HIV/AIDS UPDATE
SAARC REGION

2010

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Foreword

HIV epidemic is the single major reversal in human development in modern history. In most heavily affected countries, HIV has drastically reduced life expectancy even by more than 20 years. The estimated number of persons living with HIV in the world in 2009 was 33.3 million [31.4 million –35.3 million]. The highest burden was in Sub Saharan Africa [68%] followed by South and South East Asia.

The global HIV epidemic has emerged as a formidable challenge to public health and development of the SAARC Region too. SAARC Region has an estimated 2.45 million People Living with HIV/AIDS [PLHA] and India alone bears an estimated 2.27 million of that. HIV epidemic in the SAARC Region is a collection of different epidemics in Member States with their own characteristics and dynamics. The diversity existing in the region needs to be fully addressed and defined, in order to achieve the success in prevention and control activities.

The SAARC TB and HIV/AIDS Centre (STAC) in Kathmandu, Nepal has been coordinating the national efforts of Member States in combating HIV/AIDS epidemic. Along with the other regular activities, STAC brings out reports and publications regularly in order to disseminate information related to TB and HIV/AIDS.

SAARC HIV/AIDS Report – 2010 incorporates updated information on HIV/AIDS as of December 2009. It includes general information on HIV/AIDS and describes global & regional situation as of 2008 -2009. I hope that the information given in this report will help the SAARC Member States and the stakeholders who are engaged in the field of HIV/AIDS prevention and control in the region.

STAC is grateful to SAARC Member States for their cooperation and support extended in providing relevant information timely to compile this report in time.

STAC acknowledges with thanks the effort rendered by the Professionals and the support given by the General Services Staff of the centre for preparation of this report.

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Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
ART	Anti Retroviral Therapy
BCC	Behavior Change Communication
BSS	Behavioral Surveillance Surveys
CPT	Cotrimoxazole Prophylaxis Therapy
CSW	Commercial Sex Worker
CVM	Condom Vending Machines
DNA	Deoxyribonucleic Acid
DOTS	Directly Observed treatment Short course
ICRC	International committee of red cross
FSW	Female Sex Worker
HAART	Highly Active Antiretroviral Therapy
HIV	Human Immunodeficiency Virus
ICTC	Integrated Counseling Treatment center
IDU	Injecting Drug User
M/F	Male/Female
MSM	Man having Sex with Man
MSW	Male Sex Worker
MTCT	Mother to Child Transmission
NACO	National AIDS Control Organization
NACP	National AIDS Control Programme
NASP	National AIDS STD Programme
NCASC	National Center for AIDS and STD control
NSACP	National STD and AIDS Control Programme
NGO	Non Governmental Organization
NTP	National TB Programme
PITC	Provider initiated Testing and counseling
PLWH	People Living with HIV
PMTCT	Prevention of Mother to Child transmission
RNTCP	Revised National Tuberculosis Control Programme
SAARC	South Asian Association for Regional Cooperation
STAC	SAARC TB and HIV/AIDS Centre
STD	Sexually Transmitted Diseases
STI	Sexually Transmitted Infection
TB	Tuberculosis
UN	United Nations
UNAIDS	United Nation's Programme for AIDS
USA	United States of America
VCT	Voluntary counseling and Testing
WB	World Bank
WHO	World Health Organization

Chapter 1

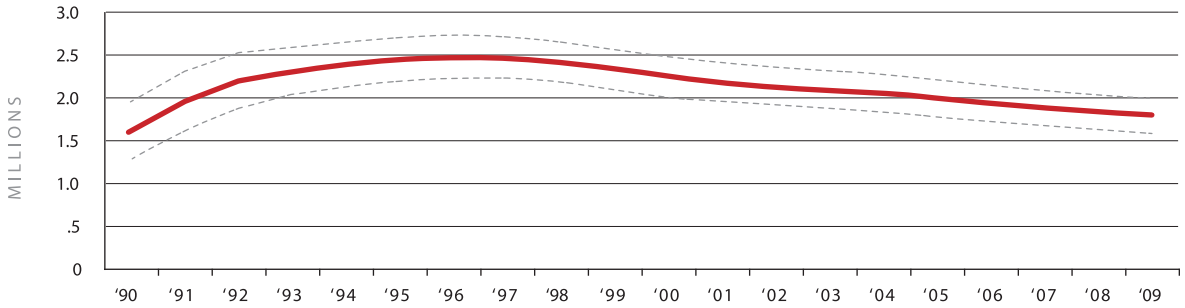
Global and SAARC Situation of HIV and AIDS

1.1 Global Situation of HIV Epidemic

The The global HIV epidemic has emerged as a formidable challenge to public health, development and human rights. In most heavily affected countries, HIV has drastically reduced life expectancy even by more than 20 years. The recent stabilization of the global epidemic can not obscure its most important aspect, the profound human toll. Since the beginning of the epidemic, approximately 25 million people have lost their lives due to HIV related causes. These deaths mean an incalculable loss of human potential and each individual death is associated with enduring trauma for the community, particularly for the loved ones in the individual households. Therefore, HIV/AIDS causes significant but less quantifiable emotional and psychological costs at individual and household levels.

The estimated number of persons living with HIV in the world in 2009 was 33.3 million (31.4 million –35.3 million). The highest burden was in Sub Saharan Africa, as it accounted for 68% of HIV infections worldwide. South and South East Asia is second only to sub-Saharan Africa in terms of the number of people living with HIV. More than 95% of people living with HIV/AIDS were in low and middle income countries. An estimated number of 2.6 million (2.3 million – 2.8 million) uninfected persons became infected with the virus during the year 2009. Of which, over two third (69%) occurred in Sub-Saharan Africa. Figure 01 illustrates the number of people newly infected with HIV (1990-2009).

Figure 01: Number of People newly infected with HIV



(Source: UNAIDS, AIDS Epidemic Update 2009)

In the year 2009, slightly less than 52% of the global estimates of HIV/AIDS, was among women. An estimated 15.9 million (14.9 million –17.2 million) women were living with HIV in 2009 and the figure was 2.1 million more than that of 2001 (13.8 million). Globally, the spread of HIV appears to have peaked in 1997 with estimated number of 3.2 million (3.0 – 3.5 million) new infections. In 2009, the estimated number of new infections 2.6 Million (2.3 Million-2.8 Million) was lower than that of the epidemic's peak in 1997. Of the estimate 15 Million people living with HIV in low and middle income countries who need treatment, 5.2 million have access-translating in to fewer AIDS related deaths

The AIDS related deaths are decreasing. It is estimated that 1.8 million (1.6 – 2.1 million) deaths due to AIDS related causes occurred globally in 2009. Of which, (72%) occurred in sub-Saharan Africa. The number of annual AIDS related deaths peaked in 2004 with an estimated mortality of 2.1 million (1.9 million-2.3 million). The estimated numbers of deaths among HIV infected under 15 children were 260,000 (150,000 – 360,000).

Worldwide, the number of children living with HIV increased from 1.5 million (1.3–1.9 million) in 2001 to 2.5 million (1.7 million –3.4 million) in 2009. However, the estimated new infections among children declined from 460 000 (420 000–510 000) in 2001 to 370,000 (230,000– 510,000) in 2009. Figures 02, 03, 04, 05, indicate the Global HIV Trends (1990-2009).

Figure 02: Number of people living with HIV

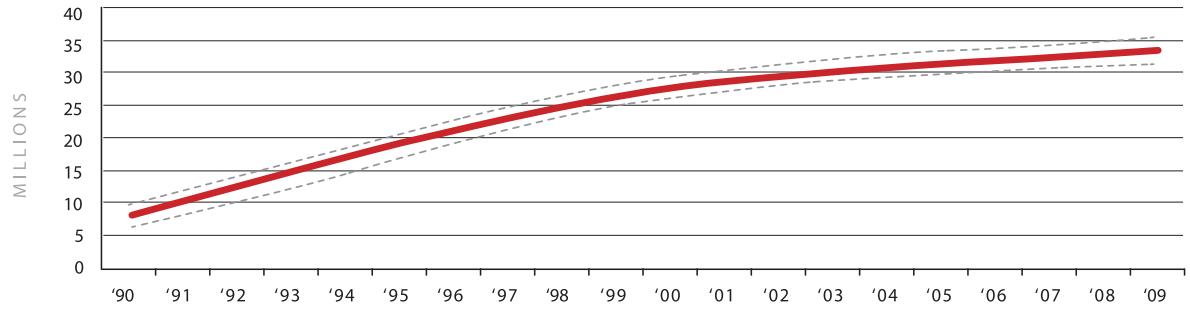


Figure 03: Number of children living with HIV

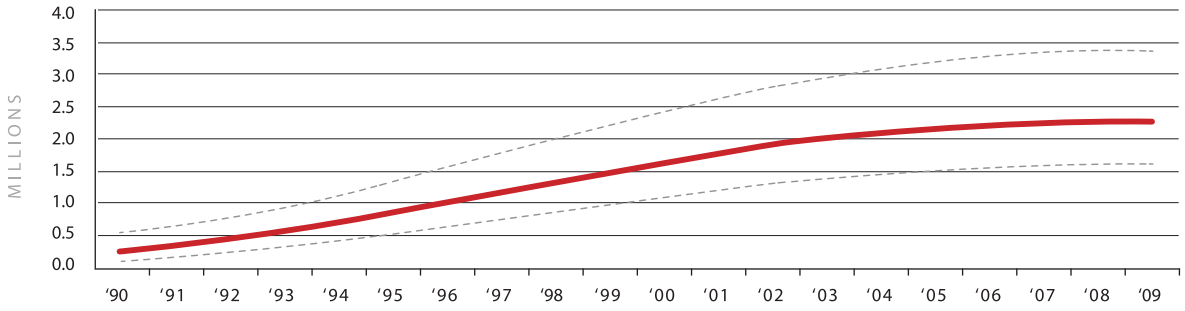


Figure 04: Adult and child death due to AIDS

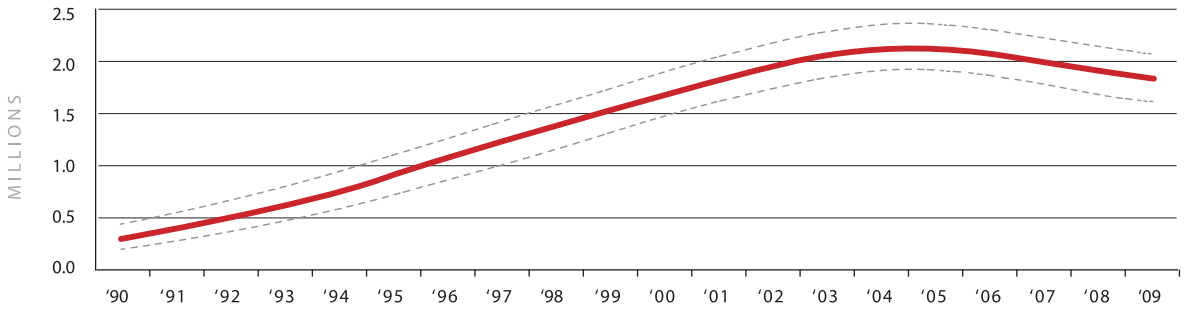
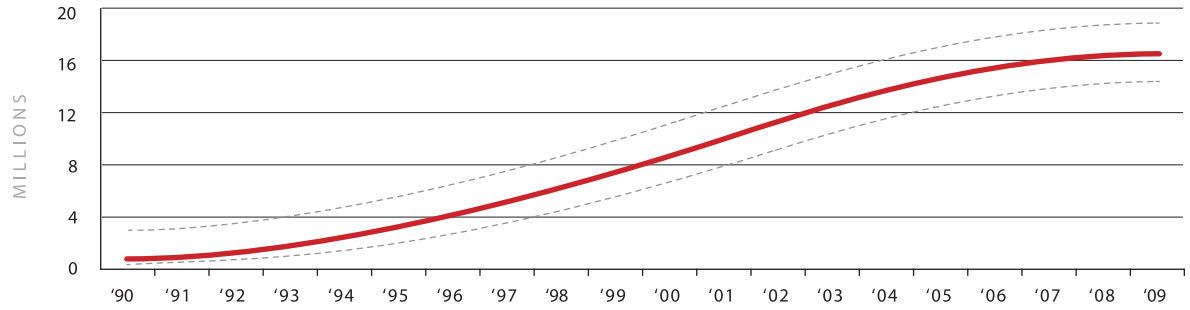


Figure 05: Number of orphans due to AIDS



(Source: UNAIDS, AIDS Epidemic Update 2010)

The AIDS epidemic has orphaned several millions of children less than 18 years of age particularly in the Sub-Saharan Africa with potentially perilous consequences for the transfer of knowledge and values from one generation to the next. Furthermore, global HIV epidemic slowed the economic growth, deepened the household poverty and escalated the individual suffering. In Asia HIV causes the greater loss of productivity than any other disease and alarmingly pushing many more millions of households into poverty during the next decade unless international responses are scaled up with strong determination. International HIV response is one of the overriding priorities of the 21st Century in order to secure future health and well-being of the whole world. Table 01 below depicts the Global Summary of HIV/AIDS estimates for 2001 to 2009.

Table 01: Global Summary of HIV/AIDS Extimates for 2001 and 2009

	Adults and children living with HIV	Adults and children newly infected with HIV	% Adult prevalence (15–49 years)	AIDS-related deaths among adults and children
2009	33.3 million [31.4–35.3 million]	2.6 million [2.3–2.8 million]	0.8 [0.7–0.8]	1.8 million [1.6–2.1 million]
2001	28.6 million [27.1–30.3 million]	3.1 million [2.9–3.4 million]	0.8 [0.7–0.8]	1.8 million [1.6–2.0 million]

1.2 HIV/AIDS Situation in the SAARC Region

HIV epidemic in SAARC region is a collection of diverse epidemics in countries, provinces & districts etc. HIV/AIDS continues to be a major public health problem in the SAARC Region. All eight Member States of the SAARC region are designated as low prevalence countries. On the basis of latest available information, this region is home for an estimated number of 2.45 million HIV infected people in 2009. Table 02 shows the estimated number of PLHA in eight Member States of the SAARC Region in the year 2009. Three countries, namely India, Nepal and Pakistan account for majority of the regional burden.

Table 02: Adult HIV Prevalence Rates and Estimated Number of PLHA in SAARC Region 2009

Country	HIV Prevalence Rate (%)	Estimated No. of PLHA
Afghanistan	<0.5	2,000
Bangladesh	<0.1	7,500
Bhutan	<0.1	<500
India	0.29	2.27 million
Maldives	<0.1	<100
Nepal	0.49	66,442
Pakistan	<0.1	97,400
Sri- Lanka	<0.1	3827
Regional		2.45 million

The overall adult HIV prevalence in SAARC region remains below 1%. However, there are important variations existing between countries. Bangladesh, India, Nepal and Pakistan have reported concentrated epidemics among most at risk populations. Of the estimated number of PLHA in SAARC region, 2.27 million were in India alone in 2009.

The first HIV/AIDS infected persons were diagnosed in 1986 by India and Pakistan. By 1993, all SAARC Member States had reported the existence of HIV infection in their countries. The cumulative numbers of reported HIV/AIDS infected persons by Member States of the SAARC Region at the end of the year 2009 are given in Table 03.

Table 03: Cumulative Number of Reported HIV & AIDS Cases by SAARC Member States 2009

Country	Cumulative Number of Reported HIV Positives	Cumulative Number of Reported AIDS Patients	Cumulative Number of Reported AIDS Death	Year of 1st HIV Positive Detected
Afghanistan	636	-	-	1989
Bangladesh	1745	619	204	1989
Bhutan	185	84	34	1993
India	288,485	-	-	1986
Maldives	14	11	10	1991
Nepal	15043	2729	509	1988
Pakistan	2917	-	-	1986
Sri Lanka	1196	309	202	1987

(Source: National Programmes' Reports on HIV/AIDS 2010)

The unprotected heterosexual intercourse, unprotected anal intercourse between men and injecting drug use with contaminated injecting equipments are the main factors that drive the HIV epidemic across the SAARC region.

Sexual Transmission drives the HIV epidemic throughout most parts of India, accounting for nearly 90% of prevalence nationwide. The brothel based sex workers are more likely than home based sex workers to be infected with HIV and the risk is also more for currently unmarried sex workers in India. HIV transmission during injecting drug use is the primary mode of transmission in north-eastern parts of the country A survey conducted in 2008 among sex trafficked women and girls in Nepal determined that 30% were HIV positive. Hence, women and girls who have been trafficked to India may be contributing to an expansion of the epidemic in Nepal (Silverman, 2008). The estimated number of IDUs in Pakistan ranges from 54,000 – 870,000. Nearly 23% of IDUs residing in urban settings in Pakistan are HIV positive.

