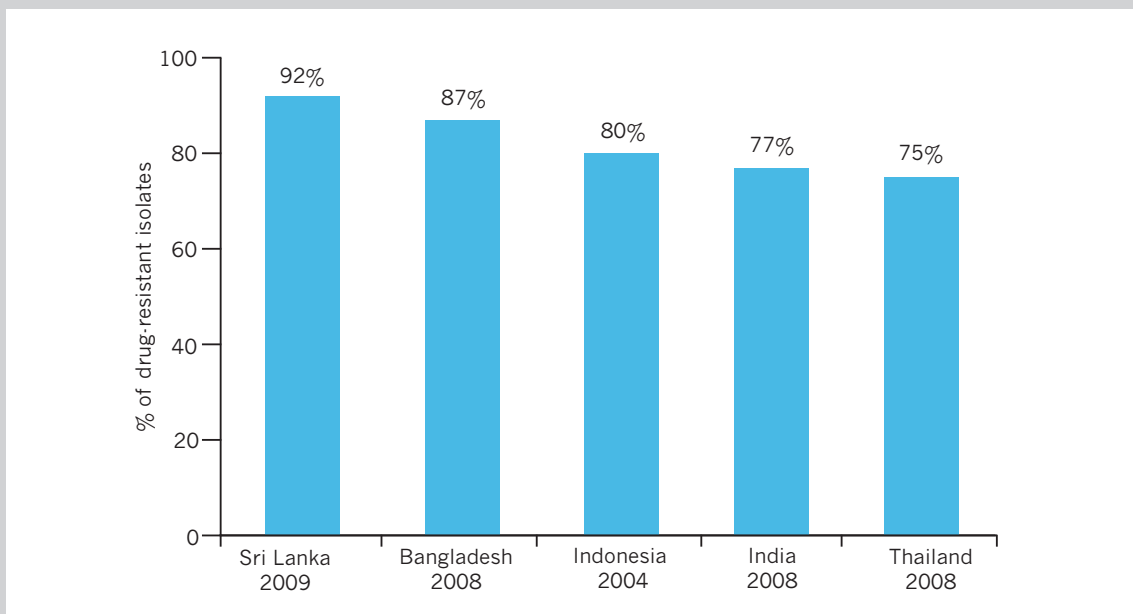
Gonococcal Antimicrobial Resistance Programme

Available data show increasing antimicrobial resistance to gonorrhoeal infection and treatment failure with drugs currently used for the treatment of gonorrhoea in the Region. Antimicrobial resistance testing is routinely carried out in India, Sri Lanka

and Thailand. Ciprofloxacin resistance ranges from 75% to 92% (Figure 20) and penicillin resistance also continues to be high. Ciprofloxacin is used to treat gonorrhoea particularly by private providers although national treatment guidelines recommend the use of cephalosporins. The general lack of reliable antimicrobial resistance data for *Neisseria gonorrhoeae* hinders control efforts. Such data provide significant insights and necessary information for standardized and cost-effective treatment.

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 drugs and increasing resistance to currently available drugs.

Fig. 20: Percentage of *Neisseria gonorrhoeae* isolates resistant to quinolones, South-East Asia Region



Source: Country reports, South-East Asia Region.

Blood Safety

Based on 2008 data, 3 456 blood banks in the South-East Asia Region collected 10.5 million units of blood annually, of a total estimated requirement of 17 million units. About 71% of the total blood is collected from voluntary non-remunerated blood donors, but country-wise variations exist (Figure 21). Two thirds of the population of the Region 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, 44% of blood is converted into components and the remaining 56% is transfused as whole blood.

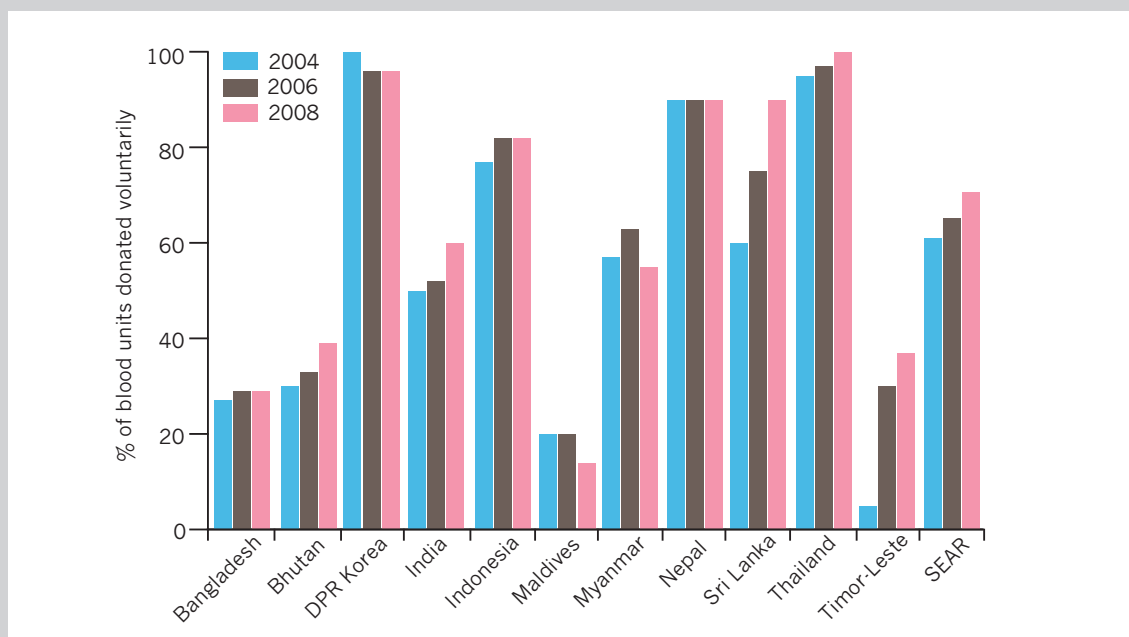
Seven countries in the Region have a national blood policy and nine countries have nationally coordinated blood transfusion services. In Myanmar, almost all blood banks are

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 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. HIV seropositivity in screened blood is decreasing (Figure 22).

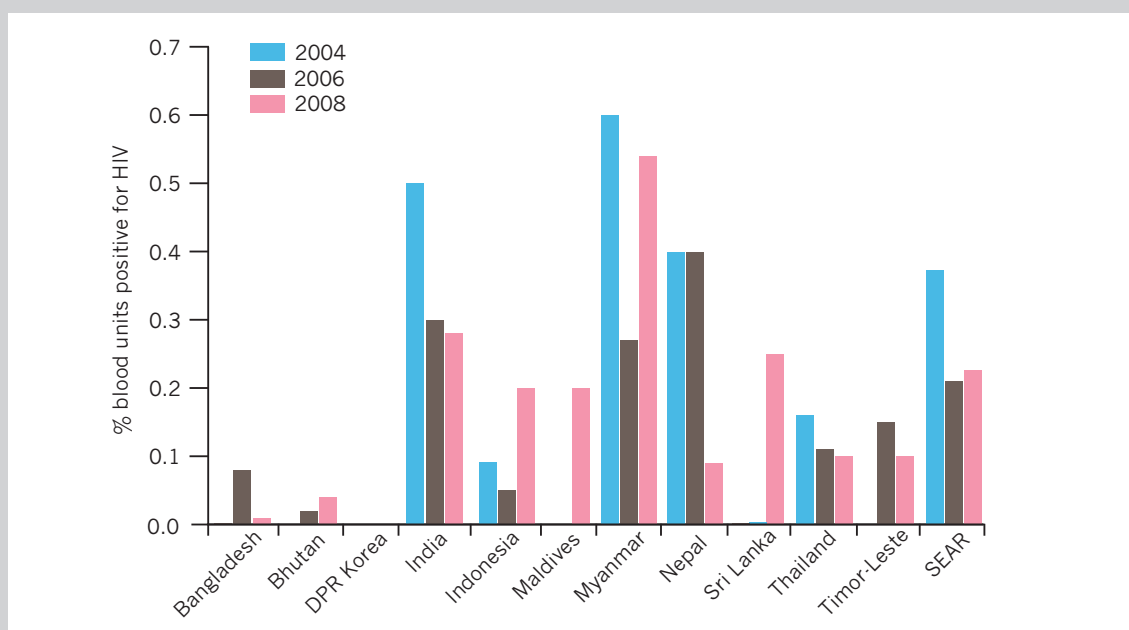
In 2009, 0.32% of screened blood units in the Region were found to be positive for HIV antibody.

Fig. 21: Percentage of voluntary blood donation, South-East Asia Region, 2004–2008



Source: Country reports, South-East Asia Region.
SEAR=South-East Asia Region

Fig. 22: Proportion of screened blood units positive for HIV antibody, South-East Asia Region, 2004–2008



Source: Country reports, South-East Asia Region.
SEAR=South-East Asia Region

HIV Testing and Counselling

Continuous increase in the number of people receiving HIV testing and counselling was noted throughout the Region. Approximately, 15.1 million individuals received testing and counselling in 2009 in the Region, nearly 50% more than in 2008. The number of women receiving HIV testing and counselling far exceeded men receiving these services in India, Myanmar, Nepal and Thailand reflecting the contribution of women tested in antenatal services under the prevention of mother-to-child transmission programme; whereas in Bangladesh and Indonesia (both concentrated and predominantly injecting drug use driven epidemics) more men than women were tested.

During 2009, 8133 health facilities were providing HIV testing and counselling services throughout the Region. The number of facilities per 100 000 population varied widely among countries (Table A5). Maldives had the highest number of facilities (3.5 per 100 000 population) followed by Thailand (1.9 per 100 000 adult population). The number of tests per 1000 adult population is the highest in Thailand (21 tests per 1000 population), followed by India (16 tests per 1000 population).

In several countries, testing and counselling services are provided both by the government and private/NGO 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 NGOs. In the public sector, HIV testing and counselling is provided free of charge in most countries.

Policy guidelines of all countries mention that testing and counselling be targeted for most-at-risk

populations. Based on sample surveys, approximately a third of the most-at-risk populations in the Region received testing and counselling, with variations among risk groups as well as among countries. In Myanmar, coverage of testing and counselling services was calculated based on routine programme data (Figure 23). While a positive trend is noted among female sex workers, coverage continues to be very low among men who have sex with men and people who inject drugs. Expectedly, a fraction (0.28%) of the general population in the reproductive age group received counselling and testing.

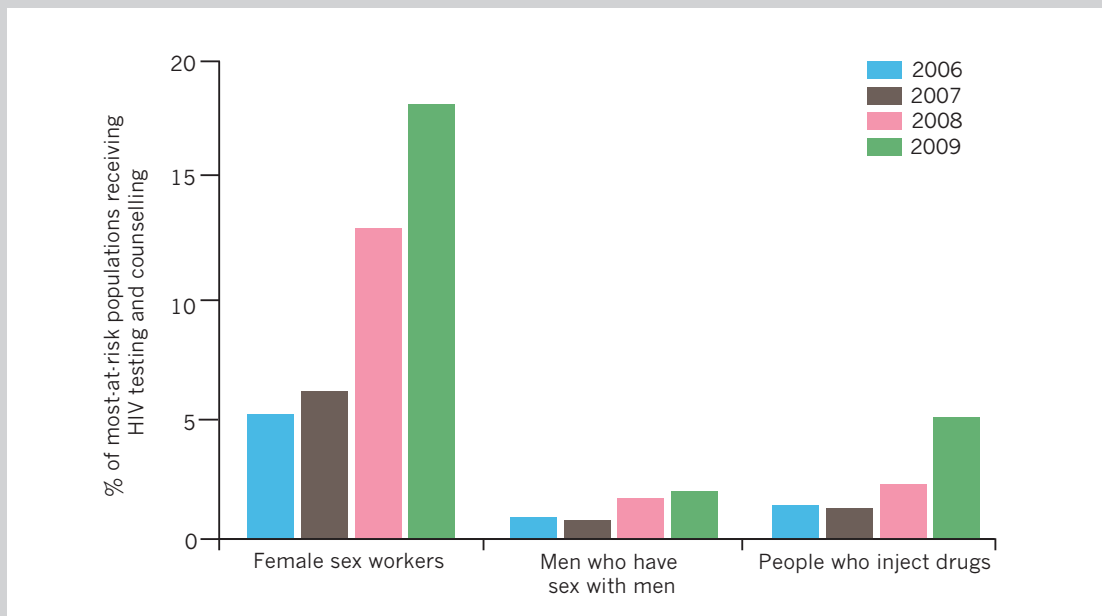
With the expansion in services, the coverage of HIV testing among the sexually active general population is expected to increase. A behaviour survey among young people in Thailand (vocational students, median age 17 years) indicates an unchanged trend in this population (Figure 24).

Prevention of HIV Transmission from Mother-to-Child

Limited progress has been made in providing access to prevention of mother-to-child transmission services. Overall, a mere 18% (range: <5% to >80%) of pregnant women had access to HIV testing and counselling in 2009. Lack of access to antenatal care services has been cited as a major barrier for expanding HIV testing and counselling among pregnant women. Universal access to HIV testing and counselling cannot be achieved unless utilization of antenatal services is improved.

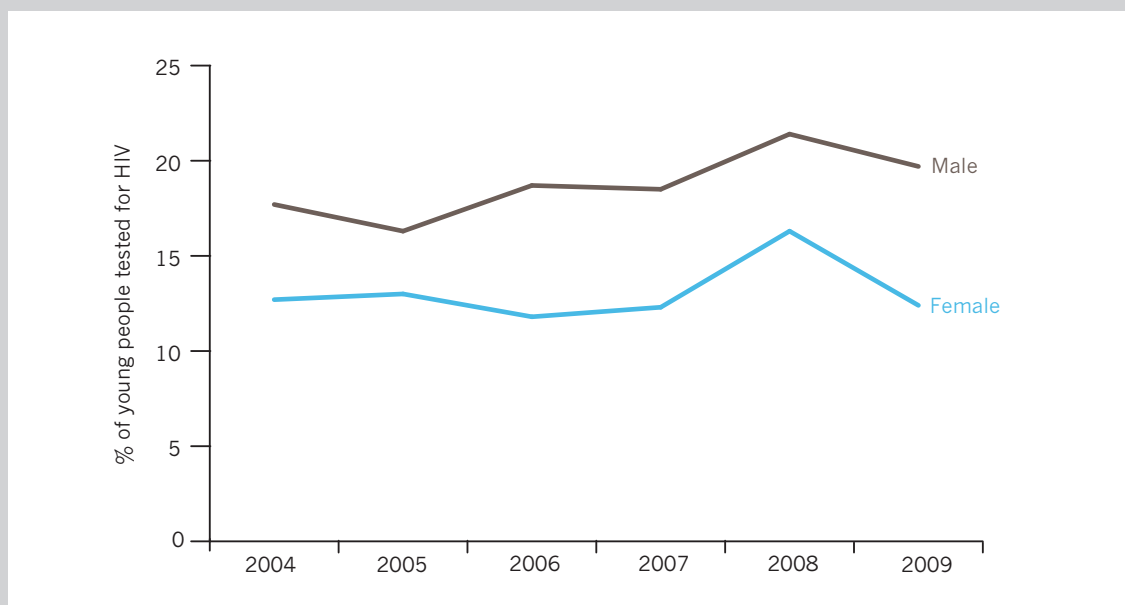
From 2008 to 2009, the proportion of HIV-positive pregnant women receiving antiretrovirals increased slightly from 28% to 34%. The percentage of HIV-

Fig. 23: Percentage of most-at-risk populations receiving HIV testing and counselling, Myanmar, 2006–2009



Source: 2009 Annual Progress Report, National AIDS Programme, Myanmar.
 Note: Numerator is number of most-at-risk populations receiving HIV testing and counselling in 2009; denominator is the estimated population size of most-at-risk populations.

Fig. 24: Percentage of young people¹ receiving HIV testing and counselling in the past year, Thailand, 2004–2009



Source: 2009 Behavioural Survey, Bureau of Epidemiology, Ministry of Public Health, Thailand, 2009.
¹ Vocational trainees, median age 17 years.

“ Two of three HIV-infected pregnant women do not receive antiretroviral prophylaxis. ”

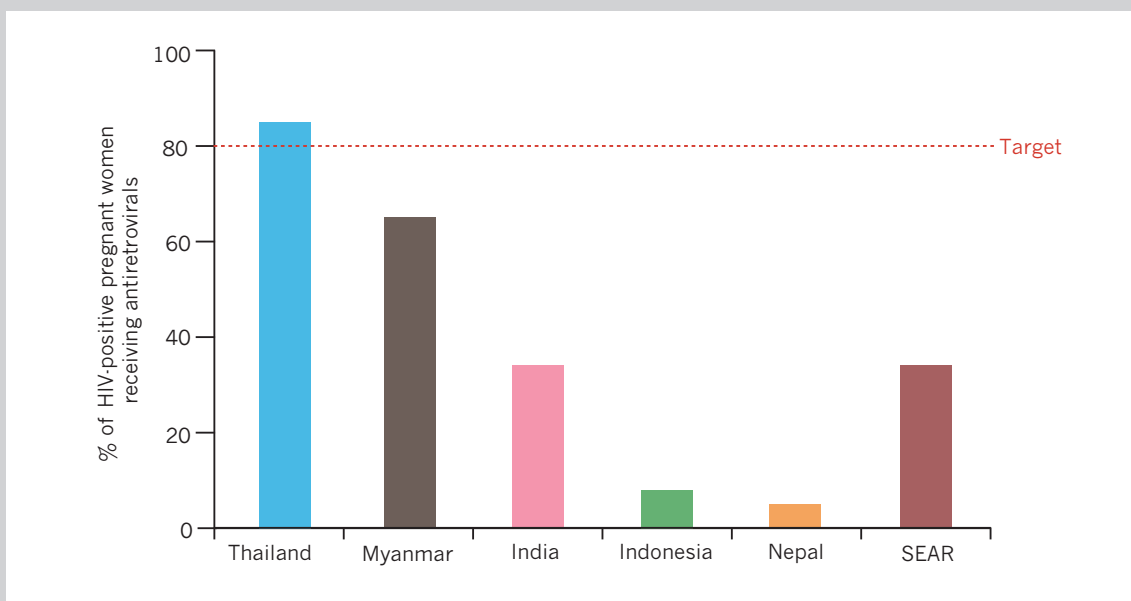
infected pregnant women receiving antiretrovirals varies widely from 5% in Nepal to 85% in Thailand (Figure 25).

Thailand is the only country in the Region to have achieved universal coverage of prevention of mother-to-child transmission services. Perinatal HIV transmission is almost negligible among women who were put on treatment early (CD4>200 cells/mm³) and received triple antiretroviral therapy (Figure 26). Further details on the Thailand programme are provided on page 67.