HIV epidemic in India is highly heterogeneous and appears to be stable or diminishing in some parts of the country while growing in others. The majority of reported HIV infections (66%) are concentrated in six high prevalence states where HIV prevalence is 4-5 times higher than that of the other states. Mumbai-Karnataka corridor, the Nagpur area of Maharashtra, the Nammakkal district of Tamil Nadu, coastal Andhra Pradesh, parts of Manipur and Nagaland, reported the higher HIV prevalence in 2008. India has 195 priority districts on the basis of the HIV prevalence rates for focused programmatic interventions. Of these, 156 districts have HIV prevalence over or equal to 1% among ante-natal attendees. Another 39 districts are having less than 1% HIV prevalence among ante-natal attendees but more or equal to 5% prevalence among high risk groups.

HIV epidemic of Nepal is concentrated among most at risk populations and diverse in various regions/zones and districts. A high proportion of migrants in the Far West has added a new dimension to the epidemic. The estimated adult HIV prevalence rate of Nepal is 0.49% and approximately 50% of total HIV infections were recorded along the highway districts across the country. The labour migrants and low risk women account for about 40% and 26% of the total HIV burden respectively.

HIV epidemic in Pakistan is a concentrated epidemic among IDUs and Hijra sex workers. IDU group is the core group which drives HIV epidemic in Pakistan and having the highest prevalence of 20.8%. The HIV prevalence among female sex workers in Pakistan is 0.97%. However, there is evidence of sexual networking between female sex workers and IDUs. The geographic trend of the epidemic is expanding from major urban cities and provincial capitals to smaller cities and towns. Although national adult HIV prevalence rate remains low below 0.1%, exceptions were observed in Gujrat where 88 HIV positives were found from a general population sample of 246. That sample included a large number of ex-migrant workers.

Migration itself is not a high risk factor for HIV transmission. However, the circumstances in which migration occurs may increase vulnerability to infection. Cross-border migration of the sexual and drug-using networks along the India-Nepal border appears to be contributing to a two-way flow of HIV. Migrants are considerably more likely than non-migrants to delay seeking medical treatment for infectious diseases due to various factors which are held responsible for exclusion of them from basic health services in the settings to which they have migrated.

Women account for a significant proportion of people living with HIV in SAARC region. A large proportion of women appear to have acquired the virus from regular partners who acquired the HIV during paid sex. In the region as a whole, HIV prevalence is low among general population, however, significantly higher among Most at Risk Populations (MARPs). The low prevalence of HIV among the general population poses a significant threat as it undermines the gravity of the situation. When the infection get established in the bridging groups such as clients of sex workers through them, HIV may spread to the low risk groups in the general population such as housewives at an exponential pace. As a result, generalized epidemics may arise in many parts of the region unless the responsible authorities take the timely decisions for implementation of appropriate prevention approaches timely to contain the HIV in the region.

All the Member States have high levels of high risk factors to fuel the HIV epidemic further and faster. The identified prevailing high risk factors in the SAARC region are

- Poverty
- Low level of literacy/illiteracy
- Rapid and unplanned urbanization
- Porous borders between some countries
- High rates of internal and international migration
- Low status of women
- Trafficking of women and children
- Discrimination and stigmatization
- Social marginalization of population groups
- Low levels of condom use
- High prevalence of Sexually Transmitted Infections (STIs)
- Low level of health care seeking behaviour
- Unsafe injection practices in formal and informal health care settings
- Growing numbers of Most At Risk Populations
- Civil war situations creating a huge group of internally displaced people

These identified risk factors create favorable conditions for the spread of the virus across the SAARC region.
There is a wide variation in the number of people living with HIV/AIDS from less than 100 in Maldives to 2.27 million, in India. In order to implement an effective prevention package for the region of SAARC, this diversity is to be considered. The factors responsible for diversity should be identified and addressed during designing phase as well as implementation phase.

The wide disparity between the estimated numbers of people living with HIV/AIDS and reported numbers of people living with HIV/AIDS is to be considered by both regional authorities responsible for the HIV prevention and care as well as by the National AIDS Control Programmes in prioritizing, designing and implementation of activities in HIV prevention and care continuum.

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Chapter 2

Milestones in global response to HIV/AIDS pandemic

The following milestones are of historic significance in global health development particularly in the global response to contain HIV/AIDS epidemic.

- **Millennium Development Goals – In the year 2000**
- **UNGASS Declaration – in the year 2001**
- **Treating Three Million by 2005 Initiative – in the year 2003**
- **The "Three Ones" Principles – in the year 2004**
- **Universal Access for treatment, care and support by 2010 – in the year 2006**
- **UNAIDS Outcome Framework 2009 – 2011: nine priority areas**

Millennium Development Goals: At the Millennium summit in September 2000, the largest gathering of world leaders in history adopted the United Nations Millennium Declaration. The world leaders showed their nations commitment to a new global partnership to reduce extreme poverty by setting out a series of time-bound targets, with a deadline of 2015.

The Millennium Development Goals (MDGs) are the global time-bound and quantified targets to make the world safer, healthier and more equitable by addressing extreme poverty in its many dimensions. These dimensions are income poverty, hunger, disease, lack of adequate shelter and exclusion. MDGs promote gender equality, education and environmental sustainability.

There are eight Millennium Development Goals and 18 targets. Of the MDGs, the Goal six has been set up to combat HIV/AIDS, Malaria and TB. Of the 18 targets 08 are directly related to the health. The target 07 deals with HIV/AIDS and it has 06 indicators. Although one of the MDGs specifically addresses the HIV epidemic, an effective HIV response will also support achievement of other Millennium Development Goals embraced by the world community.

Goal 06: Combat HIV/AIDS, Malaria and other diseases

Target 07: HIV/AIDS epidemic to be halted and begun to reverse by 2015

Indicators (18, 19, 19a, 19b, 19c & 20):

1. **Indicator No. 18: HIV prevalence among pregnant women aged 15 – 24 years**
2. **Indicator No. 19: Condom use rate of the contraceptive prevalence rate**
3. **Indicator No. 19a: Condom use at last high risk sex**

4. **Indicator No. 19b: Percentage of population aged 15 – 24 years with comprehensive correct knowledge on HIV/AIDS**
5. **Indicator No. 19c: Contraceptive prevalence rate**
6. **Indicator No. 20: Ratio of school attendance of orphans to school attendance of non-orphans aged 10 – 14 years**

United Nations General Assembly Special Session Declaration of Commitment on HIV/AIDS (UNGASS): At the first ever special session on HIV/AIDS of the United Nations General Assembly in June 2001, 189 United Nations Member States unanimously endorsed the Declaration of Commitment on HIV/AIDS. This was done to strengthen the response to Millennium Development Goal 06. This declaration included time-bound pledges to generate measurable action and concrete progress in the HIV/AIDS response. The UN Member States committed to take extraordinary action to move towards universal access to HIV prevention, treatment, care and support by 2010.

Recognizing the need for multi-sectoral action on a range of fronts, the Declaration of Commitment on HIV/AIDS addresses global, regional and country level response to prevent new infections, expand health care access and mitigate the impact of the epidemic. The vision of the Declaration extends far beyond the governmental sector to private sector, labour groups, faith-based organizations, NGOs and other civil society entities, including organizations of people living with HIV.

In 2002, UNAIDS with its cosponsors and other important partners developed a series of core indicators known as UNGASS Indicators to measure progress in implementing the Declaration of Commitment on HIV/AIDS. There are 25 core UNGASS Indicators based on four broad categories namely:

- **National commitment and action**
  1. Domestic and international AIDS spending by categories and financing sources
  2. National Composite Policy Index (Areas covered: gender, workplace programmes, stigma and discrimination, prevention, care and support, human rights, civil society involvement, and monitoring and evaluation)
- **National Programmes**
  3. Percentage of donated blood units screened for HIV in a quality assured manner
  4. Percentage of adults and children with advanced HIV infection receiving antiretroviral therapy
  5. Percentage of HIV-positive pregnant women who received antiretrovirals to reduce the risk of mother-to-child transmission
  6. Percentage of estimated HIV-positive incident Tuberculosis cases that received treatment for Tuberculosis and HIV
  7. Percentage of women and men aged 15-49 who received an HIV test in the last 12 months and who know their results
  8. Percentage of most-at-risk populations that have received an HIV test in the last 12 months and who know their results
  9. Percentage of most-at-risk populations reached with HIV prevention programmes
  10. Percentage of orphaned and vulnerable children aged 0–17 whose households received free basic external support in caring for the child
  11. Percentage of schools that provided life skills-based HIV education in the last academic year
- **National knowledge and behaviour**
  12. Current school attendance among orphans and among non-orphans aged 10–14*
  13. Percentage of young women and men aged 15–24 who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission*
  14. Percentage of most-at-risk populations who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission
  15. Percentage of young women and men aged 15–24 who have had sexual intercourse before the age of 15
  16. Percentage of women and men aged 15–49 who have had sexual intercourse with more than one partner in the last 12 months

17. Percentage of women and men aged 15–49 who had more than one sexual partner in the past 12 months reporting the use of a condom during their last sexual intercourse*
18. Percentage of female and male sex workers reporting the use of a condom with their most recent client
19. Percentage of men reporting the use of a condom the last time they had anal sex with a male partner
20. Percentage of injecting drug users reporting the use of a condom the last time they had sexual intercourse
21. Percentage of injecting drug users reporting the use of sterile injecting equipment the last time they injected

- **National Impact**

22. Percentage of young women and men aged 15–24 who are HIV infected*
23. Percentage of most-at-risk populations who are HIV infected
24. Percentage of adults and children with HIV known to be on treatment 12 months after initiation of antiretroviral therapy
25. Percentage of infants born to HIV-infected mothers who are infected

* Millennium Development Goals indicator

(source: Global AIDS Report 2008, UNAIDS)

Treating Three Million by 2005 Initiative: In 2001, the Joint United Nations Programme on HIV/AIDS (UNAIDS), scientists of WHO and other important partners calculated that, under optimal conditions, 3 million people living in developing countries could be provided access to medical services including antiretroviral therapy by the end of 2005.

On 22nd September 2003, Director-General of WHO with Executive Director of UNAIDS, and Executive Director of the Global Fund to Fight AIDS, Tuberculosis and Malaria declared that the lack of access to antiretroviral therapy as a global health emergency. In response, WHO and its partners launched the "Treat 3 Million people by 2005" (3 by 5 Initiative). The global target of treating 3 million people with antiretroviral therapy by the end of 2005 was a necessary and an achievable target on the way to the ultimate goal of universal access to antiretrovirals for everyone who requires such therapy.

Prevention will remain central to all HIV interventions. Universal access to antiretroviral treatment accelerates prevention in communities in which more people will know their HIV status. As HIV/AIDS becomes a disease that can be both prevented and treated, attitudes will change and denial, stigma and discrimination will rapidly be reduced. Rolling out effective HIV/AIDS treatment is the single activity that can most effectively energize and accelerate the uptake and impact of prevention. The 3 by 5 initiative was a comprehensive strategy linking treatment, prevention, care and full social support for people affected by HIV/AIDS. Care and support is critical to ensure the adherence to antiretroviral treatment and to reinforce prevention.

Successful implementation of 3 by 5 Initiative has already accelerated the attainment towards the time-bound target of the UNGASS Declaration (Universal access to prevention, treatment, care and support by the year 2010) and sixth goal of Millennium Development Goals (Halting and start to reversing the HIV/AIDS epidemic by 2015).

The "Three Ones" principles: On 25th April 2004, UNAIDS, United Kingdom and United States co-hosted a high level meeting. At which key donors reaffirmed their commitment to strengthening national AIDS responses led by the affected countries themselves. They endorsed the "Three Ones" principles to achieve the most effective and efficient use of resources and to ensure the rapid action and results-based management of the national response on HIV/AIDS epidemic. The "Three Ones" principles are as follows:

- **One agreed HIV/AIDS Action framework** that provides the basis for coordinating the work of all partners
- **One agreed National AIDS Coordinating Authority** with a broad based multisectoral mandate
- **One agreed country level monitoring and evaluation system**

Universal Access to prevention, treatment, care and support: At the June 2006 United Nations General Assembly High-Level Meeting on HIV/AIDS, United Nations Member States agreed to work towards the goal of "universal access to comprehensive prevention programmes, treatment, care and support" by 2010.

Drawing on lessons from the scale-up of HIV interventions over the last few years, WHO, as the UNAIDS cosponsor responsible for the health sector response to HIV/AIDS, has established priorities for its technical work and support to countries on the basis of the following five Strategic Directions, each of which represents a critical area where the health sector must invest if significant progress is to be made towards achieving universal access.

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

In this context, WHO undertook at the World Health Assembly in May 2006 to monitor and evaluate the global health sector response in scaling up towards universal access and to produce annual reports. This report addresses progress in scaling up the following health sector interventions.

- **Antiretroviral therapy**
- **Prevention of mother-to-child transmission of HIV (PMTCT)**
- **HIV testing and counselling**
- **Interventions for injecting drug users**
- **Control of sexually transmitted infections to prevent HIV transmission**
- **Surveillance of the HIV/AIDS epidemic**

There has been a marked shift in the global response to the complex HIV/AIDS crisis. Currently the national responses are broader and stronger and have improved access to financial resources and commodities. The key milestones mentioned above have raised both the commitments by the affected countries themselves and the availability of the funding to fight the HIV/AIDS epidemic. The advent of the Global Fund, new AIDS programmes of the World Bank, expanding commitments of the donor countries particularly the United States and the work of the private sector foundations have remarkably raised the funding on AIDS by the year 2007 when compared to 2002. Hence, there is an urgent need for greater support and collaboration with heavily affected countries and to avoid duplication and fragmentation. It is the challenge that the "Three Ones" were specifically designed to achieve. Therefore, these principles will help to improve the ability of the donors and developing countries to work more effectively together, on a country by country basis.

UNAIDS Outcome Framework 2009 – 2011: nine priority areas: In 2009, the UNAIDS Secretariat and Cosponsors proposed and the UNAIDS Programme Coordinating Board endorsed, a set of specific outcomes that the Joint Programme aimed to catalyse support from 2009 – 2011. In addition to the comprehensive national responses to AIDS through out the world, the outcome framework sets out a limited number of specific aims to guide the future investments and to mobilize focused, concerted action.

As the recent declines in HIV incidence in multiple countries demonstrate the possibility of reducing the sexual transmission of HIV. At the same time, increasing coverage of services to prevent mother to child transmission and the associated declines in new HIV infections among children highlight the feasibility of preventing mothers from dying and babies becoming infected with HIV. Hence, this set of specific outcomes certainly helps the countries to identify areas that need intensified action in order to achieve the desired impact across the breadth of the AIDS response. The nine priority areas of the UNAIDS Outcome Framework 2009 – 2011 are;

- **We can reduce sexual transmission of HIV**
- **We can prevent mothers of dying and babies from becoming infected with HIV**
- **We can ensure that people living with HIV receive treatment**
- **We can prevent people living with HIV from dying of tuberculosis**
- **We can protect drug users from becoming infected with HIV**
- **We can remove punitive laws, policies, practices, stigma and discrimination that block effective responses to AIDS**
- **We can stop violence against women and girls**
- **We can empower young people to protect themselves from HIV**
- **We can enhance social protection for people affected by HIV**

Chapter 3

3.1 Global Progress in HIV/AIDS Prevention and Control

HIV/AIDS continues to be a major global health priority. Although important progress has been achieved in preventing new HIV infections and in lowering the annual number of AIDS related deaths, the number of people living with HIV/AIDS continues to increase.

One of the time bound pledges of the Millennium Development Goals is, to begin to reverse the HIV epidemic by the year 2015. In order to reach that goal, the global community is moving currently to provide the universal access to HIV prevention, treatment, care and support by 2010 for those who need them. The global community regards this step as of historic significance in global health and development.

HIV/AIDS, being the single greatest reversal in human development in modern history has heightened global consciousness on health disparities. No disease in the history has obtained a comparable mobilization of political, financial and human resources. The six-fold increase in financing for HIV activities in low and middle income countries during this decade is beginning to yield results. The annual number of AIDS deaths has declined from 2.2 million (1.9 million – 2.6 million) in 2004 to 2 million (1.8 million – 2.3 million) in 2008. HIV related mortality appears to have peaked in 2004 and the estimated number of AIDS related deaths in 2008 was approximately 10% lower than that of 2004.

In a number of heavily affected countries in Sub-Saharan Africa, dramatic changes in sexual behaviour have been accompanied by decline in the number of new HIV infections contributed to the global stabilization of the epidemic. However, these gains are not consistent with in or in between the regions of the globe. Gaps are evident in basic prevention approaches in hyperendemic settings. Even though the largest proportion of new infections in many African countries occurs among older heterosexual couples, relatively a few prevention programmes have specifically focused on older adults. Many programmes have been focused on young people in many countries. However, they failed to address “inter-generational partnerships” as one of the key determinants of vulnerability.

The progress achieved in HIV/AIDS prevention and control by the World as a whole and by the Member States of the SAARC Region is assessed on following aspects:

1. **HIV/AIDS Prevention:** The global epidemic can not be reversed and gained achievements in expanding treatment access can not be sustained with out an effective programme on reducing the rate of new infections. There is growing evidence on successful HIV prevention programmes in diverse settings.

2. **Counseling and Testing for HIV:** Counselling and Testing for HIV is recognized as the most important linkage in prevention and care continuum. Low testing rates reduce the impact of HIV treatment, as

diagnosis late in the course of infection have a poorer prognosis and increased knowledge on HIV sero-status will curtail the onward HIV transmission.

3. **Treatment, Care and Support:** The rapid expansion of treatment access is saving lives, improving quality of life and mitigating the suffering in households, communities and the entire societies. An estimated 11.7 million life years added globally between 1996 and 2008 as a result of antiretroviral therapy.
4. **Strategic Information and Programme Management:** Strategic information is one of the corner stones essential for advocacy to attract the donors for funding, in mobilization of resources, prioritizing the programme activities and planning the targeted interventions to most at risk populations and to achieve the goals of the planned Programmes. Robust strategic information guides the national programmes and the stakeholders to tailor AIDS responses to maximize the impact on public health.

3.2 Global Achievements in HIV/AIDS prevention and Control

3.2.1 HIV/AIDS Prevention

The HIV epidemic can not be reversed without strong sustained success in preventing new HIV infections. Of the 87% of the countries in the world with targets for universal access have established goals for HIV treatment, only 50% targeted for key HIV prevention strategies. Therefore many people at risk of HIV infection lack meaningful access to tailored prevention services. According to the Declaration of Commitment on HIV/AIDS, "Prevention of HIV remains the mainstay of the global, regional and national response."

Countries with different epidemic patterns will require tailor-made national strategies for achieving effective HIV prevention programmes. HIV epidemics have been classified as low-level, concentrated, generalized or hyperendemic. Of 135 low and middle income countries, UNAIDS estimates that 97 countries have low-level or concentrated epidemics and 38 have generalized epidemics. Of the countries with generalized epidemic, 7 are categorized as hyperendemic.

Extensive experience gathered from diverse regions has clearly shown the effectiveness of a broad range of HIV prevention strategies. Effective strategies exist to prevent every mode of HIV transmission; sexual, blood borne through injecting drug use as well as in health care settings and mother to child transmission.

The health sector plays a key role in scaling up the implementation of HIV prevention interventions. Priority health sector interventions include a combination of behavioural and biomedical approaches such as:

i. Promotion of correct and consistent use of condoms
ii. Improving the prevention and management of Sexually Transmitted Infections
iii. Promotion of medical male circumcision
iv. Safe blood supply
v. Increasing the access to harm reduction programmes for injecting drug users
vi. Ensuring the effective infection control in health care settings

vii. Prevention of Mother To Child Transmission (PMTCT)
viii. Post Exposure Prophylaxis (PEP)

A. Prevention of Sexual Transmission of HIV:

Awareness and knowledge on HIV/AIDS alone is insufficient to sustain the long lasting behaviour change. However, an accurate understanding of the risks of HIV transmission and to know the ways to prevent exposures is a prerequisite to risk reduction. To accrue the adequate understanding, people need basic knowledge on HIV prevention. Historically, rigorous evaluation of HIV prevention programmes has had primarily concentrated on individuals rather than couples. This omission is potentially important, as international surveys revealed that sexual partner is a key influence on the particular sexual practices in which they decide to engage. By specifically tailoring programmes to reach people in difficult kind of partnerships, HIV prevention efforts may achieve greater impact than that solely aim to affect the behaviour of single individual.
The global epidemic can not be reversed without reducing the new infections among young people. Many young people lack basic knowledge about HIV prevention. Survey data from 64 countries show that 40% of males and 38% of females aged 15 – 24 years had comprehensive knowledge on HIV in 2007. The figures for 2005 were 37% for males and 28% for females. The knowledge levels in 2007 are still well below the Declaration of Commitments' Goal ring comprehensive HIV knowledge among 95% of young people by 2010. In Somalia, only 4% of young women aged 15 – 24 report accurate knowledge on HIV/AIDS and only 11% of adult females are aware that condoms can prevent HIV transmission.

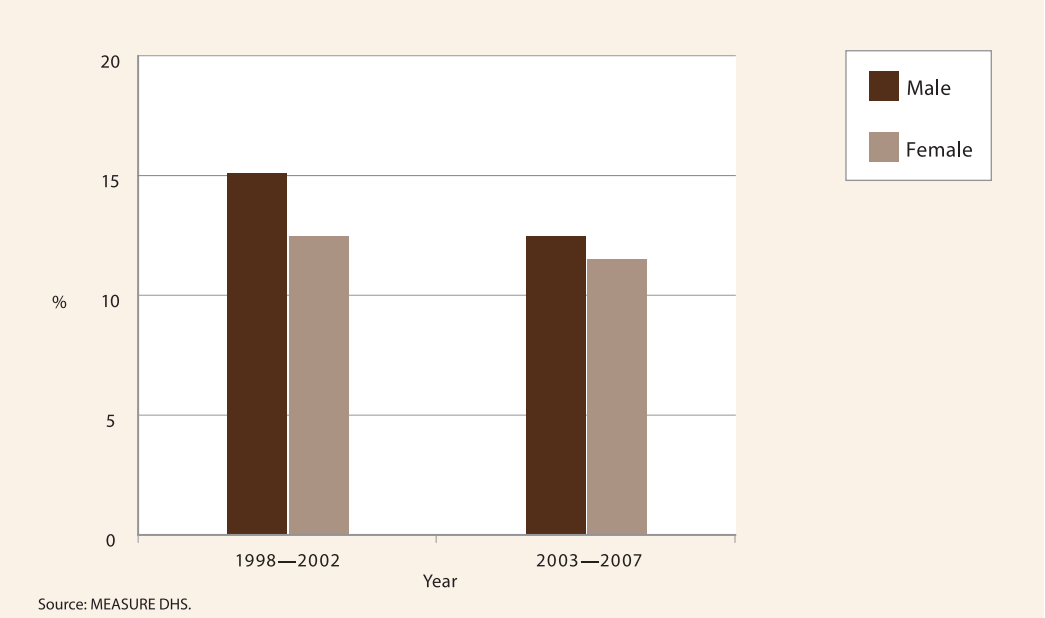
Government of Namibia has taken steps to strengthen the HIV response of the country recently according to a five-year strategic plan involving a broad array of national ministries and sectors. Life skills based HIV education is now taught in 79% of secondary schools and millions of male condoms are distributed free of charge annually by the public sector. Namibia has the highest HIV testing rate of the 38 countries recently surveyed. Adult HIV prevalence appears to have stabilized, while the prevalence among young women attending antenatal clinics declined from 18% in 2003 to 14% in 2007.

In low and middle income countries, the percentage of young people having sex before the age of 15 years is delaying in all regions of the globe. The global trend towards delayed sexual debut is clear, however, there are substantial variations between countries.

Males are significantly more likely to report sex before the age of 15 years except in Sub-Saharan Africa where adolescent girls under the age of 15 are more likely than boys to be sexually active. Figure 05 highlights the improvement in delaying sexual debut prior to the age of 15 years among young males and females in low and middle income countries from 1998 to 2007.

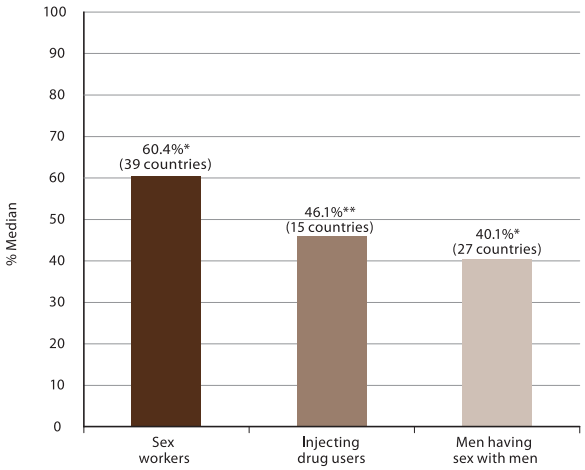
Most At Risk Populations (MARPs) are often difficult to reach with HIV prevention programmes. However, in order to prevent the spread of HIV among these populations and from them to the general population, it is important that they access preventive services.

Figure 06: Percentage of Young People who have had first sex before the age of 15 years by Sex in Low and Middle Income Countries in 1998 – 2002 and 2003 - 2007



(Source: UNAIDS, Global AIDS Report 2008)

Figure 07: Percentage of Most at Risk Populations reached with HIV Prevention Programmes 2005 - 2007



* Percentage of sex workers and men having sex with men reported knowing where they can receive an HIV test and that they were given condoms.

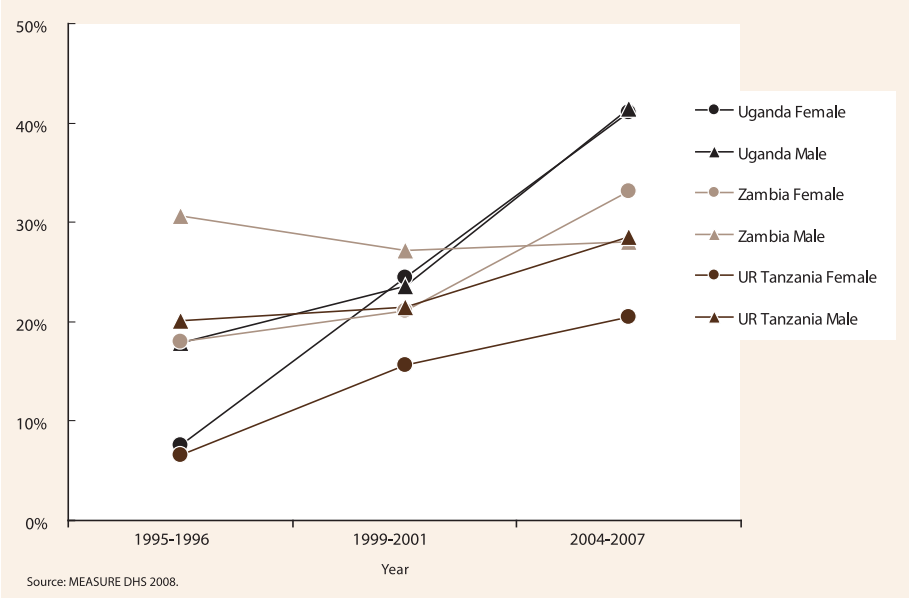
** Percentage of injecting drug users who reported knowing where they could receive an HIV test and be provided with condoms and sterile injecting needles and syringes.

Source: UNGASS Country Progress Reports 2008.

Almost 20 years after Thailand instituted a 100% condom use policy for sex workers, the median percentage of sex workers reporting condom use with their most recent client among 56 low and middle income countries was 86% (13% - 99%) in 2006 - 2008. Sub-Saharan Africa had the highest median reported HIV prevalence among sex workers (20%), despite median coverage of prevention programmes of 76% and a median rate of condom use with the last client of 86%. East, South and South-East Asia had the lowest median HIV prevalence among sex workers (2%), with significant variation among countries. Coverage by prevention programmes and use of condom with the last client were lower at 49% and 80% respectively.

Consistent condom use among those who have multiple sexual partners appears to be increasing particularly in the areas most affected by the epidemic as shown in figure 07. However, a study done in Botswana, Malawi, and Namibia among men who have sex with men found that condom use was rare and petroleum based lubricants were reportedly used frequently, thus rendering the condoms ineffective. HIV-1 prevalence among men who reported sex with men exclusively in Kenya is 43% and 12% among men who reported sex with both men and women despite that 44% of recently sexually active men reported no condom use at all with casual partners.

Figure 08: Condom Use at Last sex among those with more than one partner in last 12 months in three high burden countries



(Source: UNAIDS, Global AIDS Report 2008)

men in the 12 months preceding the surveys was 24% in East, South and South-East Asia and 31% in Europe and Central Asia.

The evidence indicates unequivocally that efforts to reach male and female sex workers must be reinforced and expanded. Innovative outreach programmes that bring high risk groups in contact with public health services are required to overcome the hidden nature of most of the members of high risk groups in societies where sex work and sex in between men are poorly tolerated.

A critical element in controlling the spread of HIV is the early detection and treatment of sexually transmitted infections (STIs). Many interventions for controlling STIs have proven to be effective. The control of major STIs may also have contributed to the gradual reduction in HIV prevalence in several low and middle income countries. In low-level and concentrated epidemics, the prevalence of curable STIs is high and high risk sexual behaviour is common. Hence, in such circumstances, the treatment of curable STIs is also likely to strongly affect the incidence of HIV infection at the population level. STI services not only provide treatment but also offer opportunities for prevention education and counseling for people with acute or established HIV infection and serves as an entry point into care programmes for people living with HIV. The global median availability of targeted services delivery for sex workers was just under 1 clinic per 1000 sex workers ranging from 0.5 in Middle East and North Africa to 2.1 in Europe and Central Asia.

Male circumcision is now recognized as another important health sector intervention to reduce the risk of men heterosexually acquiring HIV infection, particularly in countries with high rates of heterosexually transmitted HIV infection and low rates of male circumcision.

Three randomized controlled clinical trials carried out in Sub-Saharan Africa demonstrated that medical male circumcision reduces the risk of getting HIV to a man from a HIV infected woman by about 60%. Data presented at the XVII International AIDS Conference in Mexico City in 2008 showed that the protective effect of male circumcision was sustained for at least 42 months. The studies assessed the cost effectiveness of the male circumcision have shown that male circumcision as a highly cost effective approach in preventing new HIV infections in high prevalent settings. Since 2007, 13 high HIV prevalent countries have made progress towards establishing the necessary conditions to increase the availability of male circumcision services. However, the public education campaigns should emphasize that circumcision offers only a partial protection to men in order to prevent the spreading of erroneous conclusions in the society which might put the circumcised men at risk of getting HIV.

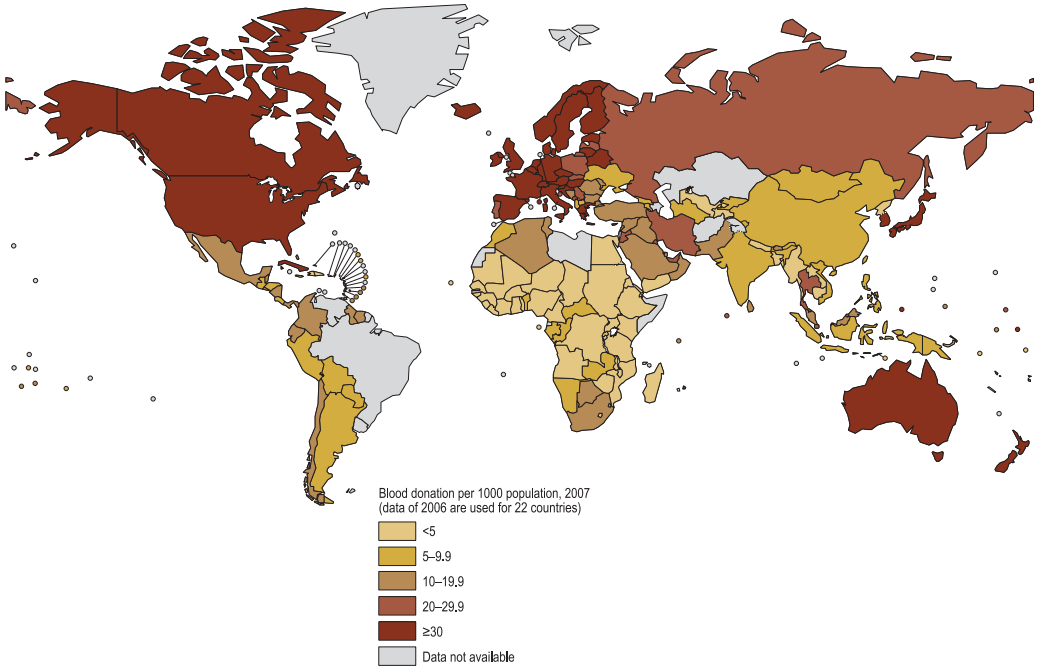
B. Prevention of HIV transmission through Blood and Blood Products:

All types of blood donors donate more than 85 million of blood donations every year. The risk of HIV transmission through an infectious blood transfusion is greater than 90% because, a large volume of virus can be transferred into a person from an infected unit of blood. Hence, the availability and safety of blood and blood products for transfusion is of continuing concern. Particularly in low and middle income countries, HIV and other blood borne infections being transmitted through blood transfusion remains an issue of concern. To curtail the HIV transmission due to unsafe blood transfusion requires implementation of an integrated strategy with the following:

1. A nationally coordinated blood transfusion service
2. Collecting blood from voluntary, unpaid donors
3. Screening all donated blood units for blood borne infections including HIV
4. Adequate training and follow-up of health care providers

Of the global population, 80% live in developing countries and they are supported by 20% of the world's blood supply. Most of the blood transfusions in the developing countries are given to women, as a life saving measure to treat heamorrhage as a complication of pregnancy, children with severe anaemia and serious trauma victims. The minimum level of blood donation required to meet a country's most basic requirement for blood is estimated to include 1% of the population. Of the low and middle income countries 73 report collecting fewer than 10 donations per 1000 population. Figure 08 highlights the rates of blood donations in countries of the world in the year 2007.