Over 75% of those in need for prevention of mother-to-child transmission services in the Region are in India. Reaching regional targets for universal access will depend on increasing coverage in India. In 2009, 11 319 (34%) of estimated HIV-positive pregnant women received antiretroviral prophylaxis. To increase coverage, NACO has planned several strategies to increase access to prevention of mother-to-child

transmission services. Community-based HIV screening by auxiliary nurse midwives to identify HIV-positive cases among pregnant women who do not visit health facilities for antenatal checkups would immensely benefit states with low rate of institutional delivery. Further, testing and counselling services will be extended to round-the-clock primary health centres under the “facility integrated model” in high prevalence districts in collaboration with the National Rural Health Mission to improve access to populations living in hard-to-reach areas. Also, testing of every direct walk-in emergency labour room patient will be done using the user friendly “whole blood” finger prick testing. Finally, more convergence with the National Rural Health Mission and securing the involvement of Ashas¹ in demand generation for prevention of mother-to-child transmission services through incentive-based schemes is in progress.

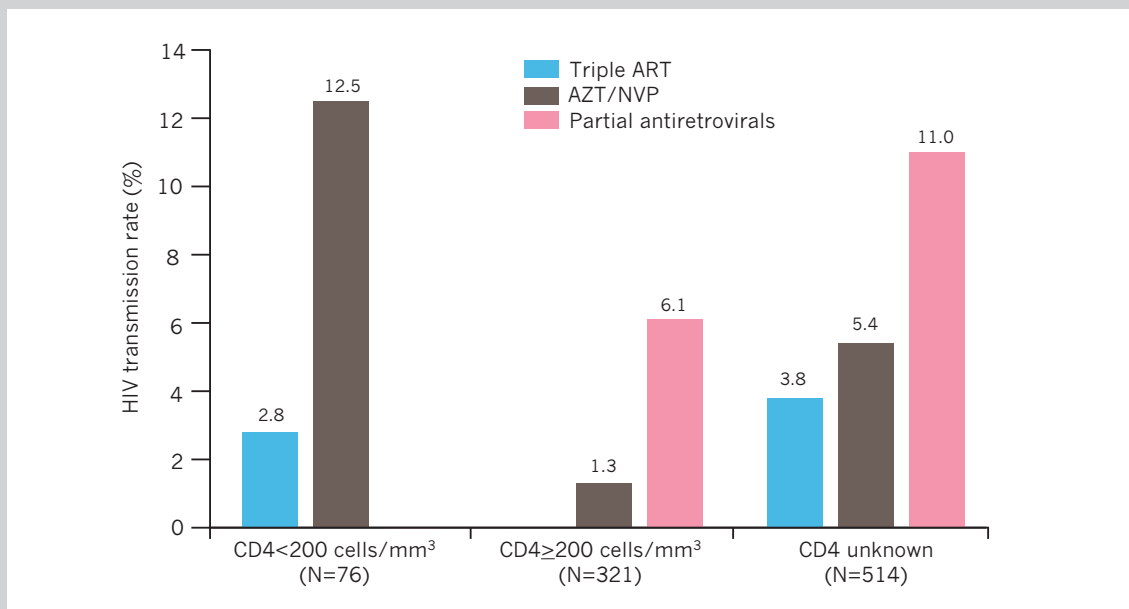
Fig. 25: Percentage of HIV-infected pregnant women receiving antiretroviral prophylaxis, South-East Asia Region, 2009



Source: 2009 universal access country reports, South-East Asia Region. SEAR=South-East Asia Region

¹ Village health women volunteers

Fig. 26: Perinatal HIV transmission rate by CD4 status and type of antiretroviral intervention, Thailand, 2009



Source: Bureau of Epidemiology, Department of Disease Control, Ministry of Public Health, Thailand, 2009. ART=antiretroviral therapy; AZT=zidovudine; NVP= nevirapine

Antiretroviral Therapy

The number of HIV-infected persons receiving antiretroviral therapy increased ten-fold from 55 000 in 2003 to 577 000 in 2009 (Figure 27). By December 2009, antiretroviral therapy was being provided at 1800 health facilities, a 24% increase in the number of facilities since 2008; nearly 90% of facilities were in the government sector.

Overall, 40% of all PLHIV receiving treatment are females (range: 25% in Indonesia to 53% in Bhutan). Children constitute 4.9% of all those on treatment (Annex, Table A7).

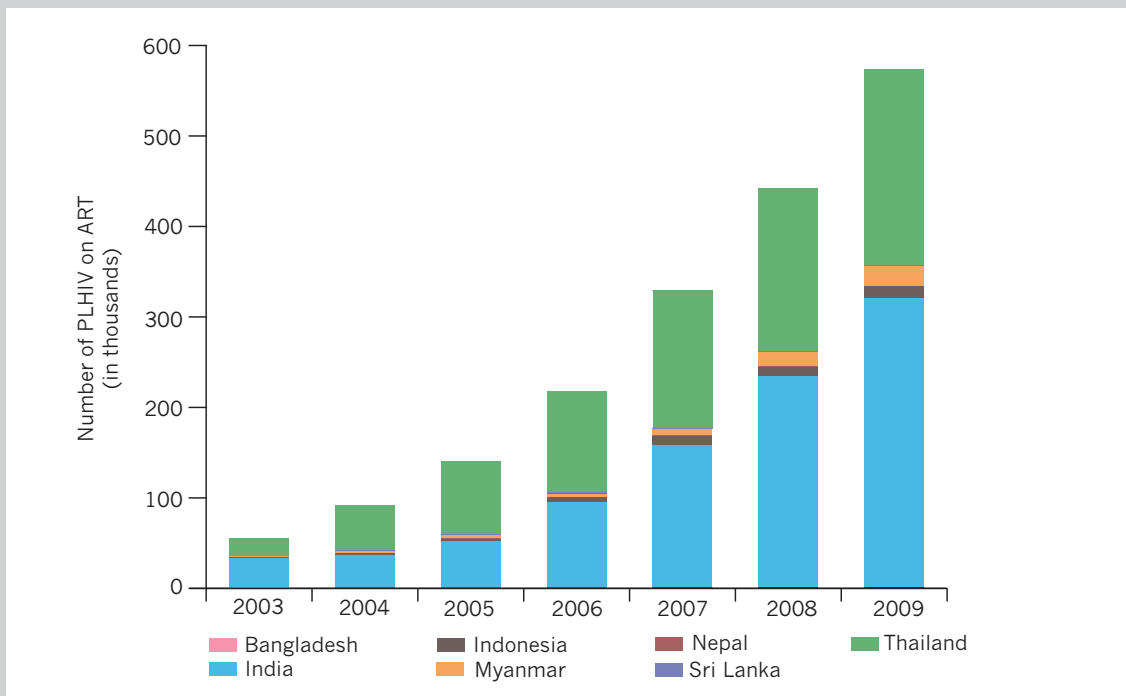
Using the revised WHO guidelines that recommend starting antiretroviral therapy at CD4 count 350 cells/mm³, the overall coverage of treatment in the Region is 32% (range: 11% in Nepal to 61% in Thailand). Using the previous criteria for starting treatment at CD4 200 cells/mm³, the overall

coverage is 48% (range 17% in Nepal to 76% in Thailand) (Figure 28).

The total estimated need for antiretroviral therapy in the Region based on CD4 counts 350 cells/mm³ and 200 cells/mm³ is 1.8 million and 1.2 million, respectively. Nearly 90% of the need for antiretroviral therapy is in just two countries — India and Thailand. Both countries have demonstrated successful scale-up of the antiretroviral therapy programme. While Thailand has the largest number of health facilities providing antiretroviral therapy (1014) in the Region, India has the largest number of people on antiretroviral therapy in 2009 (see page 48).

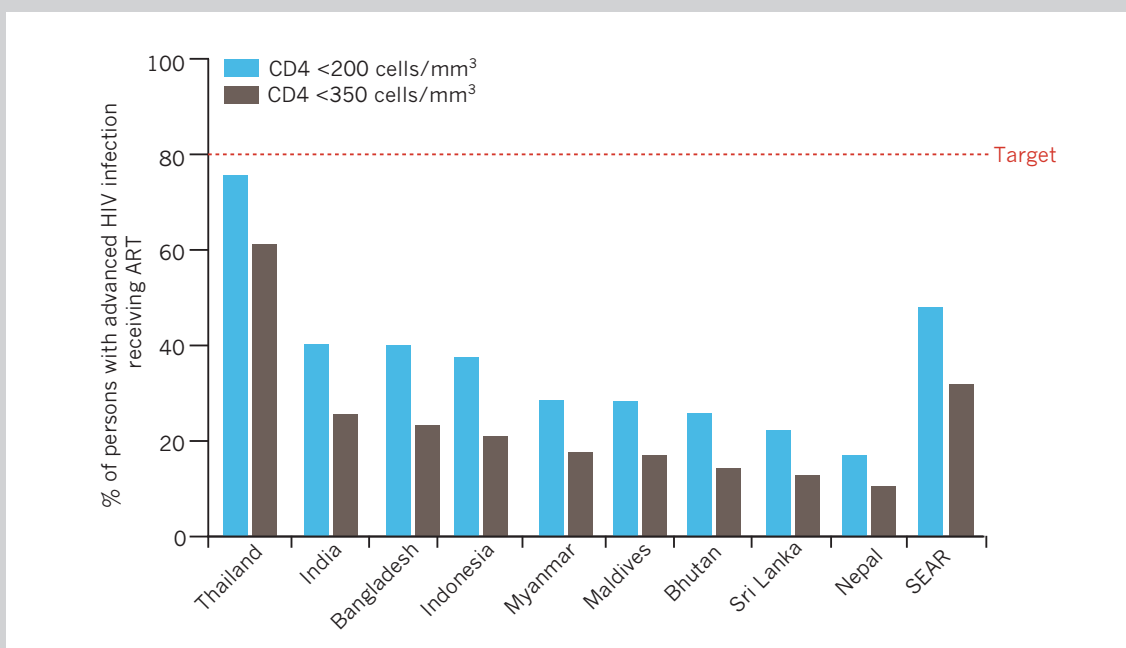
The Region accounts for approximately 5% of all children, globally, in need of antiretroviral therapy. Access to antiretroviral therapy for children is higher in the Region (42%) compared to the global average (28%). Two countries — India

Fig. 27: Number of people with advanced HIV infection receiving antiretroviral treatment, by country, 2003–2009



Source: 2009 universal access country reports, South-East Asia Region.

Fig. 28: Coverage with antiretroviral therapy, by CD4 count threshold for treatment initiation, South-East Asia Region, 2009



Source: Universal access country reports, 2009.
 ART=antiretroviral treatment; PLHIV=people living with HIV.

and Thailand contribute to the largest number of children receiving antiretroviral therapy in the Region.

Second-line antiretroviral therapy has now been rolled out in several countries in the Region. Thailand has the largest number of people on second-line antiretroviral therapy (6500 as of March 2010) followed by India (970 as of January 2010).

The implementation and expansion of antiretroviral therapy programmes in the Region was accompanied by significant improvements in survival and decreases in morbidity among persons accessing care. Analyses of national programme data from six countries indicated that the overall 12-month survival rate ranges from 65% in Indonesia to 93% in Sri Lanka.

The success of the antiretroviral therapy programmes in the Region has largely been a result of strong collaborative efforts of the national programmes, with commitment from the government, civil society and advocacy groups, NGOs and donor agencies, as well as the global momentum to provide lifesaving therapies to those in need. Further improvements in coverage hinge on expansion of testing and counselling services to facilitate early HIV diagnoses, strong linkages in care and treatment, further reductions in drug prices and health systems strengthening.

HIV-TB

Collaborative HIV-TB activities are essential to ensure that HIV-positive TB patients are identified and treated appropriately, and to prevent TB in HIV-positive patients. The recommended activities include: establishing mechanisms to collaborate between HIV and TB programmes; infection control in health care settings; HIV testing of TB

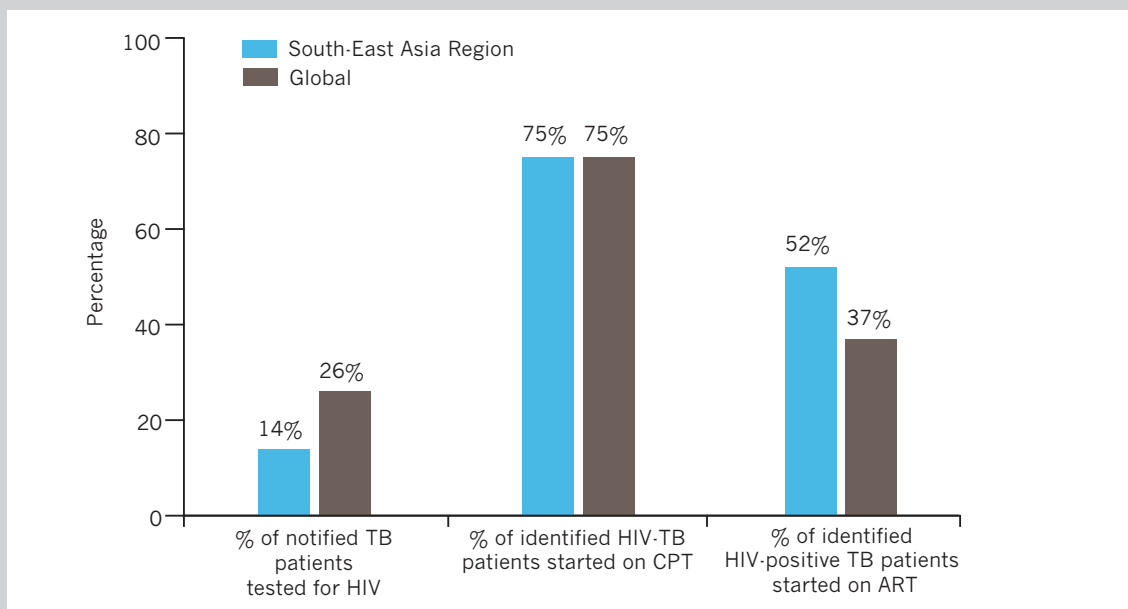
patients; antiretroviral therapy and cotrimoxazole preventive therapy (CPT) for TB patients infected with HIV; and intensified TB case finding among PLHIV followed by isoniazid preventive therapy (IPT) for those without TB.

Towards these goals, variable progress has been made in countries of the South-East Asia Region: 14% of the notified TB cases were tested for HIV against a global average of 26%; the highest HIV testing rates in TB cases are in the WHO European Region (86%) followed by WHO African Region (53%) and WHO Region of the Americas (41%). Of the identified HIV-TB coinfecting patients, 75% and 52% were started on CPT and antiretroviral therapy, respectively in the South-East Asia Region Member countries; this compares to the global average of 75% on CPT and 37% on antiretroviral therapy (Figure 29). Barely 1000 PLHIV benefit from IPT in the Region.

In the South-East Asia Region, overall there has been good progress in HIV-TB collaborative activities. HIV programmes are beginning to implement the intensified case finding approach of TB programmes, are exploring IPT for those without active TB and recognizing that infection control in HIV care settings is urgent. Similarly, TB programmes view interventions for HIV-TB as core activities and are linking known HIV-positive TB patients to HIV care and antiretroviral therapy. Both the programmes are now building HIV-TB interventions into funding proposals, routine activities, and monitoring and evaluation. National HIV-TB coordinating committees exist in 10 of 11 Member countries. HIV-TB activities are widely available in Thailand which continues to lead the Region in implementing HIV-TB activities. Services are being further expanded in India, Myanmar, Nepal and in 10 provinces in Indonesia. The present population access to a

“ HIV testing rates among TB patients are still low. ”

Fig. 29: Coverage of HIV-TB collaborative activities, South-East Asia Region versus global achievements, 2009



Source: Global Tuberculosis Control WHO Report, 2010.

comprehensive package of HIV-TB services is estimated to be 700 million. Cross-referrals between the HIV and TB programmes have been strengthened, and the TB recording and reporting systems in countries revised to include information on HIV-TB coinfection. However, screening of TB cases for HIV infection, and vice versa, proportion of PLHIV offered preventive

therapy and TB cases co-affected with HIV receiving antiretroviral therapy remain insufficient. There is also an urgent need to scale up respiratory infection control measures in health facilities to prevent the nosocomial transmission of TB among PLHIV and others. More details about HIV-TB collaborative activities in Myanmar are given on page 57 and for India in the box below.

HIV-TB collaborative activities in India

After successfully pilot testing the HIV-TB cross-referral mechanism in Maharashtra, HIV-TB joint activities were first rolled out in six high burden states in 2004. Under the revised 2009 intensified package of HIV-TB collaborative activities is currently being implemented in 17 states and it is planned to cover the entire country by 2012. During the years, cross-referrals have progressively improved and a consistently increasing number of HIV infected TB patients have been diagnosed. In 2005, 54 000 patients were cross-referred and 10 000 HIV-TB coinfecting patients were identified. In 2009, there were 7 80 000 cross-referrals between the two programmes resulting in the diagnosis of 27 900 HIV-TB coinfecting patients. Technical oversight for the programme is provided by a national technical working group, comprising key officials from NACO and the Central TB Division. Similarly, working groups at the state level and coordination committees at the state and district levels also conduct regular meetings to address issues in the implementation of HIV-TB collaborative activities.

Strategic Information

Surveillance of HIV, Sexually Transmitted Infections and Risk Behaviours

The most important surveillance questions for countries with concentrated epidemics are:

- Where are new infections likely to emerge (which geographical areas and which sub populations)?
- Are the risk markers for HIV changing (increasing/decreasing/stable)?
- How many people are living with HIV/AIDS and what is their profile?

Answering these questions through appropriate surveillance activities helps in planning, targeting and monitoring prevention programmes, as well planning and monitoring care and treatment for those who are infected.

Significant progress has been made in surveillance activities in the Region over the past five years (Table 2).

Surveillance activities in the Region have expanded substantially to include more geographic areas and population groups (Figure 30). Most elements of second generation surveillance systems are in place in the majority of Member countries of the Region. With increased surveillance activities there is richer data and a better understanding of the national epidemics. Moreover, national AIDS programmes are taking greater ownership of surveillance activities for data collection, analyses and use.

During 2008–2010, several countries including India, Indonesia, Myanmar, Nepal and Timor-Leste carried out mapping and updated national size estimations among most-at-risk populations in their countries. This will provide better data for measuring coverage of interventions. In recent years, much capacity has been built at the national level in using HIV estimates and projections tools. In 2009–2010, Bangladesh, India, Myanmar, Nepal and Sri Lanka conducted national level exercises to

Table 2: Status of second-generation surveillance in South-East Asia Region countries, 2010

Country	Mapping for most-at-risk populations	HIV sero surveillance (most-at-risk population)	STI surveillance (most-at-risk population)	Behavioural surveillance (most-at-risk population)	HIV/AIDS case reporting	HIV sero surveillance (general population)	STI case reporting (general population)
Bangladesh	√	√	√	√	Under-reporting	NA	Incomplete
Bhutan	Planned	X	Needs improvement	√ one round	Under-reporting	NA	Incomplete
DPR Korea	X	X	X	X	X	NA	X
India	√	√	Needs improvement	√	Under-reporting	√	Incomplete
Indonesia	√	—————	IBBS every two years	—————	Under-reporting	NA	Incomplete
Maldives	√	—————	IBBS one round	—————	√	NA	√
Myanmar	√	√	Needs improvement	√	Under-reporting	√	√
Nepal	√	—————	IBBS every 2–3 rounds	—————	Under-reporting	NA	Incomplete
Sri Lanka	√	√	√	√ one round	√	NA	√
Thailand	√	√	√	√	√	√	√
Timor-Leste	√	—————	IBBS (one round)	—————	Under-reporting	√/NA	Incomplete

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

“ Transmitted HIV drug resistance is currently at a low level in the Region. ”

make HIV projections using the Estimations and Projection Package and Spectrum model, while Indonesia and Thailand used the Asia Epidemic model.