Figure 09: Blood Donation rates of the World in 2007



(Source: WHO, Towards Universal Access, Scaling up priority HIV/AIDS interventions in the health sector, 2009, Blood safety, figure3.2, page 46)

Across the globe 57 countries report that they collect blood from 100% voluntary unpaid donors. Another 42 countries collect a significant amount of the blood supply (>75%) from family or replacement and paid donors.

Data from 121 countries show that only 40% of donated blood is screened following basic quality assurance procedures, the number for the middle income countries is 74% and 99% for the high income countries. More than 20 years after sensitive screening testing systems becoming available, failure to screen all donated blood for HIV in accordance with minimum quality standards is a grave concern. In addition, 40% of hospitals with blood transfusion facilities in low income countries, 71% in middle income countries and 92% in high income countries have a system for reporting adverse transfusion events. It is crucial to take efforts urgently to ensure safe and rational blood transfusion services for the whole world.

Curtailing the burden of TTIs particularly, HIV infection due to unsafe blood transfusion remains an issue of concern and requires implementing an integrated strategy with a nationally coordinated blood transfusion service; collecting blood from voluntary unpaid donors; screening all donated blood for TTIs and ensuring adequate training and follow-up of health care providers.

Globally, the number of people who inject drugs appears to be growing. In 2008, UNAIDS/WHO estimates that approximately 11 – 21 million people inject drugs worldwide, with the largest numbers concentrated in China, United States of America and the Russian Federation. Of them approximately 0.8 million – 6.6 million are living with HIV, of whom largest numbers are in Eastern Europe, East and South-East Asia and Latin America.

Studies have consistently demonstrated that harm reduction reduces HIV infections and risk behaviours without contributing to increased drug use or increasing other harms in the communities in which such programmes operate. However, many countries continue to fall short of meeting IDUs' health promotion and HIV prevention needs. Use of contaminated equipment during injecting drug use represents an efficient means of HIV transmission, often leading to the rapid spread of HIV in localized networks of Injecting Drug Users (IDUs).

Effective HIV prevention for IDUs involves ready access to substitution treatment for drug dependence and to sterile needles and syringes. In addition, prevention programmes should help IDUs to reduce the risks of sexual transmission of HIV and link them to other related health and social services. This whole prevention package is introduced as Harm Reduction Programme. WHO, UNODC and UNAIDS recommend a comprehensive package of nine interventions for HIV prevention, treatment and care among IDUs. The recommended nine interventions are as follows:

1. Needle and syringe programmes
2. Dependence treatment programmes (opioid substitution etc.)
3. HIV testing and counselling
4. Antiretroviral therapy
5. Prevention and treatment of STIs
6. Condom promotion among IDUs and their sexual partners
7. Targeted IEC programmes
8. Diagnosis, treatment and vaccination for viral hepatitis
9. Prevention, diagnosis and treatment of TB

Among 92 low and middle income countries which provided information on programmes and policies targeted at IDUs, 30 reported having needle and syringe programmes and 26 offered opioid substitution therapy in 2008. Needle and syringe programmes distributed a median of 24.4 syringes per year in Europe and Central Asia and 26.5 in East, South and South-East Asia, far below the internationally recommended target of 200 syringes per injecting drug user per year. Apart from the scalling up efforts, in many settings, IDUs continue to face legal and social barriers in accessing health services. The criminalization of injecting drug use behaviour and the failure to recognize comorbid conditions in many people who inject drugs are important factors which prevent universal access to HIV interventions for them in many countries.

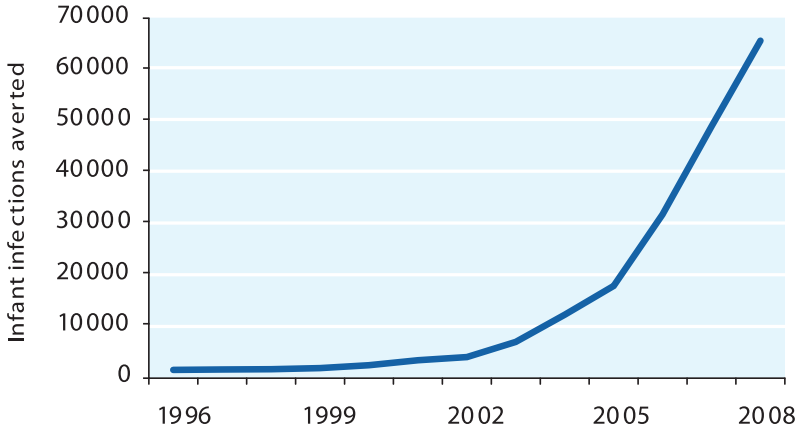
C. Prevention of HIV transmission from Infected Mother to Child:

Increasing coverage of services to prevent mother to child transmission of HIV and the associated declines in new HIV infections among children highlights the feasibility of preventing babies getting HIV infection. In the absence of any preventive interventions, infants born to and breastfed by HIV infected women have approximately a one in three chance of acquiring infection (30 - 35%).

The risk of mother to child transmission can be significantly reduced through the complementary approaches of Anti-Retro Viral (ARV) regimens for the mother with or without prophylaxis to the infants, implementation of safe delivery practices and the use of safe alternatives to breast feeding.

In ideal conditions, the provision of antiretroviral prophylaxis and replacement feeding can reduce the transmission from an estimated 30% - 35% with no intervention to around 1% to 2%. UNAIDS estimates that 200,000 cumulative number of new HIV infections were averted exclusively to the provision of antiretroviral prophylaxis to HIV positive pregnant mothers from 1996 to 2008. Figure 09 illustrates the annual number of infant infections averted from 1996 to 2008 period.

Figure 10: Estimated annual number of averted infant HIV infections globally through the provision of antiretroviral prophylaxis to HIV positive pregnant mothers 1996 –2008



(Source: UNAIDS, AIDS Epidemic Update 2009)

According to the WHO, in 2007, the coverage of pregnant mothers living with HIV receiving antiretroviral drugs to prevent mother to child transmission was 35% (29% - 44%) in the world. In 2008, the coverage of pregnant mothers living with HIV receiving antiretroviral drugs to prevent mother to child transmission has increased to 45% (37% - 57%) in the world. An estimated 430,000 (240,000 – 610,000) new HIV infections occurred among children under the age of 15 in 2008. The number of children newly infected with HIV in 2008 was approximately 18% lower than that of 2001.

To reach the ultimate goal of eliminating HIV infection in infants and young children, a standard package of services is required. These include

- HIV primary prevention services,
- Prevention of unintended pregnancies among HIV infected women,
- Antiretroviral drugs for prevention of mother to child transmission (PMTCT), safer delivery practices, infant feeding, counseling and support,
- Sexual and reproductive health services for HIV-infected women and linkages with ongoing care and support services.

It is challenging to measure the impact of the full range of services available to prevent mother to child transmission of HIV. Figure 9 illustrates the infant infections averted exclusively to provision of antiretroviral prophylaxis to HIV positive mothers during the period from 1996 to 2008. This represent only a fraction of the overall infant infections averted through prevention interventions as the data was analyzed solely on a single prong of the broader four prong service approach available to prevent mother to child transmission.

3.2. 2 Counselling and Testing for HIV

HIV counseling and testing service is the gateway for HIV prevention, care and treatment. In order to increase the coverage of services in relation to HIV, counseling and testing services need to be linked to prevention, treatment and care services. More people are being tested for HIV through diverse client-initiated and provider-initiated models. However, the awareness of the HIV status among people remains low and HIV infection is often diagnosed late.

The benefits of the knowledge on HIV status can be seen at the individual, community and population levels. Enhanced ability to reduce the risk of acquiring or transmitting HIV, access to HIV care, treatment and support and protection of unborn infants are the important benefits for the individual. This improves the quality of life of the infected individuals as well as their longevity. A wider knowledge of HIV status and its links to interventions can lead to a reduction in denial, stigma and discrimination and availability of the collective responsibility for an action are the benefits for the community. At the population level, knowledge on HIV epidemiological trends has an immense influence on the policy making, normalizing HIV/AIDS as another infectious disease and reducing the stigma and discrimination.

WHO and UNAIDS recommend continuing the scale up of client initiated HIV counseling and testing as well as provider initiated counseling and testing in health facilities. Health care providers recommend HIV testing for patients whose clinical presentation might result from underlying HIV infection, for everyone attending health facilities in generalized epidemics and in concentrated or low-level epidemic settings, more selectively for individuals with high risk behaviour and for their sexual contacts. In the communities that have been longest and hardest hit by the HIV epidemic, an increasing number of people with HIV are becoming ill and need treatment, care and support. However, most of the infected people with HIV do not know their HIV status yet. Scaling up of HIV testing and counseling services is a critical step for scaling up a range of interventions in HIV/AIDS prevention, treatment, care and support. The working towards the universal access of treatment, care and support requires many more millions of people to be tested for HIV and counseled in order to identify the infected persons who need the prevention, treatment, care and support services. The scaling up of ARV treatment is likely to generate a dramatic demand for HIV testing and counseling services.

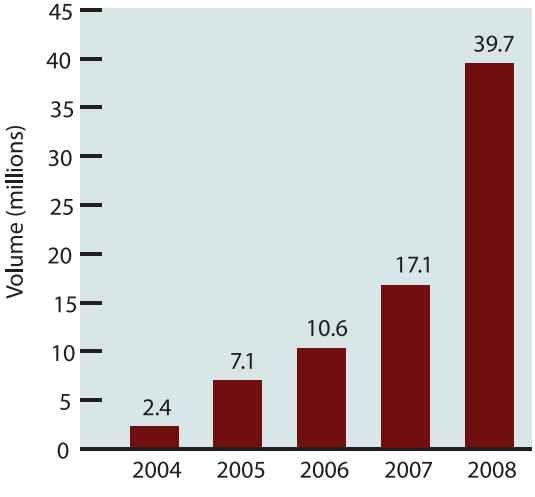
According to WHO, the number of countries that have developed national policies on HIV counseling and testing have scaled-up recently. In 2007, 70% of the countries reported (58 out of 82 countries)

had HIV counseling and testing policies. As at the end of 2008, nearly 90% of the reported countries (111 out of 125 countries) indicated having such policies. In addition to that, HIV counseling and testing is increasingly shifting from client-initiated model towards provider-initiated counseling and testing model. Of the 110 reporting countries, 89 reported that their guidelines on provider-initiated counseling and testing ensure to obtain the informed consent and to maintain the confidentiality of the obtained information and the test results.

In 2008, 50% of the countries among the 53 countries with generalized HIV epidemics that reported information on provider-initiated counseling and testing, reported that their policies encourage providers to offer counseling and testing to everyone. In 2007, only 12 countries out of 27 reporting countries with generalized epidemics had reported having such policies.

Of the 82 reported countries with low-level or concentrated epidemics, 66 had policies or guidelines to scale up HIV testing and counseling in selected health facilities such as those providing antenatal services, TB services, sexual health services and services for most at risk populations in 2008. A significant observation regarding policies related to HIV testing was that most countries across all regions (94 countries out of 101) make HIV tests available free of charge in the public sector, in 2008. Figure 10 depicts the scaling up of rapid HIV test kits procurement worldwide from 2004 – 2008 period.

Figure 11: Global procurement of rapid HIV tests 2004 - 2008



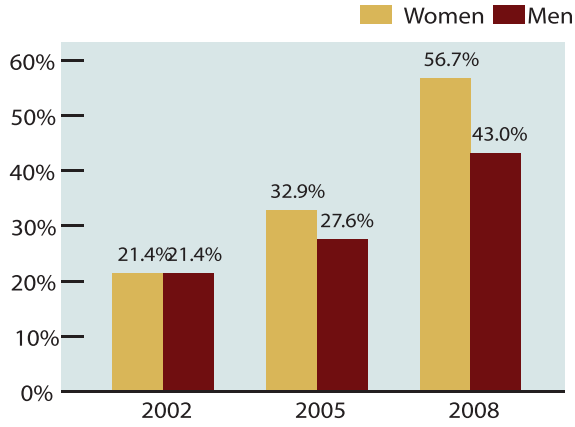
(Source: WHO, Towards Universal Access, scaling up priority HIV/AIDS interventions in the health sector, 2009)

As access to ARV treatment is scaled up in low and middle income countries, there is a critical opportunity to simultaneously expand access to HIV prevention, which continues to be the mainstay of the response to the HIV epidemic. Among the interventions which play a pivotal role both in treatment and in prevention, HIV counseling and testing stands out as paramount. The current reach of HIV testing services remains poor; in low and middle income countries. More countries reported on the number of health facilities providing HIV testing and counseling services; from 52 countries in 2006 to 81 in 2007 and 119 in 2008. In 2008, the reporting countries showed that 95,300 health facilities providing HIV counseling and testing services in 2008 (30,500 in 2007 and 21,900 in 2006). In 66 low and middle income countries reported data for 2007 and 2008 on number of health facilities available for HIV counseling and testing facility. Total number of health facilities available for HIV counseling and testing was increased by 35%, from 25,000 in 2007 to 33,600 in 2008.

Even in settings in which voluntary counseling and testing is routinely offered, the number of people availing these services remains low in many countries. Even in high income settings, despite the availability of services, many people living with HIV tend to be diagnosed late. In Europe, 15% - 38% of all people living with HIV present late when their CD_4 counts are less than 200 per microlitre. The stigma and discrimination continue to play a major role in stopping people from having the HIV test and in addition to that the missed opportunities to offer the HIV testing during previous visits.

In 2008, 101 countries reported data on the uptake of HIV testing and counseling versus 53 countries in 2007. The combined reported number of tests done in 39 low and middle income countries were more than doubled over the 2007 to 2008 period. In the surveys conducted in 2007 and 2008, less than 10% of women and men reported ever having received a HIV test in the Democratic Republic of Congo versus more than 50% of women and more than 40% men in Dominican Republic and in South Africa. Figure 11 illustrates the scaling up of HIV uptake in South Africa.

Figure 12: Men and women (>= 15 years) who ever had a HIV test and its results in South Africa 2002, 2005 & 2008



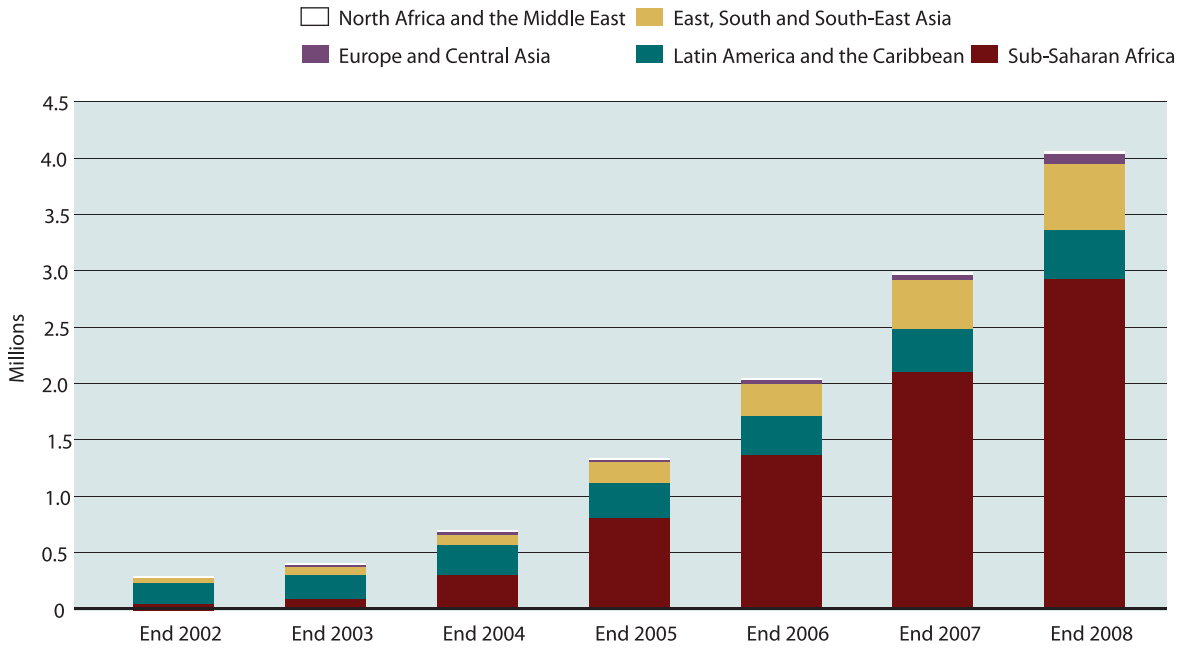
Source: Shisana et al. *(31–33)*.

(Source: WHO, Towards Universal Access, scaling up priority HIV/AIDS interventions in the health sector, 2009)

As of December 2008, WHO, UNICEF and UNAIDS estimate that 4,030,000 people (3,700, 000 – 4,360,000) were receiving antiretroviral therapy. This is more than one million more people than that at the end of 2007. The number of adults and children receiving antiretroviral treatment was 2,970,000 (2,680,000 – 3,260,000) in low and middle income countries at the end of 2007. Therefore, the antiretroviral therapy coverage among adults and children was 33% (30% - 36%) in 2007. Therefore, the progress achieved by these low and middle income countries in 2008 was significant. As of December 2008, the coverage of adults and children receiving antiretroviral treatment was 42% (40 – 47%) of the 9.5 million (8.7 – 10 million) people in need at the end of year 2008. About 45% of women in need and 37% of men in need in low and middle income countries received antiretroviral treatment at the end of 2008. The greatest increase in the number of people receiving treatment in 2008 was in Sub-Saharan Africa, the region with the highest need, where approximately 2,925,000 (2,690,000 – 3,160,000) needy people were receiving antiretroviral therapy at the end of 2008. This represents a regional increase of 39% in one year and a 30 fold increase since the end of 2003. The antiretroviral coverage of Sub-Saharan Africa was 44% (41% - 48%) in 2008 compared to 33% (30% - 36%) in 2007.

The coverage of antiretroviral therapy in East, South and South-East Asia was 37% (31% - 47%) in 2008 compared to 29% (23% - 37%) in 2007. This region represents 16% of the estimated treatment

Figure 13: Number of people receiving antiretroviral treatment in low and middle income countries by WHO regions 2002 - 2008



(Source: WHO, Towards Universal Access, scaling up priority HIV/AIDS interventions in the health sector, 2009)

need in low and middle income countries and 14% of the total number of people receiving treatment at the end of 2008.

Approximately, 275,700 children younger than 15 years of age were receiving antiretroviral treatment at the end of 2008. This is a 39% increase since 2007 when only 198,000 children received antiretroviral treatment. Hence, 38% of children in need in low and middle income countries had access to antiretroviral treatment at the end of year 2008.

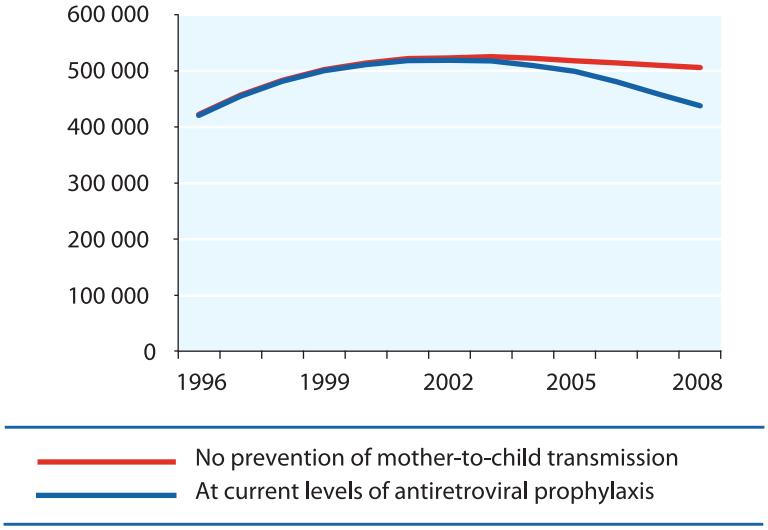
Impact of increased access to Highly Active Anti-Retroviral Treatment: The rapid expansion of treatment access in resource-limited settings is saving lives, improving quality of life and contributing to the rejuvenation of households, communities and entire societies. The impact of antiretroviral drugs on the management of HIV infection has been evident, with improvement in health proving to be far more marked than anticipated. The introduction of Highly Active Anti-Retroviral Therapy (HAART) has saved an estimated three million years of life in the United States alone in slightly more than a decade.

Access to treatment has had a remarkable impact on HIV related mortality in high income countries where antiretroviral drugs have long been available widely. A multi-centric research study conducted among 12 high income countries showed that the rate of excess mortality among people living with HIV in comparison with uninfected declined by 85% following introduction of HAART. As a result of HAART declined mortality among HIV infected people has contributed to increase the HIV prevalence in high income countries.

In low and middle income countries, evidence has emerged to confirm the comparable improvements in longevity for people living with HIV due to the scaling up of access to antiretroviral drugs. According to the findings of a prospective cohort study in Uganda, a combination of antiretroviral drugs and co-trimoxazole declined mortality by 95% in comparison to no intervention. The same study also showed the 93% reduction in HIV related orphanhood. In Botswana, an estimated 79% of adult people living with HIV registered in antiretroviral scale-up programme, survived five years after the commencement of the treatment.

The global impact of antiretroviral therapy has remarkably been increased since 2004. As a result of this scaling up of antiretroviral accessibility, approximately 2.9 million lives have been saved. Since 2004, number of deaths averted in Sub-Saharan Africa is 1.2 million and that of Western Europe and North America is 1.1 million. Figure 13 highlights the estimated number of AIDS related deaths averted by antiretroviral therapy globally from 1996 to 2008.

Figure 14: Estimated number of AIDS related deaths with and without antiretroviral therapy globally 1996 – 2008



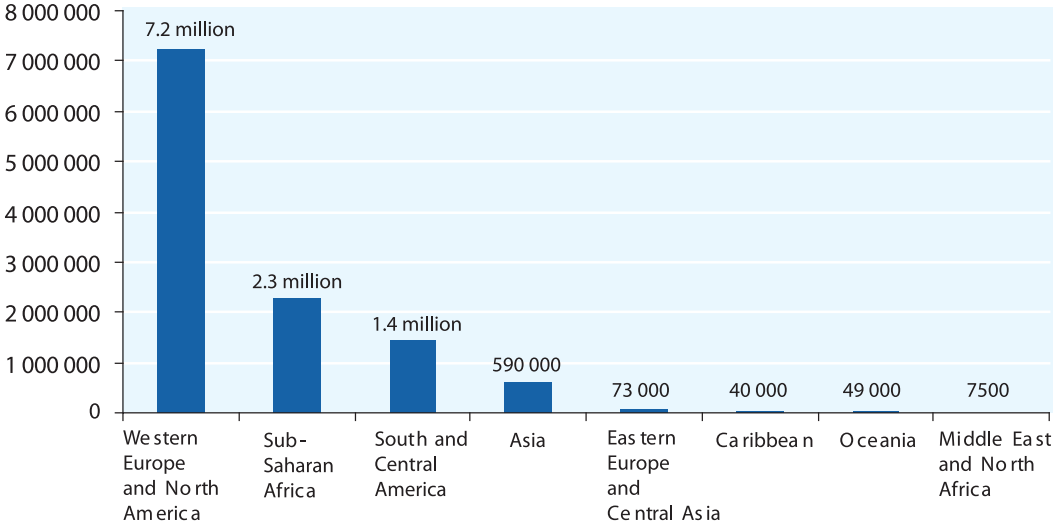
(Source: UNAIDS, AIDS Epidemic Update 2009)

Life-years added due to antiretroviral therapy is a better measure of impact as it facilitates the comparison between programmes and helps to assess the cost-effectiveness. Globally, an estimated 11.7 million life years were added between 1996 and 2008 as a result of antiretroviral treatment. Figure 14 illustrates the estimated number of life-years added due to antiretroviral therapy by region during the period 1996 to 2008.

Early diagnosis and early antiretroviral treatment were shown to reduce infant mortality by 76% and to slow the HIV related disease progression by 75% in two medical centres in South Africa. A combination of antiretroviral treatment and once-daily co-trimoxazole prophylaxis reduced the deaths among HIV infected children by sixfold in Zambia. However, mortality during the first months of therapy remains high for HIV infected children in Sub-Saharan Africa.

The growing availability of antiretroviral drugs is lessening the burden of HIV related mortality in low and middle income countries, as it did in high income countries. According to the findings of the cost-effectiveness studies performed, antiretroviral therapy has been also found to be a cost saving intervention for all the countries in the world as it enables people living with HIV/AIDS to spend socially and economically active lives. However, the treatment success rates may be somewhat lower in resource limited settings than in high income settings. A number of factors are likely to contribute to this, such as more advanced clinical disease in resource limited settings at the start of therapy and a higher incidence of co-infections.

Figure 15: Estimated number of life years added due to antiretroviral therapy by regions 1996 - 2008



(Source: UNAIDS, AIDS Epidemic Update 2009)

In addition to the outcomes of antiretroviral therapy on AIDS related mortality and HIV prevalence, the scaled up access to antiretroviral therapy could help to lower HIV incidence by reducing the viral load at the individual and community level. The findings of a meta-analysis has shown that the rate of HIV transmission from a person on antiretroviral therapy is about 0.5 per 100 person-years whereas that of a person not on therapy is 5.6 per 100 person-years. Hence, scaled up access to HIV counseling and testing and antiretroviral therapy could significantly reduce the new HIV infection rates.

3.2.4 Strategic Information and Programme Management

Strategic information on HIV epidemic and its response is knowledge that guides health policy, planning, programme management and service delivery. It is essential to understand the disease burden and its determinants and also to develop policies in order to improve service delivery. In addition to that it is also essential for the effective Programme Management to execute evidence based action at all levels of the health system. There is an increasing recognition for the need of sound strategic information to assess the disease burden, to prioritize the strategies planned, to measure and evaluate the results and to promote the accountability in countries when they scale up their HIV response towards universal access. Global Fund and United States President's Emergency Plan For AIDS Relief emphasize the importance of performance-based programme management

and implementation and attention to the cost-effectiveness of different strategies as determinants for the disbursement of funding.

Many activities are essential to generate strategic information necessary for the effective Programme Management in order to guide the HIV response in the health sector. The key activities that generate strategic information in relation to HIV response towards the universal access are;

1. **HIV Surveillance:** HIV Surveillance provides essential data to understand the magnitude and determinants of the epidemic in a country, monitor trends and develop strengthen/implement appropriate interventions.

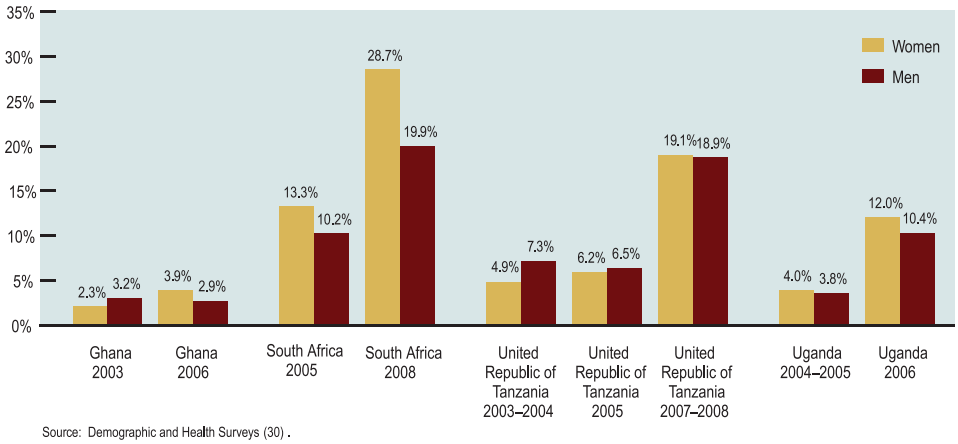
2. **Monitoring and Evaluation:** Monitoring and Evaluation is essential to track availability, coverage, outcome and impact of health sector interventions in order to improve their effectiveness and ensure accountability.

3. **Operational Research:** Operational Research is a key component of the learning by doing approach to scale up, by linking research to policies and practices and providing evidence to improve programmes.

Since the HIV was first recognized, approaches and methodologies to monitor the epidemic and the response have continuously improved. Hence the world is better equipped with the information than ever to estimate HIV prevalence, rate of new infections and to evaluate the national responses.

HIV surveillance: HIV surveillance is the cornerstone of knowing an epidemic and designing a response. WHO and UNAIDS continued to provide guidance and technical support to countries to strengthen their HIV surveillance systems. An increasing number of countries conducted population based demographic and health surveys with HIV testing. Five countries conducted at least two population based nationally representative surveys by 2008. Therefore, those countries equipped with data on regular basis will enable to assess trends over the years. Additional ten countries have to conclude their national surveys during the period 2009 to 2010.

Figure 16: Percentage of women and men receiving HIV test and its results in the 12 months preceding the survey in countries with repeat population surveys 2003 - 2008



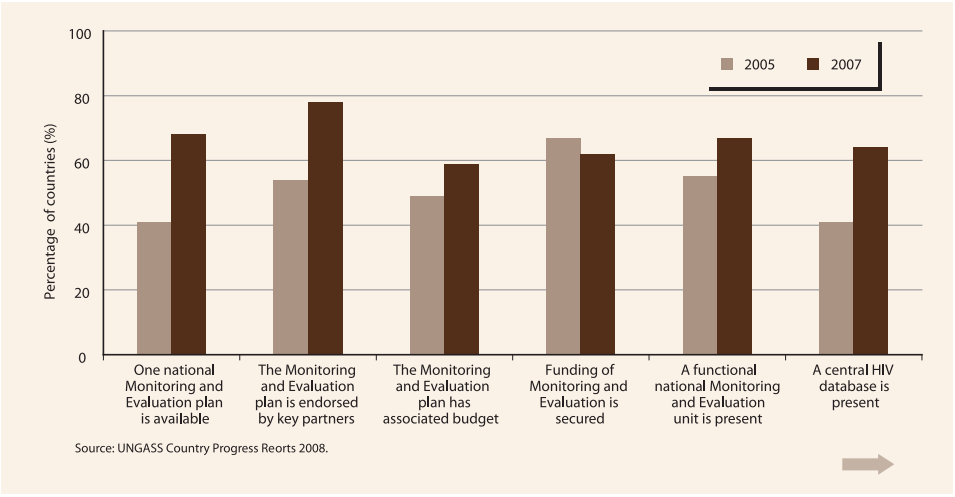
Source: Demographic and Health Surveys (30) .

Biological and behavioural surveillance of most at risk population groups is critically important for programme planning. UNAIDS and WHO are in the process of developing guidance on conducting surveillance among most at risk population groups. Of 149 low and middle income countries, 41 reported that they had conducted systematic surveillance of HIV among IDUs, 44 countries among MSM and 65 countries among sex workers.

Scaling up of access to antiretroviral treatment also draws attention to the importance of cohort analysis in collecting, compiling and analyzing data to monitor the outcomes and impacts of expanding programmes. Three interlinked patient monitoring systems on HIV care /antiretroviral therapy, Maternal Child Health /PMTCT and HIV/TB being developed jointly by WHO, UNICEF, UNAIDS and CDC, USA provide a standardized set of tools to help countries in improving patient monitoring and show evidence of results. Figure 15 emphasizes the importance of conducting regular population based surveys.

Monitoring and Evaluation: On the basis of the "Three Ones" principles for the effective country level action, countries own improved coordination of national stakeholders under a single monitoring and evaluation framework. Figure 16 shows the progress made by the countries in possessing a central HIV database from 2005 to 2007 and the several indicators related to the monitoring and evaluation.