Routine reporting of HIV/ AIDS and sexually transmitted infection cases remains incomplete in countries (except Maldives, Sri Lanka and Thailand). In countries with a high HIV burden (India, Myanmar and Thailand) facility-based antenatal clinic sentinel surveillance among antenatal clinic attendees is well established and provides trends in HIV infection in the general population. However, for “concentrated” epidemics, it is most important to conduct surveillance among populations engaging in high-risk behaviours. All countries in the Region (except Bhutan and DPR Korea) have conducted serological and/or behavioural surveillance among populations with high-risk behaviours at one or more locations.

In 2010, Timor-Leste conducted its first sentinel sero surveillance among antenatal clinic attendees, sexually transmitted infections patients and TB patients, and an Integrated Biological and Behavioural Surveillance (IBBS) among female sex workers and men who have sex with men groups. More countries are increasingly integrating bio-behavioural surveys among most-at-risk populations for logistic efficiency. The main advantage of an IBBS is that it offers logistic convenience for collecting both biological and behavioural data at the same time.

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 women attending antenatal clinics.

Implementation of HIV Drug Resistance Surveillance and Prevention

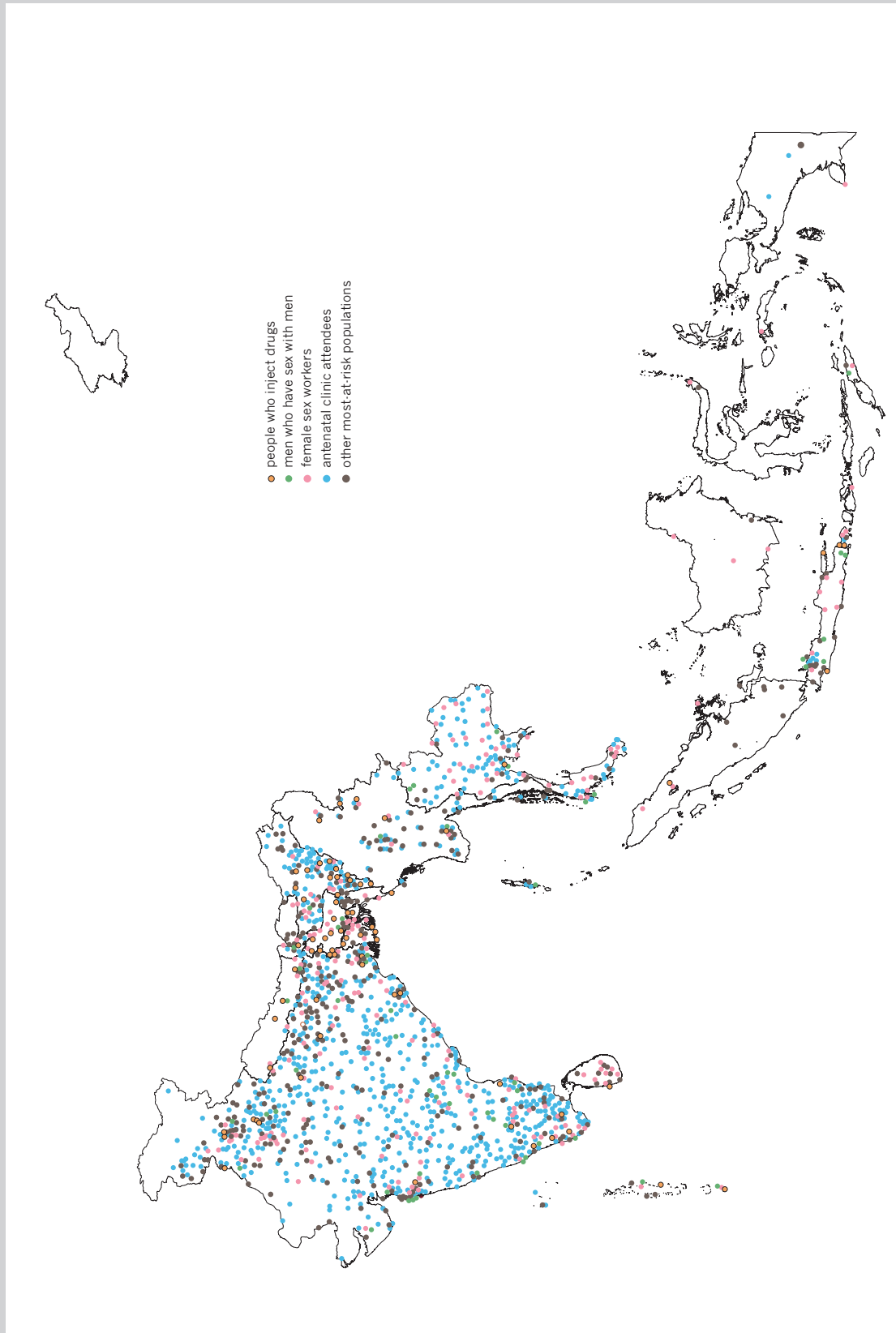
In the past five years, national HIV drug resistance activities have been initiated with WHO support in the high HIV burden countries. HIV Working Groups have been established in India, Indonesia, Myanmar and Thailand.

In India, two surveys to assess transmitted HIV-drug resistance were completed in Mumbai and Kakinada at testing and counselling centres and antenatal clinics, respectively. Both surveys revealed <5% transmitted HIV-drug resistance in the populations at these sites. Further, two surveys to assess acquired HIV-drug resistance among patients on antiretroviral therapy were implemented at antiretroviral treatment centres in Chennai and Mumbai in 2008 with the technical assistance of WHO-SEARO. The survey was completed in 2009 and the analysis is ongoing.

In Indonesia, the first HIV-drug resistance threshold survey for transmitted resistance was conducted among people who inject drugs at five clinics in Jakarta in 2007. The completed survey results indicate <5% transmitted HIV-drug resistance in this population. Surveys to assess acquired HIV-drug resistance were implemented among patients receiving first-line antiretroviral therapy at a large infectious disease hospital in Jakarta.

In Thailand, three threshold surveys assessing transmitted HIV-drug resistance have been completed — blood banks (2005), testing and counselling centre clients (2005), and sentinel surveillance of commercial sex workers (2007). In Myanmar, pilot activities for HIV-drug resistance have been planned for 2010–2011.

Fig. 30: Location of surveillance sites, by population group, South-East Asia Region, 2009



Source: Surveillance country reports. Each dot represents one surveillance site.

The collection and analyses of “early warning indicators” was piloted in Indonesia in 2008 and is planned in several pilot sites in India in the near future. While most other countries collect these indicators through paper-based data abstraction, Thailand analyses 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.

Laboratories in India and Thailand have been assessed by a WHO-Headquarters team for HIV-drug resistance accreditation. After evaluation, two laboratories (National Institute of Health and Siriraj Hospital) in Thailand and two in India (National AIDS Research Institute, Pune and Tuberculosis Research Centre, Chennai) gained WHO accreditation as national HIV-drug resistance reference laboratories.

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).

Monitoring and evaluation are often cited as weak elements of the health sector that need strengthening. The recommended 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 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, all essential elements of the framework have not been implemented in the countries. Weak monitoring and evaluation of the HIV programme, is in part, a reflection of weak health systems in countries. National AIDS programmes are making efforts to strengthen systems for monitoring and evaluation by mobilizing resources through the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM; mentioned as Global Fund in this report) and other sources.

Research

Research continues to remain a low priority for most countries. Few countries have set national research priorities. Moreover, the available research is not disseminated quickly or used to improve local programmes and policies.

India’s NACO provides an impressive example of promoting and facilitating research for evidence-based programme and policy development. NACO has constituted a “Technical Resource Group” on research and development primarily to guide the development of an appropriate research agenda for translating

knowledge into programme and policy. Also a “Network of Indian Institutions for HIV/AIDS Research” was formed with the responsibility to undertake multicentric research activities in interdisciplines. In addition, the NACO Ethics Committee for Research was constituted with the responsibility to ensure that the process of research is conducted ethically, responsibly, with privacy protection and participant non-exploitation. A research fellowship scheme was initiated to encourage

young researchers (up to 35 years) to pursue research in the field of HIV/AIDS while doing their MPhil/MD/PhD under experienced academicians and researchers.

Thailand has conducted important research particularly in the area of care and treatment, vaccine trials and operations research. Similarly, Indonesia has a strong technical research group at the national level guiding policy development.

Key issues in strategic information in the Region

- Underreporting of HIV and AIDS cases.
- Weak AIDS mortality surveillance.
- Low priority given to routine surveillance of sexually transmitted infections.
- No country, except Thailand, conducts incidence surveillance.
- Not enough attention to data quality and analyses.
- Fragmentation of monitoring and evaluation systems in some countries leading to inefficiency in collecting and reporting information.
- inadequate linkages across interventions and among departments.
- Weak health systems with limited staff and infrastructure.
- Low priority and poor resource allocation for research.

Developing research protocols — WHO-NACO training workshop

To generate evidence for policy and programme development for the next five-year HIV strategic plan, the National AIDS Control Organization (NACO) of India in conjunction with WHO-SEARO organized a workshop in New Delhi, India from 22–26 June 2010. A total of 19 participants working in the HIV treatment programme and research institutes from various parts of country attended the five-day workshop. Participants included a mix of physicians, paediatricians, statisticians, social scientists and epidemiologists. Participants were nominated for this workshop with the understanding that they would be fully involved in the research implementation. The training used a “learning by doing” approach with a significant proportion of the training being conducted in group work under the guidance of mentors. The workshop started with the identification of research gaps and priority research questions and moved to other topics including: elements of a research protocol; types of research studies; sample size and sampling design; quantitative and qualitative data collection and overview of data analyses; ethics and project management including budget and timeline. Following theory lectures in the morning hours, participants worked in three separate teams, each under the guidance of a mentor to draft sections of the protocol. At the end of the workshop, three multicentric research protocols were prepared. These research proposals will be implemented over the next three years using Global Fund monies. Interim findings from the studies will contribute to the national strategic planning scheduled in 2012.

Country Best Practices

Bangladesh: Effective Government–NGO Collaboration



Quick Facts

- First case reported 1989
- Estimated PLHIV 7000
- Adult HIV prevalence <0.1%
- HIV prevalence among most-at-risk groups
 - PWID: 1.2%
 - MSM: <1%
 - FSW: <1%

Early and continued implementation of HIV prevention programmes among most-at-risk populations (MARPs), guided by data from regular surveillance and behavioural surveys, have largely helped Bangladesh keep HIV at bay.

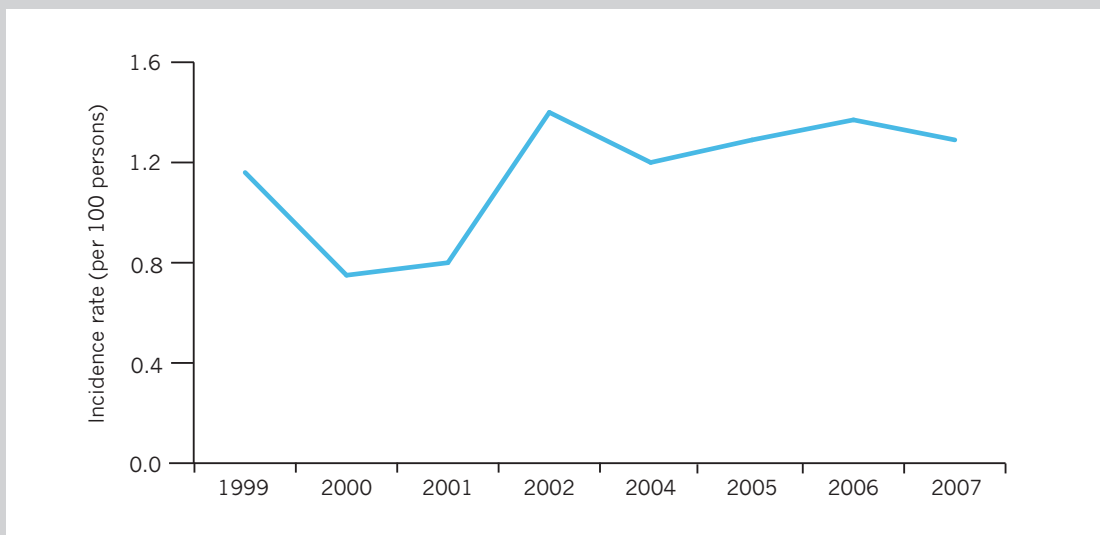
HIV prevalence in Bangladesh continues to remain at a very low level — less than 0.1% in the general population; below 1% among female and male sex workers, men who have sex with men (MSM) and transgenders

(Hijra); and just above 1% among people who inject drugs (PWID), only in one neighbourhood in Dhaka HIV prevalence among PWID was 7%. Surrogate markers of risk — hepatitis C (HCV) and active syphilis — have declined in many sites and population groups. HCV prevalence and incidence declined among Dhaka PWID (Figure 31), suggesting that safer injecting practices are being adopted, and active syphilis rates declined in many sites among female sex workers (FSWs).

Unique Features

- Early national response to HIV threat
- Expanded surveillance system and use of epidemiologic data to guide programme and policy
- Sound and comprehensive set of policies, guidelines and strategic frameworks targeting services to most-at-risk populations

Fig. 31: HIV incidence rate among people who inject drugs (n=561), Dhaka, Bangladesh, 1999–2007



Source: Azim et al. *Twenty years of HIV in Bangladesh: Experiences and way forward*, World Bank and UNAIDS, 2009.

Early national response

A very important factor was the early implementation of HIV prevention interventions among the MARPs — FSWs, PWID and MSM. These early interventions have been cited internationally as best practices. Analysis of data modelling the impact of early PWID interventions in Dhaka showed beneficial effects in delaying the epidemic.

The Government of Bangladesh (GoB) acted early in responding to the HIV epidemic, by forming the National AIDS Committee (NAC) in 1985. This high-profile advisory body has the President as Chief Patron and is chaired by the Minister of Health and Family Welfare. The NAC is responsible for formulating major policies and strategies, supervising programme implementation and mobilizing resources. A NAC Technical Committee (TC-NAC) of experts provides technical advice to the NAC and National AIDS/STD Programme (NASP).

NGO initiatives and collaboration between the Government and NGOs

The interventions for prevention of HIV/AIDS among vulnerable populations in Bangladesh was initially started and led by NGOs. Later a strong partnership was developed between the GoB, NGOs, civil society and donors. Success in controlling HIV can be attributed to functional collaboration, programme participation and ownership between the government, NGOs, research institutes, and educational institutes, etc.

NGOs are significantly involved in HIV prevention in Bangladesh. Some NGOs have also been playing a key role in managing the implementation of large projects. A number of community-based organizations have also been set up to provide services. Care and support services for people living with HIV (PLHIV) are available only through the network of positive people

established in the country. In fact once persons are identified as HIV-positive they are referred to these networks. The provision of antiretrovirals (ARVs) is also managed by the network of positive people. With support from GoB, the NGOs have set up a sexually transmitted infections (STI)/AIDS network with more than 230 member organizations working in the field of HIV/AIDS.

Effective interactions among the different ministries to support the NASP are formulated with 17 ministries and focal points working together. Partnership between the GoB and NGOs has increased through Global Fund (Round 2 and 6) and HIV/AIDS Intervention Services, with the involvement of 104 NGOs in HIV/AIDS prevention in three major programmes. Comprehensive interventions are targeted at the most vulnerable and bridge groups in the population. These groups include FSWs and their male clients, PWID, MSM, hijras and transport workers. The intervention packages include condom promotion, STI management, peer education, health education/ counselling, resting/recreation facility, community awareness and local level advocacy. Essential harm reduction service packages are also being implemented in the country that includes needle-syringe exchange,

detoxification, long term drug treatment and rehabilitation, capacity building of ex-drug users, among others.

Sound national planning and policies

Bangladesh was the first country in the South-East Asia Region to develop and adopt a comprehensive national policy on HIV/AIDS and sexually transmitted diseases —“*National Policy on HIV/AIDS and STD Related Issues*”. It was developed and approved by the cabinet in 1997. The 1st National Strategic Plan 1997–2002 was formulated and adopted through consultation and involved all stakeholders (including ministries, NGOs, private sector, civil society and others), in line with global practice. The 2nd National Strategic Plan was developed for 2004–2010. Protocol for safe blood transfusion was formulated in 1997.

Surveillance, research, monitoring and evaluation

Bangladesh began HIV (and syphilis) serological surveillance and (separate) behavioural surveys in 1988, and has expanded this surveillance and the sample sizes over the years. Since 1998, eight rounds of sero surveillance and six rounds of behavioural surveys have been completed at sentinel sites

across the country. All efforts are made to maintain strict anonymity and confidentiality. Blood samples and information are collected from populations of highest epidemiologic interest, i.e. male and female sex workers, PWID, MSM, hijras, and male groups likely to be clients of sex workers, such as rickshaw pullers, transport workers, dock workers, male STI patients.

To improve surveillance design, a pilot of “Respondent Driven Sampling” methodology was done in 2007. Some additional data to inform programme decisions were collected by other methods, such as a GIS mapping of 17 brothels and nearby police stations, NGOs and clinics; workshops to take stock of relevant areas of knowledge; and several surveys, research and evaluation studies.

Conclusion

Bangladesh demonstrates an example of government and non-government collaboration for addressing the HIV/AIDS problem. In Bangladesh, this Government–NGO collaboration worked well due to strong commitment on both sides to combat HIV/AIDS in Bangladesh. While the partnership has worked well so far, there is a need for continuing close coordination to avoid duplication of services in target populations by different service providers.

Bhutan: Strong Political Commitment

Quick Facts

- First case reported in 1993
- Estimated PLHIV: <1000
- Adult HIV prevalence: 0.1%
- HIV prevalence in most-at-risk population: <5%



Unique Features

- Visionary royal leadership
- Strong political will
- Community participation through multi-sectoral task forces

Bhutan remains a low HIV prevalence country with less than 0.1% adult prevalence of only 0.02%, even though the first HIV case was reported nearly 17 years ago. Bhutan tackled the HIV epidemic through the unique leadership of the Kings of Bhutan and government policies in HIV control that facilitated the development of Bhutan's robust HIV prevention programme. HIV is considered a national priority by the National Assembly of the country and

thus helps maintain political consciousness to HIV prevention. This strong political commitment demystified the HIV problem, enabled the community to respond effectively to prevent HIV infection, and mitigated the stigma and discrimination for people living with HIV (PLHIV) and their families. Working with the communities through multi-sectoral task forces (MSTFs) provided the opportunity to identify actions that could be synergized for the social good.