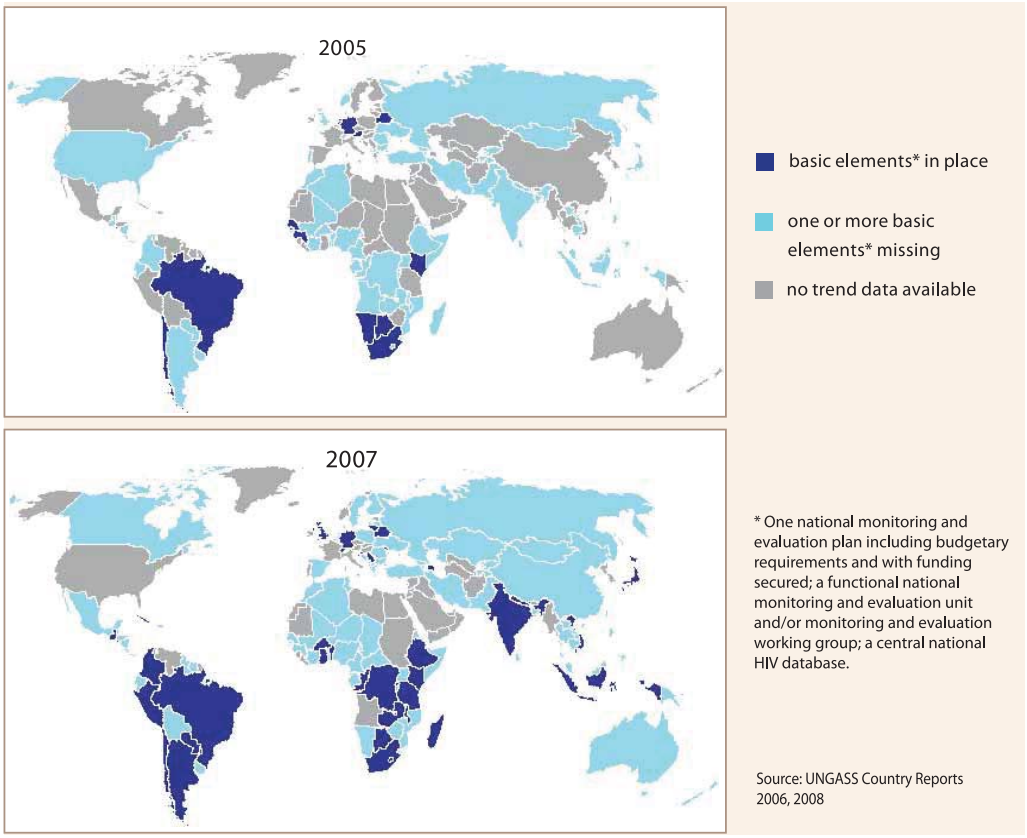
Figure 17: Percentage of countries with monitoring and evaluation components in place 2005 -2007



The Global Fund to fight AIDS, Tuberculosis and Malaria has played a key role in driving improvements in national monitoring and evaluation systems. Hence countries possess stronger systems for monitoring and evaluation as well as improved methods to track key aspects of the epidemic. Figure 17 shows the global trends in strengthening monitoring and evaluation systems.

Reported expenditures on monitoring and evaluation range from 0.1% of national HIV expenditures to 15.6%. In 54% of the countries monitoring and evaluation activities are exclusively financed through external sources. Hence, financing for monitoring and evaluation raises concerns about the sustainability of this essential function in future.

Figure 18: Global trends in monitoring and evaluation 2005 – 2007



(Source: UNAIDS, Global AIDS Report 2008)

Remarkable improvements in national monitoring and evaluation capacity are evident through out the world. However, there are critical gaps and weaknesses remain. One of the significant weaknesses is that more than 33% of the countries with a monitoring and evaluation plan have no centralized HIV database. In order to build the national capacity, it is essential to provide strategic information for decision making on policies and programmes, including HIV surveillance.

Operational Research: Operational research for learning by doing is an equally important component of strategic information, linking research to policies and practices and providing evidence to the betterment of the programmes. Countries have become more interested in incorporating operational research into their efforts in scaling up of HIV counseling and testing, prevention, treatment and care. As a response to this increasing demand, WHO is providing the technical assistance and already developed the tools to formulate and implement operational research projects. Global Fund is funding the monitoring, evaluation and research activities.

3.3 SAARC Regional Progress in HIV/AIDS prevention and Control

HIV/AIDS, being the single greatest reversal in human development in modern history has heightened global consciousness on health disparities. No disease in the history has obtained a comparable mobilization of political, financial and human resources. Therefore HIV/AIDS continues to be a major global health priority.

Although important progress has been achieved in preventing new HIV infections and in lowering the annual number of AIDS related deaths, the number of people living with HIV/AIDS continues to increase.

One of the time bound pledges of the Millennium Development Goals is, to begin to reverse the HIV epidemic by the year 2015. In order to reach that goal, the SAARC Region is also moving currently towards providing the universal access to HIV prevention, treatment, care and support for those who need them. As HIV is likely to remain a major public health problem for years to come, renewed political and financial commitment is needed from national governments as well as partners. SAARC TB and HIV/AIDS Centre, Nepal is committed to support its eight Member States in their efforts to contain HIV/AIDS burden by coordinating with the National efforts taken by the National AIDS Control Programmes of the Member States.

Progress achieved by the Member States in HIV/AIDS prevention and control could be measured in following aspects.

1. HIV/AIDS Prevention
2. HIV counseling and testing
3. Treatment, care and support
4. Strategic information and programme management

3.3.1 HIV/AIDS Prevention

All Member States of SAARC Region are committed to curb the HIV epidemic in their territories. The overall HIV prevalence rate in the region remains as less than 1%. However, differences exist between countries and also in the different regions of the same country. In some parts of India, Nepal and Sri-Lanka, HIV prevalence is decreasing or stabilizing, however, pockets of high transmission remain. Prevention is the mainstay of the strategic response to HIV/AIDS in all Member States of the SAARC Region as less than 1% of the population in the region is infected with HIV and the rest is uninfected. HIV epidemic in a country is a mixture of diverse epidemics in diverse high risk groups.

The trend of the HIV prevalence in the SAARC Region shows disproportionately higher incidence of the HIV infection among certain population groups. The findings of the HIV surveillance data of the Member states shows Commercial Sex Workers (CSWs), Men who have Sex with Men (MSM), Injecting Drug Users (IDUs) and Migrant workers have higher incidence of HIV infection. To gain control over HIV/AIDS spread, effective targeted interventions are already directed for most at risk populations in the Member States of the SAARC Region according to the prevailing high risk groups. Therefore, Member States are carrying out different but effective interventions to curtail the HIV/AIDS burden from the Region.

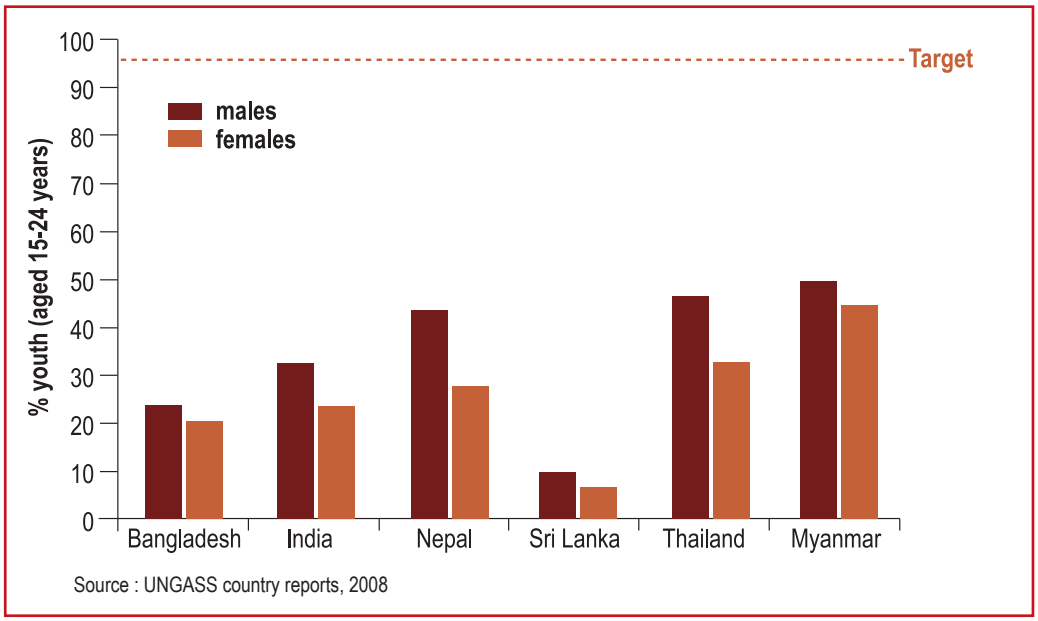
A. Prevention of Sexual Transmission of HIV:

More than 50% girls in Bangladesh, India and Nepal are married before they attain 18 years of age. A significant proportion of HIV infections are occurring among women who are married acquiring the infection from the infected spouse. Physiologically, young people are more vulnerable to sexually

Transmitted Infections including HIV than adults and girls more than boys. Gender imbalances, societal norms and economic dependence contribute to the increased risk. Lack of access to correct information, tendency to experiment and an environment which makes discussing issues around sexuality taboo adds to their vulnerability. National AIDS Control Organization of India reports that almost 73% of young people in India have misconceptions about modes of HIV transmission.

All eight member states of the SAARC Region have taken measures to improve the understanding on HIV among sexually active people particularly among young people in order to adopt the healthy behaviours. An accurate understanding of both the risks of HIV transmission and the prevention is a prerequisite to risk reduction. To accrue the adequate understanding, people need basic knowledge on HIV prevention.

Figure 19: Percentage of young women and men aged 15 – 24 years with correct knowledge of HIV/AIDS, South-East Asia Region, 2007



Source : UNGASS country reports, 2008

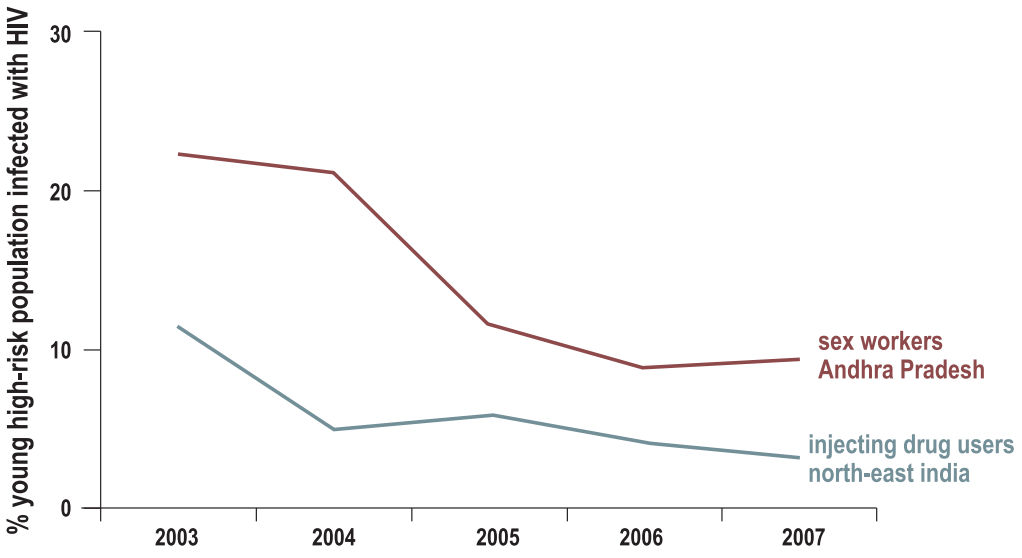
According to the findings of the country reports sent in 2007 for the UNGASS indicator 13 (Percentage of young women and men aged 15 – 24 years who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission), less number of youth in Bangladesh (22%), India (28%), Nepal (32%) and Sri-Lanka (8%) had the adequate knowledge on HIV/AIDS. The findings for Afghanistan, Bhutan, Maldives and Pakistan were not available in the UNAIDS Global AIDS Report 2008. Figure 18 illustrates the percentage of young women and men aged 15 – 24 years with correct knowledge on HIV/AIDS in South East Asia. The levels achieved by the Member States were far more behind the 95% target set by the United Nations General Assembly Special Session on HIV/AIDS.

According to National Behavioural Sentinel Surveillance Surveys, the proportion of youth who had sex before the age of 15 years was low in Member States of SAARC Region. Delay in sexual debut is recognized as one of the important HIV preventive approaches among youth population. Some of

the SAARC Member States reported very low levels of early sexual debut before the age of 15 years among their youth population in 2007 (UNGASS indicator 15). The proportion of youth reported of having early sexual debut before the age of 15 years for India was 3% and that of Bangladesh was 2.3%.

Data of National Family Health Survey-3, India indicate a very low HIV prevalence among young people and it is 0.1% in the 15 – 24 years age group. HIV prevalence was much higher among urban youth (0.14%) than rural youth (0.09%). Across the five high HIV burden states in India, HIV prevalence was highest in Manipur (0.39%), followed by Andhra Pradesh (0.37%) and lowest in Tamil Nadu (0.13%). In Uttar Pradesh, which is a low burden state, 0.02% of youth were infected. Figure 19 depicts the HIV prevalence among youth belongs to high risk groups in India 2003 – 2007.

Figure 20: HIV prevalence among high-risk populations (aged 15 – 24 years) in parts of India, 2003 - 2007



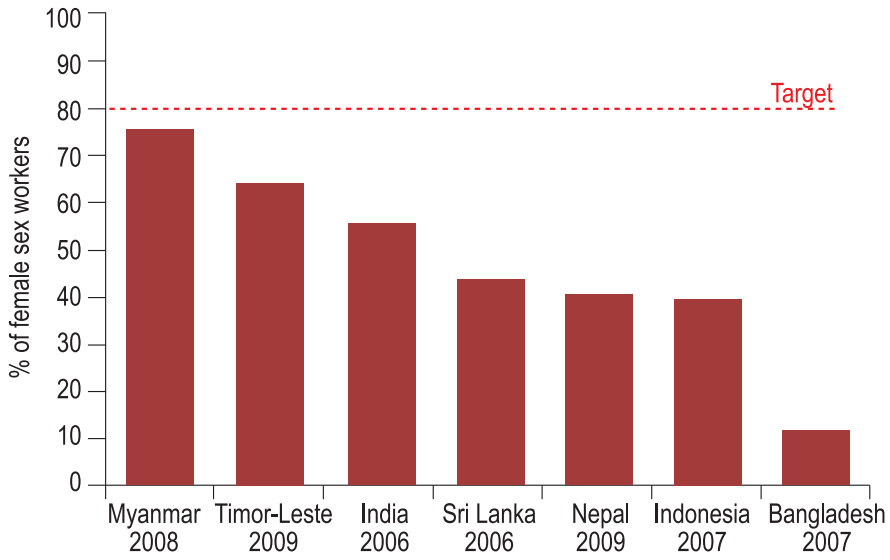
Source : Sentinel surveillance date reported bt National AIDS Control Organization, India.
Sample size is based on nationally approved protocols. Data included from consistent sites

(Source: World Health Organization, Regional Office for South-East Asia. HIV/AIDS in the South-East Asia Region, 2009, New Delhi)

All Member States of the SAARC Region recognize commercial sex as a key driver of the HIV epidemic and have launched targeted interventions to prevent HIV infection among sex workers. Figure 20 shows the percentage of sex workers reached by prevention programmes in some of the countries of SAARC Region in past few years. The under mentioned key components were considered for the targeted interventions for sex workers.

- Advocacy to create an enabling environment
- Promotion of acceptability and accessibility of sexual health services through peer outreach
- Promotion of condom supply and its usage

Figure 21: Percentage of sex workers reached by prevention programmes in the past year, South-East Asia Region



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

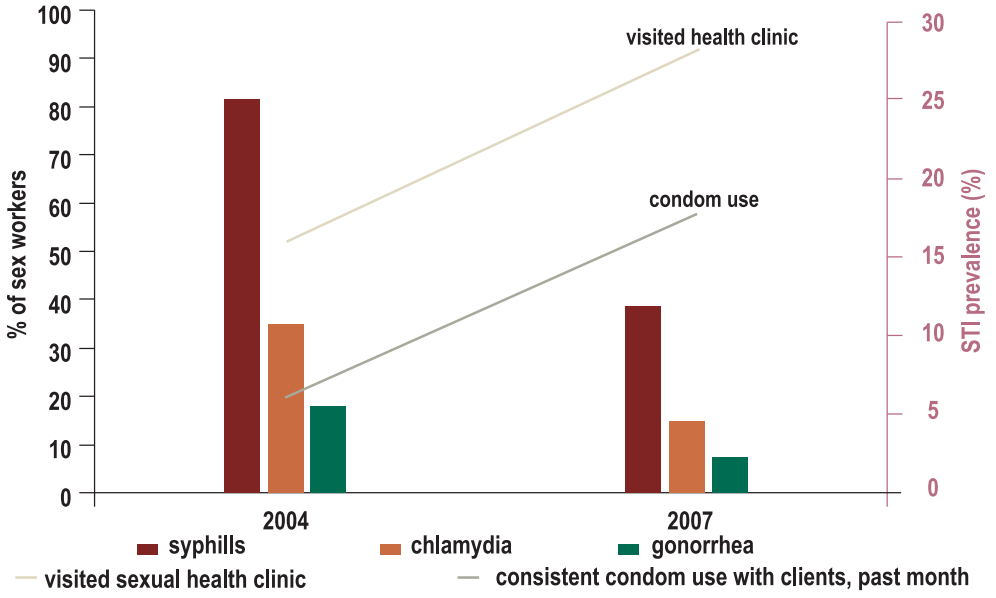
(Source: World Health Organization, Regional Office for South-East Asia. HIV/AIDS in the South-East Asia Region, 2009, New Delhi, 2009.)

Sonagachi sex worker empowerment project in West Bengal in India can be cited as one of the best practices for HIV prevention among sex workers in the SAARC Region. This is a sex worker cooperative which lobbies for the recognition of sex workers rights and legislation, runs literacy and vocational programmes and provides micro-finances in order to empower sex workers. This project increased condom use during commercial sexual encounters and decreased sexually transmitted infections among sex workers.

As in Sonagachi project, Avahan India AIDS Initiative also has a positive impact by increasing condom use and decreasing the prevalence of sexually transmitted infections among sex workers in six high HIV burden Indian states. This initiative has scaled up interventions for sex workers in six high HIV states by using community led HIV prevention approach. Figure 21 highlights the impact of this community-led HIV prevention approach in Mysore, India from 2004 to 2007 period.

In Bangladesh, targeted interventions implemented with the help of NGOs have kept HIV prevalence below 1% among sex workers and their clients. According to the surveys conducted, the percentage of sex workers reached with prevention services was 12% in Bangladesh. Interventions for sex workers are implemented mainly through a network of Government Sexually Transmitted Infection Clinics in Sri-Lanka. Approximately, 30% of sex workers in the South-East Asia reported having received an HIV test in the past 12 months.

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



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

Almost all countries in the Region have criminal sanctions against "same sex" sexual relationships that present considerable barrier to reach men who have sex with men by the HIV prevention programmes. A bill passed in Nepal recently recognized transgender as the "Third Gender". In 2009, the Delhi high court ruled that sex between two consenting same-sex adults should not be considered as a criminal behaviour. Majority of the countries in the Region have considered MSM as a core group for interventions in their national strategic plan. However, coverage of MSM reached by prevention interventions and sexual health services is low in the Member States.

India has made progress in scaling up interventions for MSM. Comprehensive operational guidelines for implementing HIV prevention interventions for MSM have been prepared. As of March 2009, 129 interventions were commenced exclusively for MSM. In Nepal, targeted interventions specifically designed for MSM in 11 districts out of 15 are handled by MSM population themselves. In Sri-Lanka, one large community based NGO and several smaller community based organizations manage by MSM themselves meet some of the sexual health needs of MSM population. Bhutan and Maldives have limited interventions for MSM. Less than 20% of MSM were covered by preventive services in Bangladesh, Maldives and Sri-Lanka. The coverage of MSM reached with such services in Nepal was 23% in 2008. The very low HIV programme coverage for MSM in the Region indicates the need to scale up the number and the quality of HIV prevention and care interventions for MSM, male sex workers and the transgender populations.

Afghanistan has both international and national NGOs involved in the provision of health services related to HIV/AIDS. NGOs play a key role in reaching most at risk and vulnerable groups. Several NGOs involve in targeted interventions to prevent HIV among high risk groups. Following the approval of the Strategic Plan in 2003, Ministry of Public Health established the National AIDS Control Programme in Afghanistan. Ministry of Public Health with National AIDS and STI Control

Programme developed a National Strategic Framework for HIV/AIDS 2006 – 2010. The goal of the National Strategic Framework for HIV/AIDS is to maintain the low prevalence of HIV in Afghanistan to reduce mortality and morbidity associated with HIV/AIDS. Targeted interventions have already been launched for most at risk populations including sex workers to ensure the universal access to behaviour change communication on HIV.

In Bangladesh, more than 380 NGOs have been implementing targeted interventions to prevent sexual transmission of HIV among high risk groups in different parts of the country. The National AIDS Control Programme recognized that NGOs are often in a better position than the public sector to reach high risk populations such as sex workers, their clients etc. Under the National Strategic Plan 2009 – 2011, National AIDS Control Programme, Bangladesh continues to conduct the intervention packages to Brothel based sex workers, Street based sex workers, Hotel and residence based sex workers, MSM, Male sex workers, Hijra sex workers and Clients of sex workers.

According to the National AIDS Control Organization in India, about 86% of HIV incidence in the country is from unprotected sexual intercourse. Hence the targeted interventions are aimed to effect the behaviour change through raising awareness among high risk groups and clients of sex workers and providing services on safe sex interventions. Nationwide mapping of high risk groups was completed during National AIDS Control Programme II. Targeted interventions among sex workers raise the awareness about health implications of unsafe sex. Hence, the targeted interventions reduce vulnerability of sex workers to STIs and HIV/AIDS through promotion of STI services, condom use, peer outreach for behaviour change communication, building enabling environment and linking prevention to HIV related care and support services. Similar type of targeted interventions formulated for MSM in India. In addition to the above services, they have been delivered the use of lubricants and appropriate condoms.

Maldives has so far experienced a low level HIV epidemic. However, the situation analysis conducted in 2006 has pointed out several factors that demonstrate vulnerability to an increasing epidemic. Maldives is in a unique position as all the HIV positives reported were believed to be acquired through unprotected sex. The implementation of the Strategic Plan for Prevention and Control of HIV/AIDS 2002 – 2006 was completed with a strong progress and commitment towards an expanded response. National Strategic Plan on HIV/AIDS 2007 – 2011 was developed by the National AIDS Control Programme of the Ministry of Health Maldives. The aim of this Strategic Plan is to ensure to achieve the Millennium Development Goals, the Declaration of Commitment from UN General Assembly Special Session and the SAARC HIV/AIDS Strategy. Hence National AIDS Control Programme, Maldives has been implementing Intensive Targeted Interventions particularly for sex workers, MSM, institutionalized populations and IDUs.

The National HIV/AIDS Strategy 2002 – 2006 was regarded as a milestone in national efforts to combat the epidemic in Nepal. The strategy was instrumental in accelerating the responses by expanding partnerships, broadening the scope and opportunities for innovative need driven programming and initiating the dialogue at all levels for policy and structural reformation process. The National strategic Plan 2006 – 2011 was formulated on the foundation built by the earlier strategic plan. The current

strategic plan aims to achieve the Millennium Development Goal (halt and begin to reverse the increasing trend of HIV by 2015). As a remedial measure to existing low coverage of services, low access to services and insufficient focus of the interventions, the National Strategic Plan 2006 – 2011 is designed to achieve 80% coverage with prevention, care and support services to most at risk populations and people living with HIV/AIDS.

In Pakistan, at least 54 NGOs involve in HIV/AIDS awareness and prevention interventions among sex workers, truck drivers and other high risk groups. However, it is noted that these NGOs are reaching less than 15% of the vulnerable population. Under the National HIV/AIDS Strategic Framework I, the National AIDS and STD Control Programme of Pakistan launched the Enhanced HIV/AIDS Control Programme since 2001 in which they initiated the expansion of interventions for vulnerable populations. These activities are further consolidated with the help of the National HIV/AIDS Strategic Framework II 2007 – 2012.

External review of the STD/AIDS response in Sri-Lanka in 2006 found that the reach of targeted prevention programmes directed at sex workers and MSM remained low and without sufficient focus. Hence, the targeted interventions carried out prior to 2006 had no intensity required to produce sufficient behaviour change among high risk populations in order to avert the emergence of possible concentrated epidemic. As a result of above findings, the National Strategic Plan 2007 – 2011 has been formulated in a manner to serve as the framework for the development of a district based operational planning. Therefore, the current strategic plan exerts the highest priority for HIV prevention interventions for sex workers in each district in the island.

Bhutan has demonstrated a strong political commitment to preventing and controlling the spread of HIV. Ninth Five – Year Plan of the Royal Government of Bhutan has identified HIV/AIDS and STI prevention and control as one of the most important programmes for addressing emerging health issues and promoting better health for women and adolescents in Bhutan. As Bhutan is also a country with low HIV prevalence, the National AIDS and STI Control Programme of Ministry of Health, Bhutan has developed a Technical Strategy for Prevention and Control of Sexually transmitted Infections in 2008. With the help of this strategy, Bhutan is focusing on controlling STIs and taking that as an effective strategy for reinforcing the prevention of HIV.

Prevention and Control of Sexually Transmitted Infections is of public health importance on its own and as a strategy to reduce the HIV transmission. National HIV/AIDS Strategic Plan of all Member States has given priority to control STIs in order to contain the HIV/AIDS epidemic in the region. Almost all Member States in the Region have national guidelines for management of sexually transmitted infections and ensure uniform treatment provided by all practitioners. Self medication and direct over the counter purchases from pharmacies is a common form of treatment of STIs in the Region.

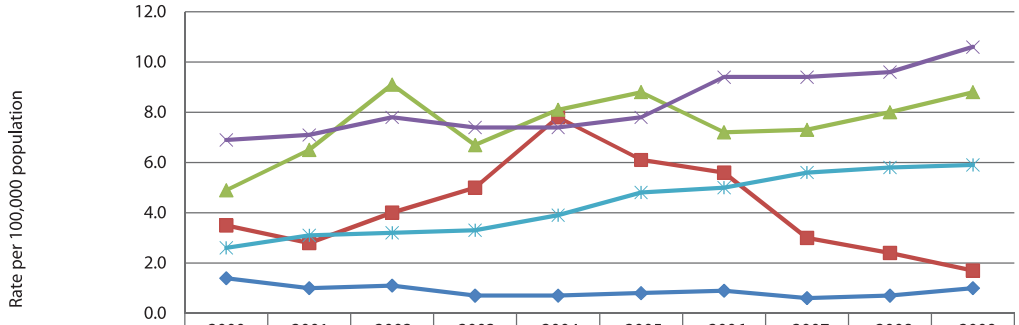
In Bhutan, the National AIDS and STI Control Programme has made strong initial efforts to strengthen the HIV prevention within a broader context of controlling STIs. Hence, Bhutan has initiated to expand the availability of STI Syndromic Case Management in all health facilities with trained health workers and STI drugs in stock under the National Strategic Plan launched in 2008.

In India, the Ministry of Health and Family Welfare has adopted a policy to integrate STI prevention and management services within the existing reproductive health services. These services are being delivered through a network of public health facilities ranging from Primary Health Centres to District Hospitals to Medical Colleges. The clinics established at targeted intervention sites are offering services for high risk and bridging populations. In 2008 – 2009 period, approximately, 66, 700, 000 STI/Reproductive Tract Infection (RTI) episodes were managed through National STI Control Programme in India.

In Nepal, STI services have expanded from 132 clinics in 2006 to 155 in 2007. Approximately, half of these clinics are run by NGOs.

Sri-Lanka has one of the best STI Control Programmes in the SAARC Region. Clinical services for STIs in Sri-Lanka are high quality and well organized among a well-established network of STD clinics at provincial and district levels. These clinics provide both curative and preventive health services. Therefore the staff members of these clinics have both clinic and community outreach responsibilities. STD clinic attendance increased following the activities conducted to raise the awareness of STIs and HIV within the communities. STD Clinic staff collaborate the activities directed towards most at risk populations with that of the NGOs dealing with high risk groups such as sex workers, MSM etc. Figure 22 shows the rates of new episodes of STIs reported in Sri-Lanka since 2000 to 2009.

Figure 23: Rate of New episodes of Sexually Transmitted Infections reported in Sri-Lanka 2000 - 2009



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Early Syphilis	1.4	1.0	1.1	0.7	0.7	0.8	0.9	0.6	0.7	1.0
Gonorrhoea	3.5	2.8	4.0	5.0	7.8	6.1	5.6	3.0	2.4	1.7
Non Gono, Infec.	4.9	6.5	9.1	6.7	8.1	8.8	7.2	7.3	8.0	8.8
Genital Herpes	6.9	7.1	7.8	7.4	7.4	7.8	9.4	9.4	9.6	10.6
Genitial Warts	2.6	3.1	3.2	3.3	3.9	4.8	5.0	5.6	5.8	5.9

(Source: UNAIDS, UNGASS Country Progress Report, Sri-Lanka, 2010)

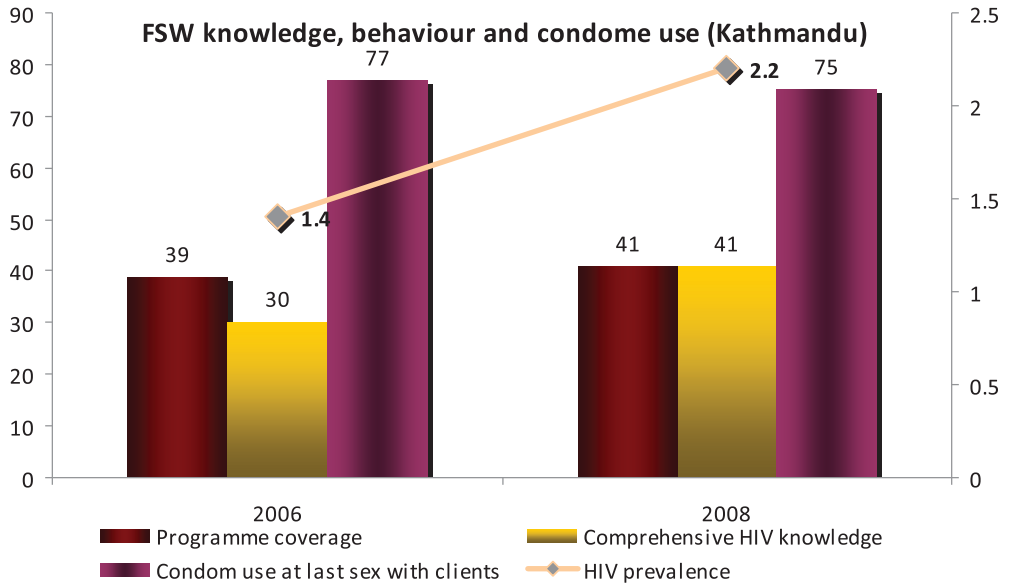
Some of the important challenges in implementing STI Programmes have been recognized. They are the lack of laboratory capacity for diagnosis at decentralized centres, low acceptability of the clients to the existing services, lack of monitoring and evaluation, interrupted supply of effective drugs and increasing resistance to currently available drugs.

To decrease the transmission of HIV among commercial sex networks, it is imperative to achieve high rates of condom use among clients of sex workers. When condom usage rates among clients of

sex workers reach >80%, transmission of STIs and HIV decreases markedly. The 100% Condom use Programme in Thailand markedly reduced the reported number of new episodes of STIs and HIV. All the Member States in SAARC Region have committed to scale up the condom use among high risk groups by implementing the strategies planned in their National HIV/AIDS Strategic Plans.

Approximately 86% of HIV transmission in India was reported to be acquired through unprotected sexual intercourse. Hence, National AIDS Control Organization (NACO) advocates and promotes condom use as a safe sex practice for prevention of STI/RTI and HIV and as a protection to prevent unwanted pregnancies. Condom promotion under NACP-I & II increased the awareness on the importance of consistent condom use in HIV/AIDS prevention. NACO has launched a number of approaches in promotion of condom use such as installation of condom vending machines, Introduction of female condoms, thicker and more lubricated condoms for MSM etc. The availability of condoms free of charge, subsidised supply of condoms and availability of commercial brands were also increased in India.

Figure 24: HIV prevalence, Programme Coverage, Knowledge and Condom Use among female sex workers, Nepal 2006 - 2008



(Source: UNAIDS, UNGASS Country Progress Report, Nepal 2010)

The high level of condom use reported by the sex workers in India particularly in high HIV burden states can be taken as one of the major successes achieved by NACO. In 2009, levels of reported condom use with last paying client reached 100% in Andhra Pradesh and exceeded 99% in Karnataka and Maharashtra. However, consistency of condom use with nonregular paying clients remained at lower levels ranging from 68% in Uttar Pradesh to 83% in Andhra Pradesh.

There are estimated 30,000 female sex workers operating in Nepal. Of them 52% are illiterate or have no formal schooling. The targeted interventions have focused on the female sex workers in Kathmandu valley and Highway districts. In 2009, 75% of the female sex workers and 37.8% of male sex workers have reported that they used a condom with their most recent client. Of the MSM, 75.3%

have reported that they used a condom during last anal sex with a male partner. Figure 23 highlights the condom use among female sex workers in Nepal from 2006 to 2008.