Setting up the national response framework

In 1993, immediately after the first report of HIV infection, the National AIDS Committee was formed, comprising representatives from different sectors under the Director General of the Ministry of Social Service. The National AIDS Committee was strengthened to form the National AIDS Commission in February 2004 to advise the Government on HIV policies. The Commission formulated conclusive policies, such as provision of free antiretrovirals (ARVs), greater involvement of PLHIV, and multi-sectoral duties in the biennial meetings.

The unique leadership of the Kings of Bhutan

The ultimate demonstration of the concern and commitment for the HIV epidemic is reflected in the initiatives of the Kings of Bhutan. The Royal Decree on HIV prevention, dated May 24, 2004 by the Fourth King, His Majesty Jigme Singye Wangchuck calls for citizens to participate in HIV prevention and respect the rights of HIV infected and affected people. The Royal Edict (also in 2004) broadened the roles of the organizational and individual-level participation for HIV prevention. The Fifth King, His Majesty Jigme Gesar Namgyel Wangchuck and heir to the throne in 2005, deeply concerned about the HIV epidemic, proclaimed to the nation that: "HIV/AIDS is no exception. The youth will use their strength of character to reject undesirable activities; their compassion to aid those afflicted; and their will to prevent its spread." The youthful image of the King, promotes deeper appeal to the youths to look forward to HIV free lives. Today, the "youth in-and-out-of-school" group is one of the key targets in HIV prevention.

Following these initiatives, strategies for free and universal access to HIV prevention and care services were strengthened and mainstreaming of HIV education among other organizations was intensified. This was a huge leap in public health for HIV prevention.

Mainstreaming HIV/STI prevention

The National Strategy for HIV/sexually transmitted infection (STI) prevention is based on the principles of the 2004 Royal Edict. HIV prevention moved from the concept of an "ill health and disease model" to incorporate fundamental issues of rights and empowerment to address its link with poverty, and improve livelihoods through the maximum feasible participation of the community. The mainstreaming of HIV education through institutional teaching started in 2008, with nine vocational training institutes, one army training centre, senior schools and 747 non-formal education centres integrating life-skill based HIV curriculum.

The Ministry of Labour and Human Resources introduced HIV education booths at youth employment counters. The armed forces mobilized women volunteers among family camps to intensify HIV prevention through condom promotion and health education. In the hospitality sector, hotels and lodges in urban settings participated in condom promotion. All karaoke bars in Thimphu and Phuntsholing, the two biggest urban cities in the country, introduced workplace HIV education during entertainment hours in 2010. In line with the Royal Edict, to engage PLHIV and empower them to take control, the National AIDS Control Programme successfully mobilized the first peer association of PLHIV in 2009, named Lhaksam. It is expected to grow into a

future NGO for people infected and affected with HIV.

The Queen — an icon of HIV prevention

Good leadership is the cornerstone of any public health intervention. Her Majesty, the Queen Ashi Sangay Choden Wangchuck is the icon of HIV prevention in Bhutan. She assumed the position as the UNFPA Ambassador for Bhutan in 1999. Since then, she has constantly worked for public health education campaigns focusing on HIV prevention, and sexual and reproductive health. Her Majesty routinely visits the different sections of the communities, and holds numerous public gatherings and discourses on HIV prevention. The armed forces, school children, out-of-school children, monastic institutions and rural masses are repeatedly reached across the country.

The World AIDS Day has always been observed under the auspices of Her Majesty reminding the nation of the urgency to avert a serious HIV epidemic. The Queen has reached out to the people more than any media campaign leading to mass awareness, encouraging cross-sectoral participation, and being a role model for all the sections of the Bhutanese society. Her Majesty mobilized multi-sectoral participation at the district and the grassroots levels through the formation of MSTFs for HIV prevention.

Social mobilization — multi-sectoral task forces

In Bhutan, social mobilization was formally initiated under Her Majesty's patronage. In 1999–2000, two demonstration sites — Thimphu (the capital city) and Phuntsholing (commercial hub at the Indo-Bhutan border) — were piloted to engage a

multi-sectoral framework for HIV prevention. The aim was to engage partners from formal and informal sectors at the local level as equal partners of the health sector. The two demonstration projects were successful and provided “renewed strength and clarity within the process of decentralization towards prevention and care for HIV/AIDS”. In 2002, the MSTF approach was expanded to all 20 districts of the country, and remains the key strategy for population based HIV prevention.

The MSTFs have become an effective platform for HIV prevention for the general population in the district. They function under the governors (Dzongdags) or the executive head of the district administration. The MSTFs coordinate different players at the local level and ensure sectoral participation in the prevention of HIV/AIDS. Since 2004, the district MSTFs have been implementing the HIV prevention programme through an annual workplan. The PLHIV are also represented as members of the MSTFs in four districts. Sex workers are actively engaged in HIV prevention in Phuntsholing. Women groups in the armed forces and civilians also formed effective alliances to engage in condom promotion activities, family planning programmes, and prevention of domestic- and gender-based violence in the communities.

HIV prevention at grassroots level

The MSTF approach enabled the engagement of the communities at the block (geog; a cluster of communities) level. Through an integrated approach, blocks are increasingly participating in HIV prevention. The Gup, who is the elected head of the block, acts as the chair of the geog MSTF. Over 50% of the 206 blocks have established geog MSTFs since 2005. HIV/AIDS messages are propagated during religious and festive events in the communities. Condom distribution is enhanced through outreach of community volunteers and the existing network of village health workers in the rural setting. In 2008, 75.4% reported easy access to condoms and 73.6% used condoms during extramarital sex in the previous six months. The block development committees regularly review the HIV prevention activities of the geog, and plan and monitor implementation in the villages and communities.

In conclusion, Bhutan’s success to remain a low HIV prevalence state can be attributed to the unique leadership of the royals and the strong political will that prevailed since the start of the HIV epidemic. The strong leadership role has demystified the HIV problem, enabled the community to respond effectively to protect from the HIV virus, and mitigate stigma and discrimination faced by PLHIV and their families.

Democratic People’s Republic of Korea: Widespread Health Infrastructure



Quick Facts

- No HIV case reported in national population
- 28 HIV-positive cases among expatriates
- Vulnerability and risk factors exist but undefined

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

most-at-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.

Unique Features

- Widespread health care infrastructure
- Government commitment to universal access to services

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. Nationally and provincially, the HIV programme operates through a network of Anti Epidemic Health Stations that manage a wide range of communicable disease control programmes. The government has committed to stepping up prevention activities and providing care, support and treatment for those infected and affected by HIV. The National Strategic Plan on HIV/AIDS Prevention and Control—DPR Korea (2008–2012) calls for intersectoral coordination to prevent the spread of HIV in the country. The Plan aims to improve HIV/AIDS awareness among the general population.

Opportunities to prevent HIV spread

The well organized and widespread health care system represents a strong basis for preventing a potential spread of HIV infection. DPR Korea also has an extensive network of more than 800 general and specialized hospitals at the central, provincial and county levels, and about 1 000 hospitals and 6 500 polyclinics at Ri (rural county) and Dong (urban county) levels, with an estimated 50 000 section level doctors working at the community level. The fundamental principles of the national health policies include universal and

free medical care and services, including prevention and curative services. The Government “maintains a commitment to the universality of services, including a complete set of entitlements for children and women, against a backdrop of severe and protracted hardships.”

DPR Korea received a funding of US\$ 4.3 million from the Global Alliance for Vaccines and Immunization (GAVI) Health System Strengthening project in the 2007–2011. This will help in strengthening capacity in health management systems and support health service delivery, including infrastructure, health equipment and clinical laboratory services.

A national Health Management Information System (HMIS) is being put in place to improve disease surveillance and standard health indicators. It will identify disadvantaged groups for the programme or targeted interventions.

Opportunities are also seen in introducing syphilis screening among pregnant women to reduce the risk of STI transmission, and use the indicators to measure the risk in HIV transmission. Condom use can be promoted through the reproductive health programme in the hospitals as well as through community-based actions.

The strong network of community-based peoples’ committees, Korean Family Planning Association, Korean Elderly Association, trade unions, women’s association and the International Federation of the Red Cross offer opportunities for community-based prevention, early detection, treatment, care and support.

India: Rapid and Effective Scale-up of Antiretroviral Treatment



Quick Facts

- First case reported in 1986
- Estimated PLHIV: 2.3 million
- Adult HIV prevalence: 0.3%
- HIV prevalence in most-at-risk population:
 - PWID: 9.2% (range 0–56%)
 - MSM: 7.3% (range 0–41%)
 - FSW: 4.9% (range 0–41%)

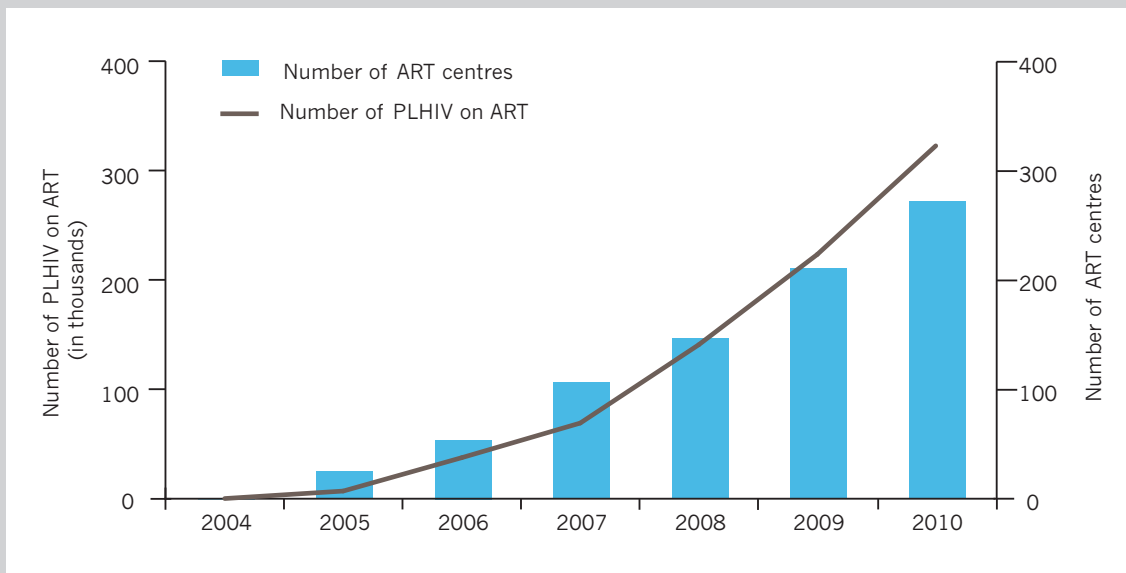
India's national antiretroviral treatment (ART) programme has had a major impact on enhancing the lives of people living with HIV (PLHIV). Since its launch in April 2004, with eight government hospitals located in six high prevalence states, there has been a gradual but sustained increase in the number of PLHIV registered for ART and those seeking treatment (Figure 32).

To accommodate the growing numbers of PLHIV, the national ART programme has scaled up considerably and as of March 2010 322 561 people are receiving ART at 272 fully functional ART centres. Analysis of available data shows that nearly 89% of PLHIV who initiated ART were alive and on treatment after 12 months of starting treatment. The remaining 11% had either reportedly died or were lost to follow-up.

Unique Features

- Government commitment
- Sound technical and operational guidelines for scale-up
- Global Fund grant for ART
- Use of existing tertiary and secondary health facilities for ART delivery
- Production of affordable ARV drugs
- Participation of NGOs and network of positive people

Fig. 32: Number of people living with HIV on treatment and antiretroviral treatment centres, India, 2004–2010



Source: National AIDS Control Organization, Annual report 2009–2010.
 Note: Year data refer to the month of March.

ART delivery through a three-tier health infrastructure

ART services are being provided through a three-tier system of health facilities supported under the programme with clearly laid down structures, functions, operational, technical and financial guidelines, and reporting in standard formats for monitoring.

(i) ART centres

The ART programme identified suitable locations for setting up ART services based on the prevalence of HIV, numbers of PLHIV identified and the capacity of existing institutions to deliver ART services. Most of the ART centres are established in medical colleges and district hospitals in the government sector. In high volume districts, some ART centres are also functioning in the subdistrict and area

hospitals. Support under the programme includes additional personnel (doctors, counsellors, nurses, laboratory technicians, pharmacists, data managers and care coordinators) based on patient load. Equipment and kits for CD4 count and ARV drugs are procured centrally and supplied directly to ART centres. Funds are provided for drugs required for the treatment of opportunistic infections. Of the 272 ART centres, 10 are designated as Centres of Excellence. Besides routine functions of ART, the Centres of Excellence also provide second-line and alternative first-line ART, as well as tertiary level services, impart training, conduct research work and mentor ART centres linked to them. In addition, seven Regional Paediatric Centres have been set up in large children hospitals of the country for providing tertiary care, second-line paediatric

ART, training, research and mentoring of paediatric care and treatment services at ART centres.

(ii) Link ART Centres

The ART programme set up Link ART Centres to make treatment services more accessible and facilitate delivery of ARV drugs to the PLHIV. These Centres are located mainly at district/subdistrict level hospitals and Community Health Centres close to the patient’s residence to improve accessibility. During the scaling up of ART services, it was observed that distance, travel time and costs are the main constraints in access to ART services and adherence to treatment. As the treatment is life-long and drugs are provided on a monthly schedule, PLHIV faced inconvenience which was one of the reasons for poor drug adherence, lost to follow up and missed cases. These Centres are located at the Integrated Counseling and Testing centres (ICTC) which further helped in linkages between ICTC and ART services. Currently, there are 325 Link ART Centres in the country.

(iii) Community Care Centres

Community Care Centres (CCC) were set up with the mandate of providing a comprehensive package of care, support and treatment services. At present there are 287 CCCs that play a critical role in providing treatment, care and support to PLHIV. These are located in and run by the nongovernmental sector with the main objective of providing psycho-social support, ensuring drug adherence and providing home-based care. The CCCs allow better community and family responses towards PLHIV through family counselling. The CCC also helps in tracing patients lost to follow-up and those who miss visits to ART centres for collecting their ARV drugs

as per schedule. CCCs are linked with ART centres and undertake various functions including counselling for ART preparedness, drug adherence, nutrition and prevention; treatment of opportunistic infections; referral and outreach services for follow up; and social support services.

Capacity building

The ART programme developed standard curriculum and training modules for all categories of human resources involved in the programme for capacity building. To ensure uniform standards of services and adherence to operational guidelines and treatment protocols, induction training is provided to various personnel using standard curriculum, training modules and tools at identified institutions. Various training programmes organized under National AIDS Control Programme- III include:

- Orientation of medical colleges/ district hospital faculty: five days
- Training of ART centre medical officers: 12 days
- Training of CCC/Link ART centre medical officers : four days
- Training of counsellors: 12 days
- Training of ART centre data managers: three days
- Training of laboratory technicians for CD4 count: two days
- Training of pharmacists (under process): three days.

Operational guidelines and modules

The programme produced several guidelines to provide normative guidance to users for ART delivery to help in standardized delivery of services using a public health approach. Key guidelines include:

Guidelines for ART in adults and adolescents – March 2007, updated April 2009; Operational guidelines for ART centres – March 2007, updated May 2008; Technical guidelines for second-line ART roll out in children – October 2009. These are also available on the National AIDS Control Organization (NACO) website and are revised regularly on the recommendations of the Technical Resource Group.

Technical Resource Group

The programme constituted four Technical Resource Groups (TRGs) on ART, paediatric care, laboratory services and CCCs to oversee the technical aspects of care and treatment. These TRGs meet periodically to review, discuss and recommend any changes in strategies and operational or technical guidelines. The TRGs review the progress and give valuable suggestions and recommendations on various technical and operational issues relating to the programme. Meetings of TRGs are held periodically with clearly drawn agenda and issues for discussion.

Supply chain management for ARV drugs

The programme has an effective supply chain management. One of the most vital components of drug adherence is continuity of drug supply to the centres. Monitoring is done centrally for all ARV drugs based on monthly consumption and stocks at the centres. As per guidelines, all ART centres must have a minimum three-month drug stock. In the event of a shortage, drugs are re-located to ensure that there are no stock-outs. The supply chain management of ARV drugs and CD4 kits is done by a dedicated supply chain team appointed at NACO.

Monitoring, evaluation and research

A set of standard Monitoring and Evaluation Tools and Formats have been developed and distributed to each ART centre for standardized recording and reporting from different centres. This ensures reporting on a standard list of indicators for monitoring progress and comparison of performance across centres. Also formats for reporting of patients on second-line and alternative first-line treatment have been developed.

Additions are made to the monthly reporting format at the ART centre to get more information on most-at-risk populations, CD4 counts and socio-economic status of the patients.

Based on identified programme gaps, multi-centric operational research projects are undertaken and their findings used in redefining strategies of the programme.

Supervision and periodic review meetings

The programme grouped various states into regions for close monitoring, mentoring and supervision of ART centres. Regional coordinators are appointed to supervise the programme in their regions. The Regional coordinator visits ART centres at least once in two months and sends regular weekly and monthly reports to NACO. A monthly meeting of Regional coordinators is held at NACO to review the various issues pointed out by them. In addition, consultants (care, support and treatment) have been appointed at most State AIDS Control Societies (SACS). NACO and SACS officials also visit centres based on their monthly reports, and feedback from Regional coordinators, Indian Network for People Living with HIV (INP+), NGOs, among others. Currently there are 10 Regional coordinators in various parts of the country.

Challenges in care, support and treatment of PLHIV

Currently, the rapid scale up of ART services in India is supported by the Global Fund. However, as the number of PLHIV on ART further increase and the number of persons requiring second-line ART also increase, the costs of providing ARV drugs to an estimated 6 00 000 persons would be massive. For the availability of such enormous funding, the current policy of providing free services to all PLHIV needs to be examined. Though ART services are provided mainly through government supported hospitals, there will be need to internalize services within the existing system for long-term sustainability. Additional human resources covered under the programme may have to be supported by the states or domestic budget. It will also be challenging to ensure services to the large migrant and moving population as these tend to be irregular in treatment and maintain sub-optimal drug adherence. However, on the positive side, government commitment, production of affordable ARV drugs offered by the Indian pharmaceutical manufacturers, as well as participation of NGOs and the network of positive people are strengths of the Indian national HIV control programme.

Indonesia: Novel Approach for Improved Size Estimation of Most-at-Risk Populations



Quick Facts

- First case reported in 1987
- Estimated PLHIV: 190 000
- Adult HIV prevalence: 0.2%
- HIV prevalence in most-at-risk population:
 - PWID: 50% (range 43–56%)
 - Waria: 19% (range 14–34%)
 - MSM: 3.5% (range 2–8%)
 - FSW: 6% (range 2–17%)

Population size estimations of most-at-risk populations (MARPs) are key to: understanding the epidemic potential of an area, estimating the burden of disease, and setting appropriate priorities in response to the HIV/AIDS epidemic. A country as large and diverse as Indonesia requires population size estimates at the provincial and district/municipality levels for proper programme planning and resource allocation.

Since 2002, Indonesia started MARP estimations at the national level, however with very limited data from

only six provinces. Estimation improved considerably with the increase in number of data available for use. In 2009, more and better data generated at the districts level and mapping data of most-at-risk populations available from NGOs, Ministry of Health, other institutions, led to an improved estimation process.

Complete data on key statistics from all areas in Indonesia were also available from the 2008 Village Potential Statistics Survey. Data from the village survey was modeled using a multi-variable regression model to predict the number of high-risk districts.

Unique Features

- Estimation is decentralized to the district level
- Recent mapping data made available from a large number of districts
- Evidence-based assumptions used from behaviour surveys
- Availability of village potential survey (Podes) data from every village in the country

The unique features in the new estimation process were:

- Establishment of a Technical Working Group
- Engaging NGOs and other institutions for collection and validation of basic data
- Calculation of estimation and confirmation and revision of initial results by the Technical Working Group
- Consensus on the results at the province and national level by engaging with key stakeholders.

The data used in the estimation process were from various sources, i.e. mapping data, sero-surveillance data, integrated biological and behavioural surveillance (IBBS) data and Village Potential Statistics. Mapping data were obtained from the local health offices, National AIDS Committee, national NGOs, and local institutions. For mapping of people who inject drugs (PWID), districts providing data increased from 45 in 2006 to 182 (out of 483) in 2009. Direct female sex worker (FSW) mapping data availability increased from 209 districts in 2006 to 332 in 2009. Indirect FSW mapping data reported from only 81 districts in 2006 increased to 314 districts in 2009. Waria mapping data reporting increased from 146 districts in 2006

to 306 districts in 2009. Men who have sex with men (MSM) mapping data were reported from 30 districts in 2006 and 178 districts in 2009. Sero-surveillance data for 2007 and 2009 were obtained from 23 of 33 provinces. IBBS data from 2007 data covered 11 provinces while 2009 data covered eight provinces.

The 2008 Village Potential Statistics were available from all districts in Indonesia. The variables of Village Potential Statistics data used in the estimation were a percentage of urban villages and villages with sexual transaction sites, pubs/discotheques/karaoke, theatre, as well as predominance of drug abuse, and illegal drug trading. Since the Podes were available for all districts, these data were used as predictors in the model for estimating the population size in the districts with no data. The population of 15–49 years olds in each district was also used as a predictor.

For subpopulation estimations, the population was divided into four groups for MARP estimations, i.e. Group 1: FSW, Waria, MSM and PWID; Group 2: clients of FSW, sex partners of FSW clients, and sex partners of PWID; Group 3: prisoners; Group 4: general population of Papua. For Group 1, the subpopulation size was

estimated using Poisson Regression method, with the district mapping data as the outcome and the Podes data as the predictors. The model built for each subpopulation in Group 1 at the national level with the district as the observation and the province as the dummy variable in each subpopulation model. The final model of each subpopulation was used to estimate the subpopulation size in the district with no mapping data, since the predictors were available for all districts.

For Group 2, the multiplier method was used to estimate the subpopulation size. The data inputs for this method were the estimates of subpopulation size of Group 1 and the IBBS data. IBBS data were not available from all districts, and for the ones which did not have IBBS data, behaviour indicators were assumed using the data from the similar district. For Group 3, the estimation was based on the register data from the Ministry of Justice and for Group 4 it was based on the 2006 IBBS among the general population in Papua.

The 2009 survey showed improved population size estimations of MARP. Importantly, these estimates are available for each district, which will facilitate district level planning and monitoring.

Table 3: Size of most-at-risk populations, Indonesia, 2009

Subpopulation	Population size		
	Median	High	Low
People who inject drugs	105 784	73 663	201 131
Female sex worker	214 054	177 962	258 007
Waria	32 065	21 589	51 235
Men sex with men	695 026	423 729	1 358 527
Client of sex worker	3 241 244	2 661 161	3 820 589
Partner of people who inject drugs	28 085	19 428	54 166
Partner of client of female sex worker	1 938 650	1 616 541	2 260 292
Prisoner	140 559	140 559	140 559

Source: National AIDS Programme, Ministry of Health, Republic of Indonesia

Maldives: Effective Use of Evidence for Programme Development



Quick Facts

- First case reported in 1991
- Estimated PLHIV: <100
- Adult HIV prevalence: <0.1%
- HIV prevalence in most-at-risk population: <0.1%

The Government of Maldives recognized the central role of surveillance in response to HIV and took the initiative to develop national guidelines for second generation surveillance in 2005. The availability of funds from the Global Fund to fight against AIDS, TB and Malaria made it possible for Maldives to conduct the first biological and behavioural survey (BBS) in 2008.

One of the biggest challenges in crafting intervention programmes for HIV has been the cultural and religious beliefs among policy makers and opinion leaders which placed the country in a state of denial. This first BBS provided evidence that the country’s risk is evolving and an impending epidemic can occur if there is complacency.

The first BBS was conducted in 2008 with technical support from UN partners. The strategy utilized by this first BBS — monitoring the populations at greatest risk — is considered the most epidemiologically sound method for identifying emerging epidemics and responding to behavioural risks among the most vulnerable groups. Sites prioritized to conduct the BBS were based on the highest risk, i.e. urban areas where commercial sex and drug use are likely to exist. The population groups included in the survey were: female sex workers (FSWs), male clients of FSW, men who have sex with men (MSM), people who inject drugs (PWID) and youth.

The BBS found that HIV prevalence was undetected except in one resort worker. The prevalence of ulcerative

Unique Features

- Strong governmental commitment
- Financial support from Global Fund
- Technical support from United Nations partners

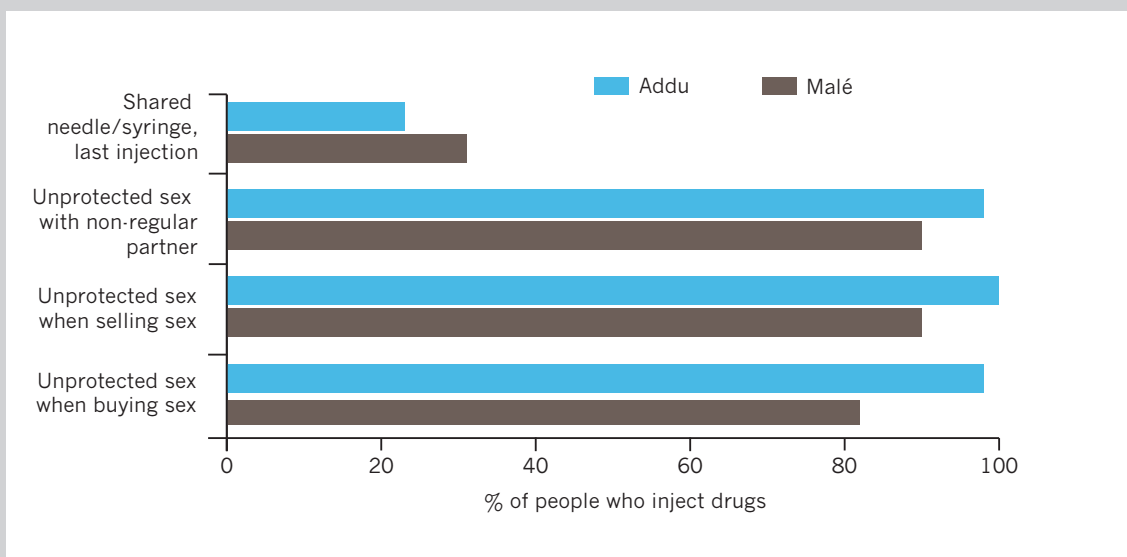
syphilis was 1.2% in resort workers. Likewise, hepatitis B and C were also found among the subpopulations. The BBS uncovered an alarming set of overlapping risk behaviours and interface among the most-at-risk populations. The BBS also highlighted the low self-risk perception, the existence of a knowledge–practice gap, low condom use and unsterile needle and syringe sharing among PWID, poor health-seeking behaviour and poor uptake of voluntary counselling and testing services.

How the survey findings were used

To date the 2008 BBS is the most comprehensive and recent data available on HIV in Maldives (Figure 33). The BBS has generated a body of knowledge/ evidence on the risk behaviour patterns, knowledge and awareness on health seeking

behaviours, sexual behaviours, number of partners (casual, regular etc.), usage of condoms and risk perception. The BBS provided baseline data for evidence-based programme planning, as well as monitoring and evaluation. BBS findings have also been used to guide the development of a Behavior Change Communication Strategy that addresses the communication needs of specific target groups. The information gathered from the study is also being used extensively for *advocacy* to identify gaps, set targets and mobilize resources; as well as for *policies* to create an enabling environment for an effective response. In view of the evidence generated by the BBS, the Ministry of Health is committed to address the growing problem of HIV and STI and acknowledges that surveillance must remain at the forefront of the country’s HIV response.

Fig. 33: Sexual and injecting risk behaviours among people who inject drugs, Addu and Malé, 2008



Source: 2008 bio-behavioural survey, National AIDS Programme, Maldives

Myanmar: Successful HIV and TB Collaboration



Quick Facts

- First case reported in 1988
- Estimated number of PLHIV: 240 000
- Adult HIV prevalence: 0.6%
- HIV prevalence in most-at-risk population:
 - PWID: 35% (range 19–54%)
 - MSM: 22% (range 13–32%)
 - FSW: 11% (range 7–17%)

With a TB incidence of 171 cases per 100 000 persons per year and an estimated 240 000 people living with HIV (PLHIV), Myanmar has a high burden of HIV–TB coinfection. The 2009 seroprevalence survey showed 9.2% sero-positivity rate among newly diagnosed TB patients, ranging from 2% to 26% across sites.

To address issues related to HIV and TB coinfection, the Ministry of Health, Myanmar set up a high level HIV–TB coordinating body placing in synergy the various actors involved in the fight against HIV–TB. These included the civil society with the PLHIV networks, NGOs, national TB and HIV control programmes, the Township Health

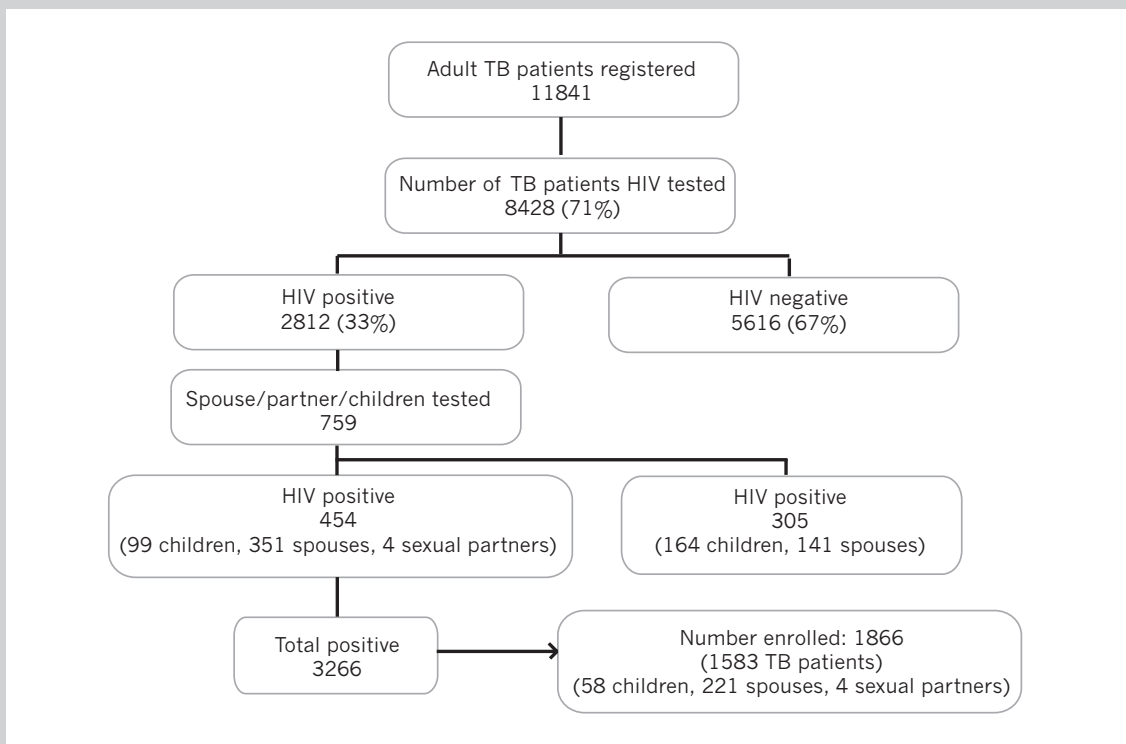
Centres (THC), the district hospitals, its Department of Health and the World Health Organization.

Collaboration between the various stakeholders permitted the implementation of the full spectrum of WHO recommended HIV–TB collaborative activities in several townships of Myanmar. HIV, TB and HIV–TB patients all benefitted from the inter-programme collaboration. Provider-initiated HIV testing of TB patients permitted the identification of a substantial number of HIV-infected patients and linked them to a comprehensive HIV care programme. Once ART was provided, the outcome of HIV–TB coinfecting patients was favourable.

Unique Features

- Strong coordination between TB and HIV/AIDS programme at all levels
- Rigorous follow-up and intensive monitoring
- Support by PLHIV network

Fig. 34: Number of patients enrolled in the joint HIV-TB programme, Mandalay, May 2005–September 2009



Sources: National TB Control Programme, National AIDS Programme, Ministry of Health, Myanmar.

Integrated HIV Care Programme

In 2005, the pilot — Integrated HIV Care (IHC) programme for tuberculosis patients and their family members — was launched in five townships of Mandalay city. It has since expanded to five additional townships covering a population of 2 262 671 people and about 5000 TB cases per year.

In 2009, in Mandalay, of the 2991 adult TB patients registered, 2830 (95%) were offered HIV test, 2610 (87%) were tested for HIV; 803 (31%) were diagnosed HIV-positive. HIV test was also offered to 499 spouses/children and of the 430 (86%) tested, 263 (61%) were HIV-positive. Nearly 78% (832) patients were enrolled in the programme, of whom 65% were put on ART. The programme permits enrollment of TB patients from neighbouring townships too.

Stakeholders and responsibilities

All HIV–TB activities are implemented in and by the public sector, but with collaboration between the various stakeholders.

National Tuberculosis Programme (NTP)

is the entry point to the IHC programme and offers: provider-initiated HIV testing and counselling to all adult TB patients and spouses/children of coinfecting patients; referral of HIV–TB coinfecting patients to divisional/district HIV outpatient department; co-trimoxazole preventive therapy (CPT) before enrolment; recording and reporting of the number of adult TB patients tested for HIV, proportion receiving CPT and antiretroviral therapy (ART), and proportion enrolled in the HIV outpatient department; defaulter

tracing through the township health services; HIV prevention by condom distribution and health education material; and active TB screening for HIV-infected patients.

National AIDS Programme (NAP)

coordinates the national response to the HIV/AIDS epidemic. It addresses stigma and provides educational sessions for the general population and training of health workers. The central or local NAP is responsible for training public health staff on specific topics: HIV testing and counselling, performance of HIV test, drug adherence counselling; HIV testing and counselling and sexually transmitted diseases/infections (STD/STI) screening, and treatment in STD clinics; as well as TB screening and isoniazid preventive therapy (IPT) for PLHIV. It ensures joint supervision, monitoring and evaluation with the National Tuberculosis Programme (NTP) and the Union. The NAP supports PLHIV self-help groups and organizes defaulter tracing through these peer support groups. NAP also provides drug adherence counselling sessions and defaulter tracing through its investigators.

Township health centres (THCs) provide TB treatment to all patients residing in their respective townships. THC also provides CPT to all HIV-TB infected patients in the medical units, while waiting enrolment. It distributes health information and education materials, and free condoms. The enrolment form is provided at the township level. In Mandalay, HIV test for TB patients and chronic care of HIV-positive people on ART are decentralized at the township level. Treatment of latent TB infection is provided at the THC in the seven townships of Mandalay district.

Medical Units (HIV inpatient and outpatient departments) in the public hospitals are general internal medicine units delivering specialized HIV care to

patients referred from the various entry points or to admitted patients. Medical officers and nurses of various medical units manage their respective HIV outpatient department (OPD). The hospital social workers provide treatment adherence counselling sessions to all HIV-infected patients before starting ART and help in defaulter tracing.

Hospital laboratories and the **Public Health Laboratory (PHL)** provide support for haematology, biochemistry, hepatitis serology and CD4 count. The PHL in Mandalay is responsible for quality control of rapid HIV tests performed in Upper Myanmar.

People living with HIV/AIDS are organized into self-help groups, one per township. All patients enrolled in the integrated HIV programme are actively encouraged to join their respective township self-help group for counselling, referral services and participation in support group meetings. PLHIV provide community health education sessions and peer counselling for testing and adherence, home-based care and participate in defaulter retrieval.

The Union (i.e. the International Union Against Tuberculosis and Lung Disease) is responsible for procurement and delivery of antiretroviral and opportunistic infections drugs to the public hospitals, as well as for the technical and financial overview of the programme. It supports rapid HIV tests for TB patients and family members, first- and second-line ART, prevention, diagnosis and treatment of opportunistic infections, and laboratory follow-up including CD4 count. The store staff maintain records of all drugs provided by the IHC programme and replenish the sub-stocks in adult and paediatric medical units. They provide a monthly report

on stocks of all drugs in the central store. Additional manpower to run the HIV OPDs and data collection and recording are provided through IHC facilitators and data-entry operators.

Activities

The IHC programme has implemented all WHO-recommended HIV–TB activities — intensive case findings of HIV infection among TB patients, intensive TB screening among HIV patients, intensive case finding for TB disease and HIV infection among spouses and children, and infection control procedures in the HIV OPDs.

All registered adult TB patients are systematically screened for HIV coinfection using a provider-initiated opt-out strategy, and the spouses and children of HIV–TB patients are also advised to get tested.

Test results are obtained on the same day using two rapid HIV tests. At the THC, a HIV testing and counselling register is maintained. Another “HIV positive” register collects information on HIV-infected patients and their outcome in the HIV programme. The NTP is responsible for the delivery of TB treatment, as well as recording and reporting of TB treatment outcomes. Co-trimoxazole preventive therapy is initiated among all HIV–TB coinfecting patients while awaiting enrolment in the HIV OPD. The TB key staff person refers the HIV–TB patients from the township to the district hospital HIV OPD. In the ART programme, HIV–TB patients are prioritized and enrolled on the spot.

Clinical services are delivered at HIV OPDs co-manned by NGO medical doctors, peer volunteers and government employees (medical officers, nurses, pharmacists, social workers). Peer volunteers organize the

consultation (flow of patients, weight and height, patients’ files, next appointment date, referral to social workers for drug adherence counselling, drug adherence counselling), and systematically screen all attendees for TB symptoms using the five questions assessment from WHO. TB suspects are referred to the TB OPD.

Patient appointments are recorded in a diary. The list of patients missing their appointment is produced at the end of each consultation. A defaulter tracing system is organized with THC midwives, peer volunteers and social workers from hospitals and STD clinics.

Health information and education materials, and free condoms are distributed in the THC, TB OPDs and HIV OPDs.

A specific HIV OPD is devoted to HIV–TB coinfecting patients. In other OPDs, HIV-infected patients are screened for TB symptoms, in particular cough; TB suspects are promptly referred for TB evaluation and treatment. All patients are requested to wear a facial mask distributed by the volunteers at the beginning of each OPD. Wall posters encourage patients to wear the facial mask and cover their mouth while coughing. Environmental measures, such as fans, air extractors, and UV lights further decrease the risk of transmission of TB. Active assessment of TB disease is performed using sputum microscopy, chest X-ray and sputum culture for *M. tuberculosis* (in Mandalay). IPT is provided in eight of the 10 townships after verbal assessment of well-being.

This collaborative model should rapidly be expanded to all the areas providing ART. With the GFATM round IX support, the HIV–TB collaborative activities would be scaled up to 24 townships by 2015.

Nepal: Local Partnerships to Prevent HIV Among PWID



Quick Facts

- First case reported in 1988
- Estimated PLHIV: 64 000
- Adult HIV prevalence: 0.4%
- HIV prevalence in most-at-risk population:
 - PWID: 3–21%
 - MSM: <5%
 - FSW: <5%

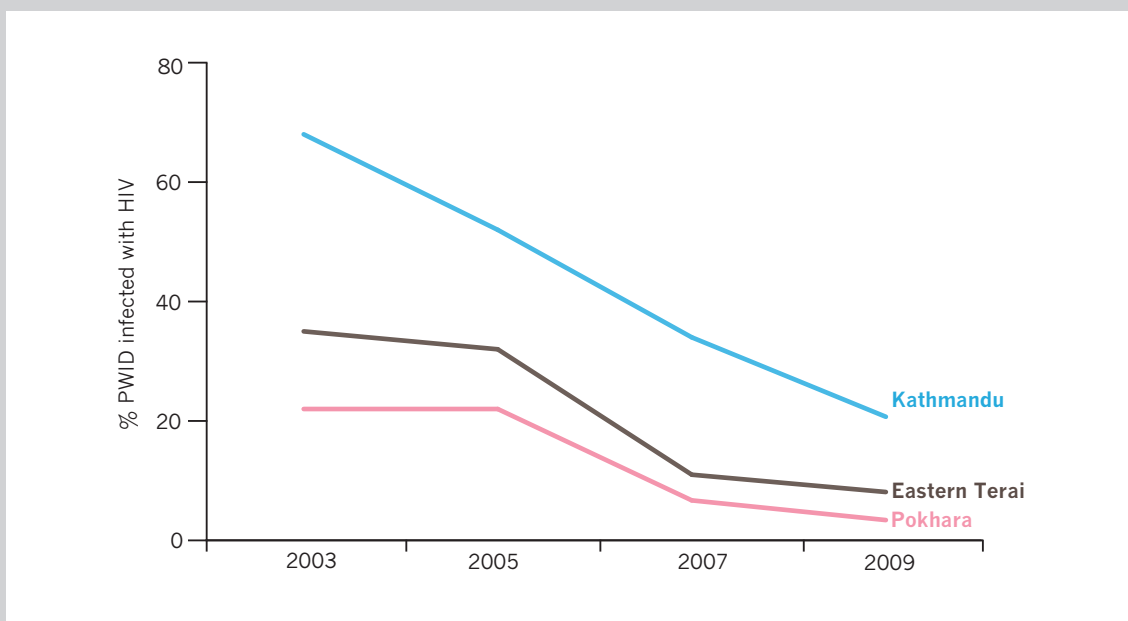
Nepal was among the first countries in Asia to adopt harm reduction approaches in the early 1990s. Drugs consumption is a serious concern in the country due to the spread of HIV and hepatitis C. The HIV epidemic is concentrated among the most-at-risk populations (MARPs), which include people who inject drugs (PWID), men who have sex with men (MSM), female sex workers (FSWs) and labour migrants. The infection prevalence among PWID was 21% in Kathmandu, 3% in Pokhara and 8% in Eastern and

Western parts of the country (Nepal IBBS 2009). Working with PWID at the local level led to the need for unity even to engage in advocacy and work closely with the Government at the local, district and national levels. While working with the main national network, Recovering Nepal, these organizations developed strong partnerships and enhanced working relations with the Ministry of Home Affairs, Ministry of Health and Population, especially through the National Centre for AIDS and STD Control and HIV/AIDS STI Control Board.

Unique Features

- High-level advocacy for harm reduction by numerous stakeholders
- Active participation by civil society
- Community-based delivery of services

Fig. 35: HIV prevalence among people who inject drugs, Nepal, 2002–2009



Source: Integrated Biological and Behavioural Survey among PWID, National Centre for AIDS and STD Control, Ministry of Health, Nepal.

The overall HIV prevalence in Nepal has begun to stabilize and HIV prevalence among PWID has declined significantly from 68% in 2002 to 21% in 2009 in Kathmandu, the capital city. The NGOs and civil society groups have played an important role in combating HIV in PWID and other most-at-risk groups through harmonization and coordination of efforts. A large number of civil society organizations in Nepal organized themselves through Recovering Nepal founded in 2001. This national network of PWID and drug service organizations is supporting more than 146 partners spread across Nepal to combat HIV among PWID through capacity development support, advocacy initiatives, information communication and small grant programmes.

Of these, the Partnership support fund's Community-based Harm

Reduction Initiative is considered to be most instrumental in the declining HIV trends noted among PWID as civil society organizations were able to reach most PWID in the targeted districts. The purpose of this initiative is to strengthen the drug users support groups and build their capacity in carrying harm reduction activities and programmes at the local level, with the primary beneficiaries being organizations working on drugs and drug-led HIV. This programme delivered a package for HIV prevention and treatment among drug users through the support of 'drop-in-centres', extensive outreach and peer mobilization of drug users and community-based drug treatment services by the local community based organizations (CBOs) in Nepal. It is through the closer working relationship among the civil societies in Nepal that these gains have been observed. The Nepal Government has

Partnership support fund is a small grant programme to support community-based harm reduction projects in 18 districts in Nepal through Recovering Nepal. The initiative supported 43 partners in the network in 2008 and 37 partners in 2009 with the ultimate objective to reach out to unreached populations and create an enabling environment for harm reduction services through a new model of community-based harm reduction approach. Initiated to provide service to existing drug users, the fund has created an enabling environment for harm reduction services covering 12 districts in 2008 and 11 districts in 2009. It provides needle-syringe exchange and community-based harm reduction services to PWID.

started recognizing and appreciating the participation and contribution of civil society organizations in the national response to the HIV/AIDS epidemic.

Harassment by law enforcement agencies can further marginalize PWID in society and compel many drug users to hide and shun seeking health services. Challenges of social stigma attached to HIV coupled with limited services to drug users still exist. However, there have been positive changes in the fight against HIV among the MARPs especially among PWID due to the engagement of the civil society in Nepal.

In 2009, a second National Harm Reduction Conference was organized through the network, its members and the Government to discuss and bring forth issues surrounding the protection of human rights, provision of accessible and quality health services as well as comprehensive harm reduction services to drug users and PLHIV in Nepal. This was a clear departure from the previous conference where the Government declined involvement in discussions possibly due to concerns about anticipated confrontations with CBOs that advocate and work with drug users. The approach has now changed with an acknowledgement of the need to work together taking precedence.

The Conference examined and provided a platform for: creating an understanding of the HIV/AIDS situation in Nepal; familiarization with the ongoing HIV/AIDS and harm reduction plans and programmes; the extent and quality of experiences in delivering HIV; and health programmes and activities in Nepal that target drug users.

The active civil society and Government participation helped elected officials, government regulators and the media to play a significant role in highlighting drug users' challenges, healthcare options and laws, rules and even perceptions that influence day-to-day lives of drug users and the prevention of HIV. It has been possible to spread and build a consensus on how current, pending and future laws, regulations, policies and perceptions impact drug users' lives in Nepal while still expanding the civic space in the country.

There is also a strong consensus among the local organizations working with PWID on the need to work more comprehensively towards promoting a human rights and public health approach to drug use and HIV/AIDS. Focus should not only be on HIV prevention and treatment but include hepatitis C prevention, treatment and care, among other health problems related to illicit drugs use.

Sri Lanka: Controlling STIs through a Public Health Approach

Quick Facts

- First case reported in 1987
- Estimated number of PLHIV: 3000
- Adult HIV prevalence: <0.1%
- HIV prevalence in most-at-risk population:
 - PWID: <1%
 - MSM: <1%
 - FSW: <1%



Unique Features

- Standardized national guidelines
- Standard package of care
- Effective defaulter tracing
- Open referral system
- Large scale up of quality services

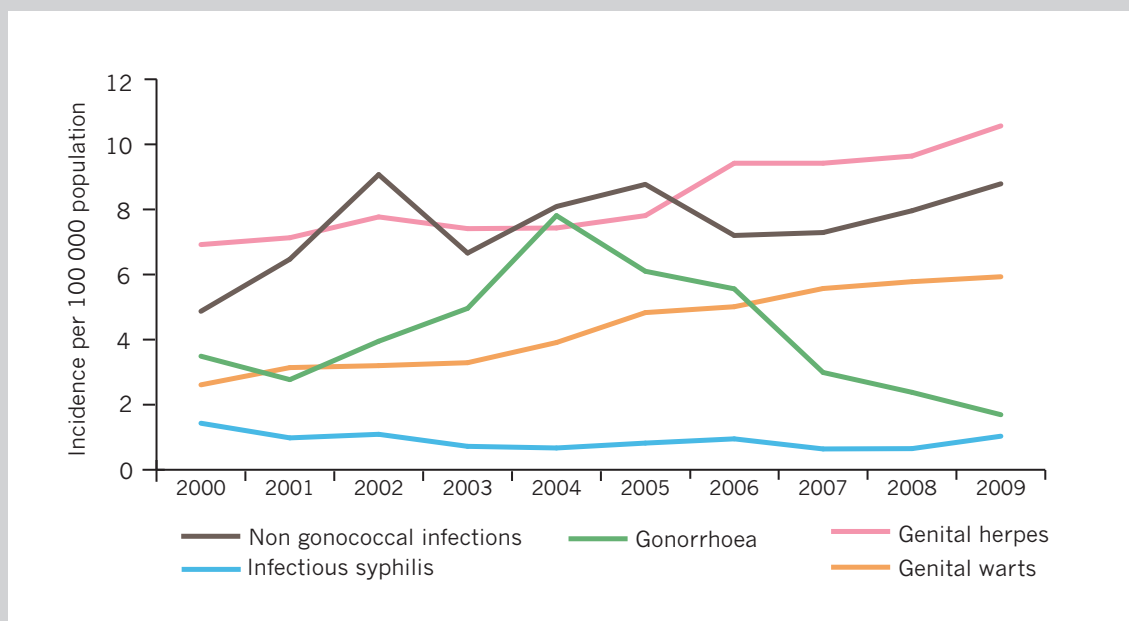
Sri Lanka was successful in maintaining a low prevalence of sexually transmitted infections (STIs) during the past decade. This was possible due to improved quality of care, strengthened preventive measures, and the well-established network of sexually transmitted diseases (STD) clinics with the central clinic and the National Reference Laboratory located in the capital, Colombo.

Since 2000, patients seeking care at the STD clinics increased following better infrastructure and improved awareness activities carried out by STD staff with the involvement of other sectors, such as education, labour, youth, military and nongovernmental organizations (NGOs). NGOs work with female sex workers (FSWs), men who have sex

with men (MSM) and people who inject drugs (PWID) in close collaboration with the local STD clinic staff, and refer the target population regularly to STD clinics for care services.

The continuous sexually transmitted infections (STI) reporting system maintained within the government STD programme for over five decades permits the evaluation of STI indicators and trends over time. A decline in bacterial STIs was observed in the past 10 years (Figure 36). The rate of gonococcal infections also decreased from more than 7% in 2004 to less than 2% in 2009. During the same period, while infectious syphilis rate continued to be less than 2%, there was a gradual increase in viral STIs, such as herpes and viral warts.

Fig. 36: Incidence rate of sexually transmitted infections, Sri Lanka, 2000–2009



Source: STI surveillance reports, Ministry of Healthcare and Nutrition, Sri Lanka

Well-organized screening, education and counselling

In Sri Lanka, asymptomatic patients attend STD clinics to get screened for common STIs. Here they also receive health education and counselling (for HIV testing, risk reduction and use of condoms). This early care-seeking behaviour probably indicates the impact of awareness activities carried out and the confidence of people regarding the STD clinics. A repeat screening is also offered depending on their sexual exposures, which gives further opportunity for education and counselling during subsequent visits. During 2009, 53% of newly registered male patients and 48% of newly registered female patients who attended the government STD clinics did not have a STI.

The availability of large-scale syphilis screening programmes, in different

settings, and their close link with STI services play an important part in prevention of syphilis as well as other STIs.

Antenatal VDRL screening for syphilis was started in 1952, but the coverage was low until a few years back. With the availability of testing in the private sector 92% of antenatal women were screened for syphilis in 2007. Women with positive test results are directed to STD clinics to confirm the diagnosis. The pre employment medical examination for prospective state employees, those seeking foreign employment and for confirmation of service in the state sector, provides another opportunity for large scale screening for syphilis at STD clinics. Of the 46 471 syphilis-screening tests performed in 2008 for pre employment, 11 were confirmed cases of syphilis. The low prevalence (0.02%) rate of syphilis among the

pre employment category can be considered as a proxy to indicate the syphilis rate in the general population. Those testing positive on screening for syphilis in all large-scale screening programmes are directed to STD clinics for confirmation. If syphilis is confirmed they undergo screening and treatment for other STIs at STD clinics, and are provided with health education and counselling, and their partners managed accordingly.

The state sector organization, National Blood Transfusion Service, is responsible for blood safety in the country. It screens all donated blood units for syphilis, hepatitis B and C, malaria and HIV. The units of blood tested for transfusion transmitted infections in 2008 and 2009 were 320 000 and 310 000, respectively.

Education and behaviour change communication activities are carried out throughout the country with multi-sectoral participation. STI prevention activities for most-at-risk populations are implemented by NGOs in collaboration with the national programme. NGOs carry out targeted interventions for female sex workers FSWs, MSM and PWID for risk reduction. Clients of sex workers, a hard to reach group is addressed at the STD clinic as it constitutes a large proportion of male STD clinic attendees. Ongoing peer educator led educational programmes on STIs/HIV/AIDS are being conducted in 34 prisons.

External migrants are educated on STIs and HIV by incorporating the topics to a 13-day pre-departure training programme. (In 2008, about 250 000 and in 2009 about 300 000 people migrated, of whom 50% were women going for unskilled labour.) In school, youth are reached through integration of STIs/HIV/AIDS to the national school curriculum. Out-of-school youth are reached through Youth Friendly Health Services (YFHS)

and the National Youth Services Council (NYSC). Currently, 50 YFHS centres are available in the country and NYSC has a network of centres spread throughout the country. Peer educator led HIV and STI prevention activities are carried out in the Sri Lankan army. There are 14 workplace-based HIV/STI prevention projects implemented by the private sector.

Standardized national guidelines

National guidelines are used to provide standardized care at all STD clinics. National guidelines on management of sexually transmitted infections (2000), Syndromic management of STIs (2001) and the Elimination of congenital syphilis (2009) are being followed at all STD clinics. The STI treatment for general practitioners (2005) was developed to assure standards of care in general practice.

Standard package of care

All symptomatic patients attending STD clinics receive a standard package of care, which includes treatment, health education and counselling for HIV testing and risk reduction, promotion and provision of condoms, and contact management. Patients diagnosed with gonorrhoea undergo a repeat culture (test of cure) after treatment in clinics where culture facilities are available. In all clinics patients treated for trichomoniasis undergo repeat wet smear. Serological follow up for syphilis is done at all STD clinics. At all STD clinics an experienced medical officer reviews records of all patients daily. Attempts are made to trace defaulters with positive test results and with active infections. If a pregnant woman with STI defaults on attendance, extra efforts are made to find her for treatment in view of the implications for the baby and the mother.

Effective defaulter tracing

Contact tracing is mainly based on the patient referral method. The provider referral method is not practically feasible and cost effective as information on sexual contacts are not readily given by the patients and even if they did, the information mostly was found to be incorrect. Therefore, the effectiveness of contact management is heavily influenced by the role played by the patients in directing their contacts to STD clinics. In each clinic public health staff is responsible for tracing contacts and defaulters when appropriate, educating about and promoting condoms to STD clinic attendees, and executing community outreach activities among the general population and most-at-risk groups.

Free condom distribution

Condoms are provided free of charge to all STD clinic attendees and NGOs carry out condom promotional activities. While condoms are freely available for purchase, stigma attached to condoms reduces its greater acceptance and usage in the population. Condoms are also available at a very low cost through public health staff at the field level where they promote the condom as a way of dual protection against HIV/STIs and pregnancy. In 2008 and 2009, 487 972 and 13 10 832 condoms, respectively were distributed by the NSCAP to STD clinics, NGOs and armed forces. The Family Health Bureau, which is the government institution implementing family planning services in Sri Lanka, has distributed 15 00 000 and 65 00 000 during 2008 and 2009, respectively.

Open referral system

Sri Lanka has a free and open referral system: i.e. a person with a STI related problem and their contacts can attend the STD clinic of their choice; availability of STI services in the private sector; and the presence of a good public and private health partnership (which also increases the accessibility to STD services). However, limited facilities for health education and counselling, condom promotion and partner management in the private sector is offset by availability of the option for referral to the state sector.

Large scale up of quality services

While services have been scaled up so that there is at least one STD clinic in a district, where patients may access services within a few hours, steps have also been taken to ensure the quality of care at each clinic. All staff at the STD clinics are trained at the central clinic before being appointed to the peripheral clinics. Further, the Post Graduate Institute of Medicine conducts Diploma in Venereology and MD in Venereology courses to train specialists in prevention and care of STI/HIV/AIDS. Quality assurance of laboratory services includes an internal quality assessment programme for STD clinics and an external quality assessment programme for the National Reference Laboratory.

Though the impact of each of the above public health preventive components cannot be calculated, the overall approach may have lead to successful control of STIs in Sri Lanka.

Thailand: Virtual Elimination of Perinatal HIV Transmission

Quick Facts

- First case reported in 1984
- Estimated number of PLHIV: 610 000
- Adult HIV prevalence: 1.4%
- HIV prevalence in most-at-risk population:
 - PWID: 35%
 - MSM: 6–25%
 - FSW: 3%



Unique Features

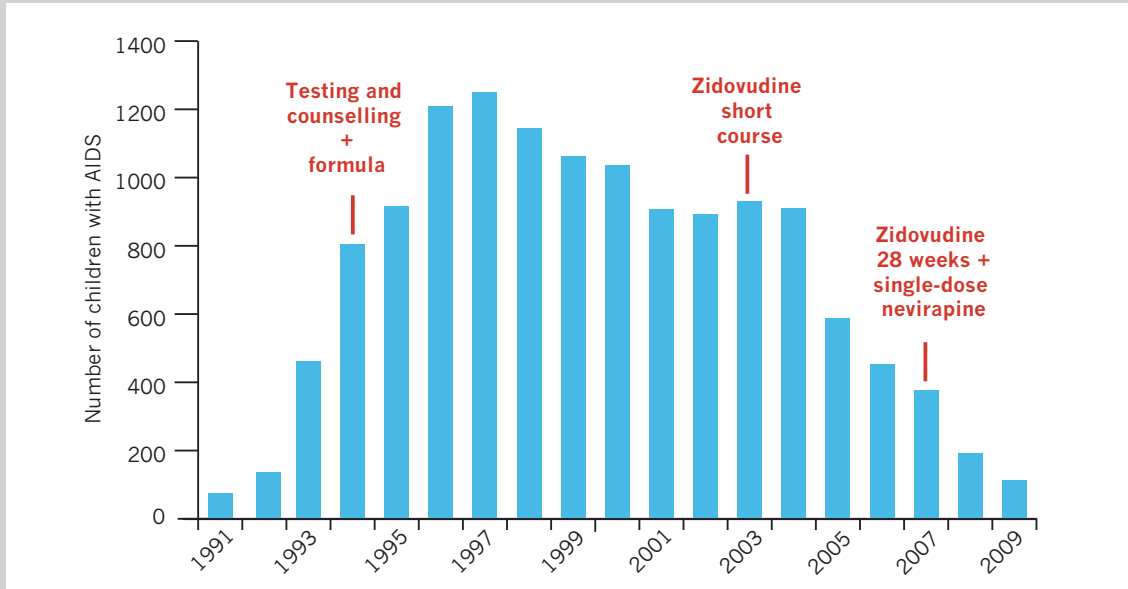
- Strong commitment and leadership
- Evidence-based programme development
- Strong infrastructure of antenatal care services and high coverage of institutional deliveries

With the dedication of public health workers around the country, a strong health infrastructure as well as the strong leadership and commitment of the Ministry of Public Health leaders, robust scientific evidence was turned into an effective HIV prevention programme that saved the lives of thousands of children in Thailand. Thailand was the first resource-limited country to integrate interventions for preventing mother-to-child HIV transmission into its existing strong antenatal care programme infrastructure in early 2000. The development of the prevention of mother-to-child transmission (PMTCT) programme included research to identify an appropriate and affordable antiretroviral regimen, field-testing

and implementation. The programme, since its implementation has led to reduction in perinatal HIV transmission rates, decrease in reported paediatric AIDS cases and has saved more than 20 000 children from HIV infection.

In the late 80s and early 90s, the HIV/AIDS epidemic emerged as a major problem in Thailand. The major mode of HIV transmission was heterosexual intercourse from most-at-risk female sex workers (FSWs) to their male clients and from male clients to the general female population. With this 'male-to-general female population' transmission, the number of women getting infected and consequently transmitting HIV to their children increased.

Fig. 37: Number of reported AIDS cases among children (0–4 years), Thailand, 1991–2009



Source: Bureau of Epidemiology, Department of Disease Control, Ministry of Public Health, Thailand.

The Ministry of Public Health (MOPH) tried to integrate HIV testing and counselling into the routine antenatal care services when it noticed an alarming increase in HIV infection among pregnant women in 1991. Nurses were trained and voluntary HIV testing and counselling units were set up in the MOPH hospitals. In these early years, no interventions were

available for pregnant women. HIV testing among pregnant women was mainly done to identify infected women so that strict precautions could be taken during labour. In 1993, the MOPH recommended that all HIV-infected women be discouraged from breastfeeding and allocated funds to purchase infant formula for all infants born to HIV-positive mothers.

The data from the Thai HIV sentinel surveillance showed that HIV prevalence among pregnant women who attend public antenatal clinics increased from 0% in December 1990 to 1.78% in June 1994 and peaked at 2.29% in 1995, resulting in a large number of children acquiring HIV infection perinatally.

Zidovudine trials: The major breakthrough in ‘prevention of mother-to-child HIV transmission’ occurred in 1994 when the results of the AIDS Clinical Trials Group (ACTG) Protocol 076 became available. The study demonstrated that, in the absence of breastfeeding, zidovudine (AZT) given orally during pregnancy, intravenously during labor, and orally to babies for 6 weeks, could lower the risk for perinatal HIV-1 transmission from 25.5% to 8.3%. This regimen was quickly adopted as the standard of care in the US and Western Europe and the use of perinatal antiretroviral drug prophylaxis has become the primary focus of strategies to prevent mother-to-child HIV transmission. However, because of the complexity and cost of the ACTG 076 regimen, it has not been implemented in Thailand. Instead, the MOPH collaborated in partnerships to plan and conduct two phase III clinical trials to study the efficacy of shorter courses of AZT. One of the short course AZT trials from Bangkok reported 50% efficacy compared to that of the placebo in a non-breastfeeding population in early 1998. The other study showed that the perinatal HIV transmission rates were 4.1% when using a longer course of AZT and 10.5% when using a shorter course of AZT.

In 1997, the MOPH decided to conduct a pilot project to assess programme feasibility, effectiveness, and acceptability to prevent mother-to-child HIV transmission in two regions (region 7 and region 10). In both regions, high proportions of pregnant women received voluntary counselling and testing for HIV and a short course AZT regimen were reported. The perinatal HIV transmission rates were low (7.7% and 9.6%) in both regions.

National implementation of PMTCT

In December 1999, the MOPH convened an expert panel to review existing data and develop national guidelines for preventing mother-to-child HIV transmission. In January 2000, the MOPH announced and began supporting nationwide integration of a PMTCT programme into the existing maternal-child health programme. The programme components included: (i) the establishment of confidential voluntary HIV testing and counselling units at all health care facilities; (ii) confidential voluntary HIV testing and counselling to all pregnant women; (iii) oral zidovudine (AZT) (300 mg twice a day) starting from 34 weeks' gestation until labour and 300 mg every three hours during labour to all HIV seropositive women; (iv) oral AZT syrup to all infants born to HIV seropositive women; (v) infant formula to substitute for breastfeeding until 12 months of age; (vi) HIV antibody testing to all children born to seropositive women at age of 12 months and 18 months; and (vii) proper medical care and treatment for mothers and children.

National antiretroviral regimen for PMTCT use in Thailand has been updated in 2004. Based on the results

from Perinatal HIV Prevention Trial 2 study, MOPH changed the recommendation of antiretroviral regimen to be as follows

Antenatal and intrapartum	300 mg AZT, 150 mg 3TC and 200 mg NVP twice per day starting at 28 weeks through delivery
ARV to infant	a single dose of 2 mg/kg NVP and 2 mg/kg AZT every 6 hours – for 1 week if the mother received antiretroviral medications more than 4 weeks or – for 6 weeks if the mother received antiretroviral medications less than 4 weeks

In 2004, the MOPH added an optional antiretroviral regimen for mothers who require treatment (i.e. mothers who have CD4 counts >200 cell/mm², or who have an AIDS defining condition). This treatment is the combination therapy as follows

Antenatal	300 mg AZT twice per day starting at 28 weeks
Intrapartum	300 mg AZT and 200 mg nevirapine (NVP) at the onset of labor and 300 mg AZT every 3 hours thereafter
ARV to infant	a single dose of 2 mg/kg NVP and 2 mg/kg AZT every 6 hours – for 1 week if the mother received AZT for more than 4 weeks or – for 6 weeks if the mother received AZT for less than 4 weeks

This year (2010), Thai MOPH has updated its national PMTCT guidelines to use triple drugs (AZT + 3TC + lopinavir/ritonavir (LPV/r)) among all HIV-infected pregnant women. The updated guidelines also included couple counselling in the prevention package to be offered to pregnant women.

The success in implementation of the PMTCT programme can be measured by routine programme monitoring indicators in the critical areas from antenatal care attendance rate, HIV testing and counselling rate, and coverage for prophylaxis and treatment. Currently, Thailand has achieved universal coverage for testing and counselling for all pregnant women and above 90% of women are receiving ARV prophylaxis and almost all the babies born to HIV-positive mothers are receiving ART. This has resulted in a reduction of perinatal HIV transmission rate to 3%.

In conclusion

Starting from research to identify an appropriate and affordable antiretroviral prophylaxis regimen for pregnant women, to field testing and implementing the programme to achieve universal coverage, Thailand has demonstrated strong leadership in combating perinatal HIV transmission saving lives of many children.

Timor-Leste: National PLHIV Network Shows the Way



Quick Facts

- First case reported in 2001
- Estimated number of PLHIV: <1000
- Adult HIV prevalence: 0.1%
- HIV prevalence in most-at-risk population:
 - MSM: 1.3%
 - FSW: 2.7%

Timor-Leste is still a low HIV prevalence country but there is recent evidence that sexual transmission outside the context of sex work and male-to-male sex (the traditional epicentres), is higher than predicted. The 2009 Sentinel Surveillance and Integrated Biological and Behavioural Surveillance showed that the HIV prevalence was 0.68% among pregnant women, 2.58% among sexually transmitted infections (STI) patients, 1.13% among TB patients, 2.76% among female sex workers (FSWs) and 1.33% among men who have sex with men (MSM). As of June 2010, 198 people, including 14 children under the age of five years, were confirmed HIV-positive with 83% living in the capital Dili; 47% of all HIV-positive cases are female.

Timor-Leste faces many challenges in confronting the threat of HIV and STIs such as stigma and discrimination; fast economic growth rates resulting in the emergence of a growing population group with significant disposable income; proximity to Indonesia which has a concentrated epidemic; illegal migration and cross-border exchange; and poor access to health care services.

Since 2005 Timor-Leste has successfully developed and implemented a national strategy to combat HIV/AIDS/STIs. Major progress has been made in prevention among most-at-risk populations (MARPs), access to antiretroviral therapy (ART) and STI management, implementation of an effective sentinel surveillance system, strong endorsement at the political level, and

Unique Features

- Evidence based responses
- Appropriate strategy and programming
- Involvement of the PLHIV in national response

effective partnership between the government and community sectors in programme implementation.

One of the unique features of the programme in Timor-Leste is that of *Estrela+*, a national network of positive people that has been actively assisting the Ministry of Health (MOH) in appropriately responding to the HIV epidemic. It currently has 59 active members from eight of the 13 districts in Timor-Leste. They are supported through a variety of channels, such as the Ministry of Health, and the Ministry of Social Solidarity and Progressio (an international agency providing development advisors). *Estrela+* has recently undertaken the process for formal registration with the Ministry of Justice.

The actions of *Estrela+* are assisting the country in responding appropriately to HIV. *Estrela+* has recently established an HIV Networking Group that includes health personnel involved in treatment at the National Hospital. Several members of *Estrela+* have attended testing and counselling training and are focused on providing pre- and post-test counselling for people attending HIV services and follow up counselling to individuals and families. Members of *Estrela+* helped facilitate an advocacy workshop along with a local NGO, Fundasoun Timor Harii and the Scarlet Alliance.

In Timor-Leste, overall there is broad consensus on the basic principles of partnership, evidence based responses and a human rights

approach across sectors in relation to strategy and programming. There are few nations in the world that could have been expected to have maintained as strong a focus on programme implementation as has occurred given the country's social and political upheavals. Timor-Leste has a National HIV and STI Strategy 2011–2016 in place that provides a clear direction for ensuring alignment and harmonization of funding from different sources to maximize its effectiveness and efficiency. With commitment from all partners Timor-Leste is well placed to strengthen the existing response to HIV, meet new challenges and achieve the goals of minimizing HIV transmission in Timor-Leste, and ensure high quality of treatment and care for PLHIV.

Story of Estrela+

In 2003, Maria¹, now aged 35, tested positive for HIV, as did her husband and eventually one of her children. In 2000, Antonio¹, 32 years of age, also positive for HIV. He did not believe his initial test results so he took another HIV test in 2006, which again came back with a positive result. He had been in Indonesia at the university when he tested positive and is not sure if it was the result of injecting drugs or from unprotected sex. But, according to him, it does not matter now; the result is still the same.

Maria and her husband felt isolated and alone; they were the first few diagnosed with HIV in the country. Through connections with local NGOs working on HIV, such as Timor Aid and Church World Services, they were introduced to a few other Timorese who were also HIV-positive. They decided that they needed to establish a support group for people like them and in 2004 “Esperanca” was born. Esperanca means ‘hope’ in Portuguese. The group was officially established as *Estrela+* in 2009.

Estrela+ has overcome many challenges since its initiation but at the same time many opportunities have also come their way. In August 2009, two members were invited to attend the International Congress on AIDS in Asia and the Pacific in Bali. They were able to connect with members of Bali Plus and other HIV positive networks. Additionally, in July 2010, two members were provided with scholarships to attend the International AIDS Conference in Vienna. One member of the group has been selected to be a permanent member of APN+, the Asia Pacific Network of people living with HIV/AIDS, and participates in regional meetings.

Although they still envision a long and bumpy road ahead, Maria and Jose are proud of their efforts to bring HIV to the forefront in Timor-Leste. Antonio, as the first PLHIV to disclose his status publicly, feels empowered and relieved to finally be able to stand up proud and not be afraid.

¹ Not her/his real name

Challenges and Future Directions

Countries in the South-East Asia Region have made substantial progress in their response to the HIV epidemic in the past decade resulting in a slow decline in new HIV infections. Still, much remains to be done. An estimated 220 000 individuals were newly infected with HIV in 2009. HIV transmission rates remain unacceptably high among populations engaging in high-risk behaviours, namely sex workers, men who have sex with men and people who inject drugs. Two of three HIV-infected pregnant women do not receive prophylactic antiretrovirals resulting in a large number of children being born with HIV each year. The majority of the HIV-infected people are unaware of their HIV status and more than half do not receive treatment. Addressing these issues will require overcoming many challenges.

Key Challenges

Stigma and Discrimination

HIV prevention and control efforts are being undermined by HIV associated stigma in communities and discriminatory practices in health care settings. 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 are illegal in most countries. The men who have sex with men population remains largely hidden due to criminal

sanctions against this group in many countries. The transgender population is highly vulnerable to HIV; it is one of the most discriminated and stigmatized populations. Although there is government support in Member countries to engage with and provide services to these marginalized populations, the law enforcement agencies are often not adequately sensitized resulting in poor access to health services.

Weak Health Systems

While effective interventions for the prevention and control of HIV have been successfully implemented in some areas in the Region, these could not achieve the level of coverage needed to make an impact because of weak health systems. There has been acknowledgement for the need to strengthen health systems, but in reality little progress has been made. The current weaknesses and gaps in the health system are largely due to underinvestment in health systems. District and subdistrict health facilities usually lack adequate equipments and commodities and referral mechanisms are usually nonexistent.

Insufficient Health Workforce

There continues to be a shortage of skilled staff in the majority of Member countries with many health facilities having vacant positions. National and subnational HIV control programmes face enormous challenges in recruiting skilled and

“ Stigma and discrimination in communities and health care settings are undermining HIV prevention and control efforts. ”

competent staff due to inadequate incentives. Motivating and retaining good staff is equally challenging. Moreover, unfilled staff positions, constant transfers and frequent change of leadership due to the changing political environment, undermines the implementation capacity of national and subnational HIV control 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 HIV programmes.

High Prices of Antiretroviral Drugs

Although the price of first-line antiretrovirals has dropped considerably over the years, these drugs continue to be unaffordable to the governments. There are also large variations in drug prices among countries in the Region. The revision of WHO global antiretroviral treatment guidelines in 2010, would lead to a substantial increase in the number of PLHIV needing treatment; and this will proportionately increase country expenditures for first-line drugs. Second-line treatment prices are very high, which presents a significant challenge for universal access because people currently on first-line treatment would progress on to second-line treatment. The prices of laboratory diagnostics and supplies also need to be reduced, to lower the financial burden of countries as more people start accessing HIV/AIDS treatment and care.

Data Gaps in Interventions for Most-at-Risk Populations

While the Member countries of the Region in recent years generated lots

of data, as a result of expanded information systems, vital information on most-at-risk populations (men who have sex with men, transgender persons, and clients of sex workers including migrants) is still inadequate. Surveillance sites for most-at-risk populations are not enough in number to capture the geographic diversity of the epidemics and data on HIV services is usually incomplete and untimely. Very little investment has been made on operational research to scale up interventions and a gap exists in synthesis and analyses of data leading to underutilization of available information for policy and programmatic reforms and improvements. In general, staff and resources dedicated to HIV information systems are limited; and available staff have limited training in surveillance, monitoring and evaluation as well as research.

Lack of Sustainable Financing

In most Member countries in the Region government funding of HIV programmes is too low to develop a scaled-up response to the HIV epidemic. Sustainable financing strategies are essential to enable countries to develop and implement long term responses to the epidemic. Heavy reliance on international funding is very common with many countries dependent on donor funds for implementing even essential services, such as blood safety. It is important to understand that donor funds are of limited duration and have unpredictable continuity. Also, though they 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. Expansion of interventions and service coverage cannot be scaled-up to the extent required to meet universal access and the

Millennium Development Goals, unless there are substantial increases in domestic and international funding.

Future Directions

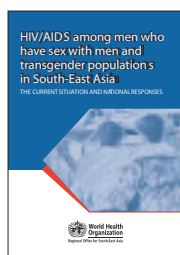
Given the setting of a concentrated epidemic and the above listed challenges, critical priorities for countries and development partners in the coming years are listed below.

1. Reducing HIV transmission among populations with the highest transmission of HIV, i.e. sex workers and their clients, men who have sex with men, the transgender population and people who inject drugs.
2. Removing barriers to access to health services for most-at-risk populations by repealing discriminatory laws and reducing stigma in communities and health settings.
3. Reducing perinatal HIV transmission by increasing access to prevention of mother-to-child transmission services for pregnant women. Integrating HIV services with related services such as maternal and reproductive health services to achieve high coverage of programmes for preventing mother-to-child transmission.
4. Ensuring timely access to treatment by effective linkages between testing, counselling and treatment centres.
5. Continuing advocacy for reduced prices of antiretroviral drugs.
6. Improving the quality of antiretroviral treatment while improving access. Ensuring adherence support and close monitoring to “slow” the development of HIV drug resistance.
7. Investing in building health systems and human resources to increase the implementation capacity for scaling-up HIV interventions. Integrating effective supervision and better management of HIV programmes into strong health systems.
8. Decentralizing HIV testing and counselling services to enable more people to know their status.
9. Filling in information gaps by building epidemiologic capacity (both institutional and human) within countries, to carry out relevant surveillance, monitoring and research activities. Undertaking research on priority topics to achieve targets for universal access to HIV prevention, care and treatment.

Annex

Selected New WHO Publications in 2010

WHO-SEARO publications



HIV/AIDS among men who have sex with men and transgender populations in South-East Asia: The current situation and national responses

There are an estimated 4–5 million men who have sex with men; among the transgender population, the number is less clear. Many of them are involved in high-risk sexual behaviours that put them at risk for HIV infection, resulting in a high and increasing HIV prevalence in several countries of the Region. Control of HIV infections among these populations is an urgent public health priority. The countries reviewed are Bangladesh, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand and Timor-Leste. This report highlights the need for improved advocacy efforts and a greater national response to save the lives of these populations who are at risk for HIV infection.



Report on people who inject drugs in the South-East Asia Region

This report highlights the need to advocate for greater efforts and resources to be channelled into harm reduction interventions in the South-East Asia Region. The report reviews the national responses of Bangladesh, India, Indonesia, Maldives, Myanmar, Nepal and Thailand in terms of efforts to reduce the HIV prevalence among people who inject drugs. Data show that such harm reduction measures have a limited reach and are not sufficiently scaled up to match the size of the problem in the Region.



A strategy to halt and reverse the HIV epidemic among people who inject drugs in Asia and the Pacific 2010–2015

This document is a road map to ensure that the HIV and hepatitis epidemics among people who use drugs and their sexual partners in the Asia Pacific region will be halted. The strategy is designed to formulate a regional framework, identify issues and priorities and provide guidance to countries in the Region for developing national strategic responses over the next six years. It shows the important link between halting the HIV epidemic and health and development, and will help countries achieve United Nations Millennium Development Goal 6.



Priority HIV and sexual health interventions in the health sector for men who have sex with men and transgender people in the Asia-Pacific Region

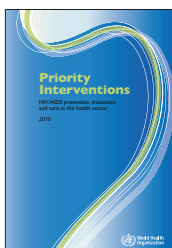
This publication is meant for public health decision-makers, national AIDS programme managers, health-care providers, managers of community-based organizations, civil society, people living with and affected by HIV and international development partners. It identifies the priority interventions required by the health sector to meet the HIV and sexual health needs of men who have sex with men and transgenders. This document highlights how national health sector partners can strengthen their response to HIV among men who have sex with men and transgenders.



Toolkit for monitoring and evaluation of interventions for sex workers

This toolkit aims to demonstrate how a small number of recommended indicators can provide critical information to guide interventions. These tools can be used at different levels of management to track the progress of a programme and focus efforts on achieving targets. Special attention is paid to how data can be used by on-site managers to help them make periodic decisions. The intended audience for this toolkit includes project directors or project managers of sites, monitoring and evaluation officers from nongovernmental organizations, state/provincial health officers and national monitoring and evaluation officers.

WHO-Headquarters publications



Priority interventions: HIV/AIDS prevention, treatment and care in the health sector

This document brings together key WHO guidance and references for the health sector response to HIV/AIDS. The complete set of WHO-recommended priority health sector interventions is described to strengthen an effective and comprehensive health sector response to HIV/AIDS. In addition, it summarizes key policy and technical recommendations developed by WHO and its partners; guides the selection and prioritization of interventions for HIV prevention, treatment and care; directs leaders to key WHO resources and references containing the best available information on the overall health sector response to HIV/AIDS and on the priority health sector interventions with the aim of promoting and supporting rational decision-making in designing and delivering HIV-related services.



2010 Guidelines: Antiretroviral treatment for HIV infection in adults and adolescents

These Guidelines are a revision of the 2006 guidelines and present significant evidence and experience on when to initiate ART and what drug regimens to use. WHO's new guidance on ART for adults and adolescents provides evidence that rates of death, morbidity and HIV and TB transmission are all reduced by starting treatment earlier. The 2010 guidelines recommend: Earlier diagnosis and treatment of HIV in the interest of a prolonged and healthier life; greater use of more patient-friendly treatment regimens; and expanded laboratory testing to improve the quality of HIV treatment and care while recognizing that access to laboratory tests should not be a prerequisite for treatment.



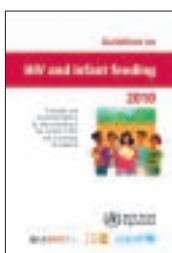
2010 Guidelines: Antiretroviral drugs for treating pregnant women and preventing HIV infections in infants

These new WHO guidelines on PMTCT and infant feeding practices provide the basis for more effective PMTCT interventions in resource-limited settings, and eliminate the number of new paediatric HIV infections. For the first time, the eradication of mother-to-child transmission of HIV (MTCT) is considered a realistic public health goal. The Guidelines recommend earlier antiretroviral therapy (ART) for a larger group of HIV-positive pregnant women, longer provision of antiretroviral (ARV) prophylaxis for HIV-positive pregnant women, and provision of ARV prophylaxis to the mother or child to reduce the risk of HIV transmission during the breastfeeding period. For the first time, WHO also recommends ARVs while breastfeeding.



Antiretroviral therapy for HIV infection in infants and children: Towards universal access. Recommendations for a public health approach: 2010 revision

These guidelines address the diagnosis of HIV infection and consider ART in different situations, e.g. where infants and children are coinfecting with HIV and TB, or have been exposed to ARVs, either for PMTCT or because of breastfeeding from an HIV-infected mother on ART. These guidelines also address the importance of nutrition in the HIV-infected child and of recognizing the severity of malnutrition, especially in relation to the provision of ART. A section on ART in adolescents briefly outlines key issues related to treatment and care for this age group. This publication is intended for treatment advisory boards, national AIDS programme managers and other senior policy-makers who are involved in the planning of national and international HIV care strategies for infants and children in resource-limited countries.



Guidelines on HIV and infant feeding 2010: Principles and recommendations for infant feeding in the context of HIV and a summary of evidence

The 2010 recommendations are consistent with the previous guidance, i.e. they recognize the important impact of ARVs during the breastfeeding period, and recommend that national authorities in each country decide which infant feeding practice should be promoted. Where national authorities promote breastfeeding and ARVs, mothers known to be HIV-infected are now recommended to breastfeed their infants until at least 12 months of age. Guidance is given on what to do in case of a delay in ARV roll-out.



WHO recommendations on the diagnosis of HIV infection in infants and children

To enable antiretroviral (ARV) prophylaxis to be given to infants as soon as possible after birth, all infants should have their HIV exposure status known at birth. As not all mothers are given HIV tests, very few HIV-exposed infants are identified and very few infants are known to be gaining access to early diagnosis, the necessary prerequisite to ‘timely’ initiation of antiretroviral therapy (ART). Currently, only an estimated 15% of HIV-exposed infants needing testing are tested in the first two months of life.

Recently published data confirming dramatic survival benefits for infants started on ART as early as possible after the diagnosis of HIV, prompted a review of the WHO paediatric treatment guidelines.



Policy requirements for HIV and counselling of infants and young children in health facilities

Many opportunities to diagnose HIV infection in infants and children are missed within the health system, such as at facilities providing services for antenatal care, prevention of mother-to-child transmission (PMTCT) of HIV, immunization, nutrition, inpatient admissions and within programmes for other vulnerable children. Very few HIV-infected infants are started on antiretroviral therapy, and those who do receive it, are started when they are already very sick, largely due to a delay in HIV testing. This policy brief advocates expanded access to HIV testing and counselling for infants and children and presents ways to address the unique challenges for policy-makers, programme managers and health-care providers. The brief aims to outline key issues that should be addressed within national policy guidance to support country programming. It is designed to be used by country programmes and technical working groups for developing policy and practice guidelines relevant to HIV testing for children.



PMTCT strategic vision 2010-2015: Preventing mother-to-child transmission of HIV to reach the UNGASS and Millennium Development Goals

This publication elaborates WHO’s ongoing commitment to the United Nations General Assembly Special Session (UNGASS) goals and global and country support to scale up access to prevention of mother-to-child transmission (PMTCT) of HIV services and integrate these services to maternal, newborn and child health programmes. The objective is strengthening of support for PMTCT within the context of the Millennium Development Goals (MDGs) and reflects an important part of WHO’s health sector response to HIV/AIDS and will contribute directly to the new Outcome framework of the Joint United Nations Programme on HIV/AIDS (UNAIDS).



Delivering HIV test results and messages for re-testing and counselling in adults

This new WHO publication complements the WHO/UNAIDS Guidance on provider-initiated HIV testing and counselling in health facilities. The document states that re-testing should be recommended to people with ongoing risk of HIV infection and to those who recall an incident of risk in the previous three months. The document aims to help HIV policy-makers, programme and site managers, trainers, and testing and counselling providers in all settings to detect HIV earlier among people with recent exposure to, or ongoing risk for HIV; it will promote earlier referral of HIV-positive people to prevention, care, treatment, including PMTCT services.



Priority research questions for TB/HIV in HIV-prevalent and resource-limited settings

This publication presents priority questions, which reflect a wide range of research needs in basic, epidemiology, clinical, and operational research. Concomitant to increasing the scientific interest of the research community towards these questions, enhancing fund allocation by national governments of resource constrained settings is very crucial. It is believed the priority research questions identified in this document would provide guidance on what needs urgent scientific interest and funding to address the dual TB and HIV epidemic.



**Asking the right questions: advancing an HIV research agenda for women and children
Consensus statement**

This comprehensive research agenda, released by WHO and partners, can help significantly advance global responses to HIV among women, girls and children. It includes 20 specific recommendations to expand upon and improve responses to the HIV-related challenges facing women and children worldwide.

It focuses on key gaps in clinical and programmatic knowledge that hinder access to effective HIV prevention, treatment and care for women and children, and was released to coincide with International Women's Day.



**Guidelines for using HIV testing technologies in surveillance: selection, evaluation and
implementation: UNAIDS/WHO working group on global HIV/AIDS/STI surveillance**

Serosurveillance is an important component of most HIV surveillance activities and an understanding of current HIV testing technologies is important. These technical guidelines are for HIV surveillance coordinators and other health professionals involved in HIV testing for surveillance purposes in developing countries. They are part of a series of operational guidelines for second generation HIV surveillance systems. The guidelines describe the specimens used in HIV testing, testing strategies in surveillance, selection and evaluation of HIV testing technologies, and laboratory quality assurance and safety.

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Tables

Table A1: Population by age and sex, South-East Asia Region, 2010

	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	164 425 000	50 759 000	25 829 000	24 931 000	113 664 000	57 304 000	56 360 000
Bhutan	708 000	211 000	107 000	104 000	497 000	267 000	230 000
DPR Korea	23 991 000	5 076 000	2 600 000	2 475 000	18 914 000	9 250 000	9 664 000
India	1214 464 000	374 159 000	195 067 000	179 093 000	840 306 000	432 134 000	408 173 000
Indonesia	232 517 000	62 029 000	31 596 000	30 434 000	170 488 000	84 466 000	86 021 000
Maldives	314 000	85 000	43 000	42 000	228 000	115 000	115 000
Myanmar	50 496 000	13 410 000	6 737 000	6 674 000	37 084 000	17 921 000	19 165 000
Nepal	29 853 000	10 711 000	5 498 000	5 213 000	19 141 000	9 328 000	9 815 000
Sri Lanka	20 410 000	4 956 000	2 525 000	2 432 000	15 455 000	7 518 000	7 936 000
Thailand	68 139 000	14 629 000	7 475 000	7 153 000	53 510 000	26 027 000	27 486 000
Timor-Leste	1 171 000	524 000	268 000	255 000	646 000	328 000	320 000
Total	1806 488 000	536 549 000	277 745 000	258 806 000	1269 933 000	644 658 000	625 285 000

Source: United Nations, Department of Economic and Social Affairs, Population Division, 2010.

Table A2: Selected socio-economic indicators, South-East Asia Region, 2010

	Population in urban areas 2010	Adult literacy rate (% aged 15 and above) (2005–2008) ^a	Gross national income per capita (PPP 2008, US\$)	Human Development Index (rank)
Bangladesh	28%	55	1 587	129
Bhutan	35%	53	5 607	NA
DPR Korea	60%	NA	NA	NA
India	30%	63	3 337	119
Indonesia	44%	92	3 957	108
Maldives	40%	98	5 408	107
Myanmar	34%	92	1 596	132
Nepal	19%	58	1 201	138
Sri Lanka	14%	91	4 886	91
Thailand	34%	94	8 001	92
Timor-Leste	28%	NA	5 303	120

Source: Human Development Report, 2010.

^a Data refers to the most recent year available during the period specified.
NA=not available

Table A3: Selected health infrastructure indicators, South-East Asia Region, 2009

	Number of administrative units		Number of health facilities			Per capita expenditure on health (US\$) ^a	Government expenditure on health as % of total government expenditure ^a
	Regions/Provinces/States	Districts of local administrative units	Public	Private	Total		
Bangladesh	6	64	1 967	3 194	5 161	42	8.0%
Bhutan	–	20	201	–	201	188	10.7%
DPR Korea	NA	NA	NA	NA	NA	NA	NA
India	35	625	10 937	NA	10 937	109	3.7%
Indonesia	33	496	9 467	638	10 105	81	6.2%
Maldives	20	20	194	1	195	514	10.5%
Myanmar	17	325	9 956	56	10 012	21	0.9%
Nepal	5	75	355	381	736	53	10.9%
Sri Lanka	9	25	615	161	776	179	8.5%
Thailand	76	1 057	1 033	328	1 361	286	13.1%
Timor-Leste	–	13	251	4	255	116	14.9%

^a World Health Statistics, 2010, WHO, 2007.

Source: Universal access country reports, 2009.

NA=not available

Table A4: Status of harm reduction interventions, South-East Asia Region, 2009

	Estimated number of PWID	Number of needle-syringe programme sites per	Number of syringes/needles distributed	Number of syringes/needles per PWID per year	Number of OST sites	Number of PWID currently enrolled on OST	Number of PWID currently enrolled on buprenorphine
Bangladesh	40 000	106	6 455 434	161	0	108	NA
Bhutan	NA	NA	NA	NA	NA	NA	NA
DPR Korea	NA	NA	NA	NA	NA	NA	NA
India	186 000	270	15 058 212	81	50	4 800	4 800
Indonesia	105 800	242	1 825 557	8.3	49	4000–5000	2000–3000
Maldives	1 000	–	–	–	1	32	–
Myanmar	75 000	41	5 032 156	67	6	1000	–
Nepal	28 500	41	1 513 941	53	3	432	175
Sri Lanka	800	NA	NA	NA	NA	NA	NA
Thailand	40 000	39	87 084	NA	147	2 200	NA
Timor-Leste	NA	–	–	–	–	–	–

Source: Universal access country reports, 2009.

PWID=people who inject drugs; OST=opioid substitution therapy; NA=not available

Table A5: Availability of testing and counselling services, South-East Asia Region, 2009

Country	Number of tests	Population (15 years plus)	Number of tests per 1000 adult population	Total Number of facilities for T&C	Number of facilities per 100 000 adult population
Bangladesh	26 278	113 664 000	0.2	105	0.09
Bhutan	NA	497 000	NA	NA	NA
DPR Korea	NA	18 914 000	NA	NA	NA
India	13 494 372	840 306 000	16.1	5 089	0.61
Indonesia	160 765	170 488 000	0.9	565	0.33
Maldives	374	228 000	1.6	8	3.51
Myanmar	270 301	37 084 000	7.3	350	0.94
Nepal	59 609	19 141 000	3.1	179	0.94
Sri Lanka	NA	15 455 000	NA	47	0.30
Thailand	1 099 657	53 510 000	20.6	1 014	1.89
Timor-Leste	–	646 000	NA	NA	NA

Source: Universal access country reports, 2009.

Table A6: Interventions to reduce the risk of HIV transmission from mother to child, South-East Asia Region, 2009

Country	Number of pregnant women who were tested	Percentage of pregnant women tested for HIV	Number of HIV-infected pregnant women receiving ART	Estimated number of HIV-infected pregnant women	% HIV-infected pregnant women who received ART
Bangladesh	91	<1%	7	103	NA
Bhutan	NA	NA	19	50	38%
DPR Korea	NA	NA	NA	NA	NA
India	5 717 819	21%	11 319	33 597	34%
Indonesia	10 026	0.5%	196	2 561	8%
Maldives	3 911	67%	–	–	–
Myanmar	1 82 760	18%	2 398	3 675	65%
Nepal	65 791	9%	56	1 233	5%
Sri Lanka	13 475	4%	4	61	7%
Thailand	7 97 047	82%	5 457	6 471	84%
Timor-Leste	71	<1%	–	NA	–

Source: *Universal access country reports, 2009; Universal Access Report, Geneva, 2009.*
 ANC=antenatal clinic; ART=antiretroviral treatment; NA=not available

Table A7: Reported number of people receiving antiretroviral treatment, South-East Asia Region, 2009

Country	Number of adults and children with advanced HIV infection who are currently receiving ART				% of PLHIV on ART		% of children living with HIV on ART	
	Total	Adult male	Adult female	Children	Based on CD4 200	Based on CD4 350	Low estimate	High estimate
Bangladesh	353	–	–	6	40%	23%	6%	16%
Bhutan	21	14	16	1	26%	14%	8%	33%
DPR Korea	NA	NA	NA	NA	NA	NA	NA	NA
India	320 074	168 598	115 036	17 952	41%	26%	24%	59%
Indonesia	15 442	7 934	2 682	356	34%	21%	14%	48%
Maldives	3	3	–	–	28%	17%	–	–
Myanmar	21 138	11 987	9 151	1 535	28%	18%	32%	83%
Nepal	3 226	1 928	1 298	178	17%	11%	7%	23%
Sri Lanka	207	120	87	11	33%	20%	34%	92%
Thailand	216 118	–	–	8 076	76%	61%	73%	>95%
Timor-Leste	31	15	16	3	NA	NA	NA	NA

Source: *Universal access country reports, 2009.*
 PLHIV=people living with HIV; NA=not available

Data Notes

The results presented in this report are primarily based on national surveillance and progress reports of the national AIDS programmes of the Member countries. Survey results based on inadequate sample size (as per national protocols) were excluded. Trends in HIV prevalence and risk behaviours were presented based on data from consistent (continuing) sites.

Surveillance data presented by national AIDS programmes are subject to important limitations. First, the geographic coverage of biological and behavioural surveillance for most-at-risk populations is limited to a few large cities or major urban areas. Given the large size of countries in the Region and the epidemiologic diversity, a few surveys in the large urban areas may not be representative of the national situation. Despite the limitations, these surveys are useful in assessing trends in HIV prevalence in different population groups. Second, data on risky behaviors 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. Thirdly, 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.

This progress report presents the current status of HIV/AIDS in the South-East Asia Region based on latest surveillance and programme data reported by Member countries. The report highlights the progress made in prevention and control of HIV in the Region and lists challenges and future priorities. Unique programmatic achievements of each Member country are elaborated under the Country Best Practices section. The information in this report would be useful to a wide audience including HIV programme managers in the Region and around the world, donors, policy makers as well as researchers in the field of HIV/AIDS.