Almost 96% of HIV infection in Sri-Lanka is through the sexual transmission, condom promotion has been accelerated as one of the prioritized prevention measure. Consistent condom use has been promoted through the Maternal and child health programs in Sri-Lanka focusing on dual protection particularly emphasizing on family planning. Condoms are available free of charge through the network of STD clinics through out the country to STD clinic attendees and to most at risk populations. National STD and AIDS Control Programme in Sri-Lanka provides condoms to the NGOs working with most at risk populations and to the uniformed services. Of the street-based sex workers 81.9% reported that they have used a condom during last sexual exposure. Only 63.7% MSM reported the use of a condom during last sexual exposure with the non-regular male partner.

There has been an increase in the distribution of condoms in Sri-Lanka as 11.5 million condoms distributed in the year 2000 and in 2008 it was 13.7 million excluding the commercially sold condoms in the marketplaces. In 2009, approximately 1.3 million condoms were distributed by National STD and AIDS Control Programme, Sri-Lanka to STD clinics, armed forces etc. The family Health Bureau (FHB), Sri-Lanka has purchased 10.6 million condoms in 2009. The FHB promotes the use of condoms for family planning through the public health midwives and public health inspectors of the primary health care team.

It is important to engage sex workers, IDUs, MSM in outreach programmes and important to take measures to empower them to initiate and practice a set of common norms and behaviors. In Sonagachi, India, one of the oldest and largest red light areas of Kolkata, the empowerment of sex workers has made a significant improvement in condom use during commercial sexual encounters. However, in almost all Member States, discussing the use of condoms is still a taboo subject.

B. Prevention of HIV transmission through Blood and Blood products:

Millions of lives are saved through blood transfusions. However, this life saving measure is estimated to be responsible for 5 – 10% of all HIV infections worldwide. Hence, all the countries should pay their attention and should take additional efforts to use blood transfusion safely and rationally. The risk of HIV transmission through a blood transfusion is greater than 90% because a large volume of virus can be transferred into a person from an infected unit of blood. Therefore, the effective screening of donated blood for HIV and other blood borne infections before the transfusion is a highly cost effective strategy. Table 04 shows the percentage of donated blood screened for HIV in a quality assured manner in Member States of the SAARC Region from 2006 to 2007 and 2008 to 2009.

Table 04: Percentage of donated blood units screened for HIV in a quality assured manner in Member States of the SAARC Region 2006 – 2007 and 2008 - 2009

Country	*Percentage of screened blood units in accordance with quality assurance 2006 - 2007*	*Percentage of screened blood units in accordance with quality assurance 2008 - 2009*
Afghanistan	39%	52%
Bangladesh	Data not available	100% (Considering only116 sampled blood transfusion centres)
Bhutan	50%	-
India	100%	100%
Maldives	0%	100% (Regardless of SOP)
Nepal	100%	38% (Considering External quality Assurance System)
Pakistan	87%	Limited data available
Sri-Lanka	42%	100%

(Data source: UNAIDS, Global AIDS Report 2008 and UNAIDS, UNGASS Country Reports, 2010)

In Afghanistan, Ministry of Public Health has developed a plan for strengthening the safe blood supply in the country. During 2008 and 2009, 31,239 blood units collected from 12 blood banks. Of them only 6 blood banks have screened the donated blood units in quality assured manner. No quality assurance monitoring available for private blood banks in Afghanistan till date. Usually, blood donors in Afghanistan are relatives of patients and all the donated blood units were screened for HIV and other Transfusion Transmissible Infections (TTIs).

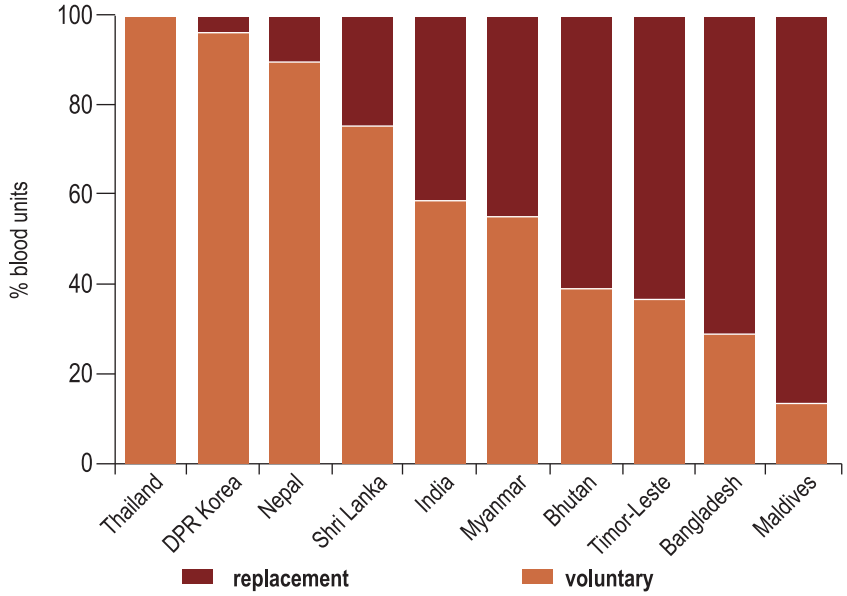
The blood safety in Bangladesh has been strengthened through the formulation of "Safe Blood Transfusion Regulations 2008". Screening for TTIs had been introduced in 2000. The National Policy and Strategy on Blood Safety was adopted in 2007 which defines minimum standards and requirements to be followed by the health care facilities. The efforts to promote voluntary blood donation and mandatory screening for HIV have remarkably reduced the paid donations from 70% in 2001 to 16% in 2006. Currently, replacement donors mainly the relatives of the patients donate 70% of the donated blood.

In India, access to safe blood is mandated by law and is the primary responsibility of National AIDS Control Organization. The specific objective of the blood safety programme is to ensure the reduction in the transfusion associated HIV transmission to 0.5% while making available safe and quality blood with in an hour of requirement in a health facility. However, there is a serious mismatch between demand and availability of blood in the country. National AIDS Control Organization is committed to bridge the gap in the availability and improve the voluntary blood donation, under NACP-III by planning a series of strategies. The voluntary blood donation strategy has increased the voluntary donations from 54% in 2006/2007 to 73.4% as of September 2009. West Bengal, Maharashtra, Tamil Nadu, Gujarat, Tripura, Mizoram, Chandigarh and Himachal Pradesh have reported over 75% of voluntary donations as of September 2009. Government of India has invested in establishing Centres of Excellence in Transfusion Medicine and a National Plasma Fractionation Centre.

In Sri-Lanka, the National Blood Transfusion Service is the Government organization responsible for providing safe blood supply to the nation. The blood safety policy was introduced in 1988 by

the Government of Sri-Lanka and has helped the country to maintain low level of HIV transmission via blood and blood products. All donated blood units in the public sector are screened for TTIs by following the Standard Operation Procedures. Blood units that test positive are destroyed and a sample sent to the Central STD Laboratory for confirmation. If confirmed, the donors are contacted by the Central STD clinic for follow up. So far only three cases of transfusion related HIV infection have been reported and all those cases were reported before the year 2000.

Figure 25: Percentage of Voluntary Blood Donation South-East Asia Region, 2007



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

(Source: World Health Organization, Regional Office for South-East Asia. HIV/AIDS in the South-East Asia Region, 2009, New Delhi, 2009.)

A remarkable progress is being made towards achieving 100% voluntary non-paid donations in Sri-Lanka. Total voluntary donations per year have increased from about 154,000 units in 2001 to 267,773 units in 2009. Currently, the non-paid voluntary donations are approximately 86% and replacement donations are 14%. Figure 24 highlights the progress achieved by selected countries in South-East Asia in recruiting voluntary blood donors in 2007.

National Blood Transfusion Service developed “Guidelines for clinical use of blood” and a handbook of blood transfusion practice for nurses to improve the rational use of blood in hospitals. The National Blood Centre participates in External Quality Assessment programme conducted by the National Reference Laboratory in NSACP and National Reference Laboratory in Melbourne and Thailand.

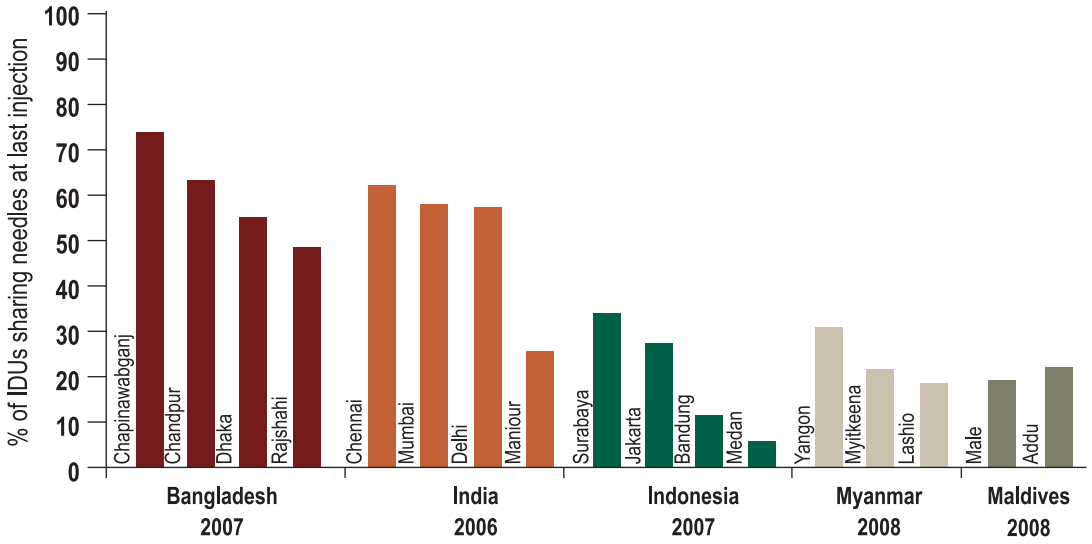
Use of contaminated equipment during injecting drug use represents an efficient means of HIV transmission, often leading to the rapid spread of HIV in localized networks of Injecting Drug Users (IDUs). Effective HIV prevention for IDUs involves ready access to substitution treatment for drug dependence and to sterile needles and syringes. Furthermore, the prevention programmes should help IDUs to reduce the risks of sexual transmission of HIV and link them to other related health and social services. This whole prevention package is introduced as Harm Reduction Programme.

IDUs are one of the identified core high risk groups in India for which targeted interventions are of critical importance. According to the findings of the behavioural sentinel surveys conducted from 2006 to 2008, Bangladesh and India had the highest rates of needle and syringe sharing. Figure 25 illustrates the percentage of injecting drug users who shared injecting equipment during last injection in selected cities of Bangladesh, India and Maldives. In Manipur, India, rates of sharing injecting equipment during last injection declined from 55% in 2001 to 26% in 2006 and HIV prevalence had been halved from 39% in 2002 to 18% in 2007. According to the findings of the HIV Sentinel Surveillance conducted in 2007, among IDUs, Maharashtra (24.4%), Manipur (17.9%), Tamil Nadu (16.8%), Punjab (13.8%), delhi (10.1%), Chandigarh (8.6%), Kerala (7.9%), West Bangal (7.8%), Mizoram (7.5%) and Orissa (7.3%) have shown high HIV prevalence of >5%.

HIV interventions targeting the majority of IDUs can stabilize and even reverse the escalating HIV epidemic among them. In India, under the National AIDS Control Programme –III, needle and syringe exchange and oral substitution therapy are recognized as integral parts of the spectrum of harm reduction services which leading finally to abstinence from drug use. As a result of targeted interventions launched for IDUs mainly through the NGOs, the HIV prevalence trends among IDUs in Manipur, Nagaland and Chennai are on a decline, according to the findings of the HIV Sentinel Surveillance in 2007. However, there is a steady rise in Meghalaya, Mizoram, West Bengal, Mumbai, Kerala and Delhi. The overall HIV prevalence among IDUs in India was 13.3% in 2003, 10.16% in 2005 and 7.2% in 2007.

In Bangladesh, HIV prevalence among IDUs was comparatively low. However, it has grown five-fold from 1.7% in 2000 to 7.1% in 2007 in Dhaka. It is noteworthy that harm reduction interventions including large scale needle syringe programmes have been conducted since 1998 when HIV prevalence among IDUs was less than 1%. Majority of the harm reduction programmes in SAARC Region have had limited impact because they were implemented on a small scale. Since 1998 CARE Bangladesh, a Non-Governmental Organization (NGO), implements harm reduction programme in Bangladesh which includes needle/syringe exchange, condom distribution, abscess management and advocacy. By the end of 2004, the needle/syringe exchange programme covered 3900 IDUs in 19 districts of Bangladesh. However, this programme had little impact at the national level, as HIV prevalence continued to increase among IDUs from 1.4% in 1999 to 4.0% in 2002 to 4.9% in 2005 to 7.1% in 2007. National Harm Reduction Strategy was developed as a response to HIV/AIDS problem in Bangladesh. Figure 26 depicts the coverage of needle-syringe programme in selected countries of South-East Asia Region in 2008.

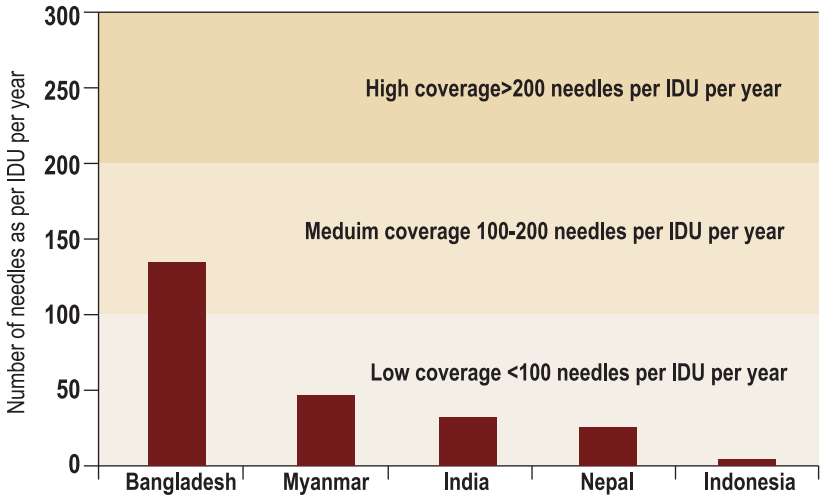
Figure 26: Percentage of injecting drug users sharing injecting equipment at last injection, selected cities, South-East Asia Region



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

(Source: World Health Organization, Regional Office for South-East Asia. HIV/AIDS in the South-East Asia Region, 2009, New Delhi, 2009.)

Figure 27: Coverage of needle-syringe programmes, South-East Asia Region, 2008

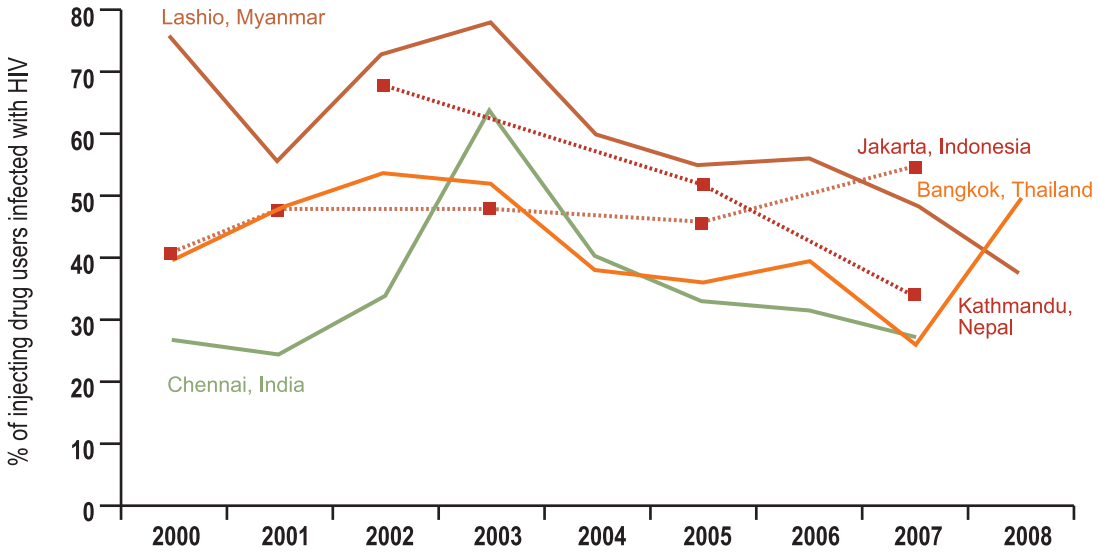


Source: Universal access country reports, 2008.
Note: Needles accessed through pharmacies and other retail are not included.

(Source: World Health Organization, Regional Office for South-East Asia. HIV/AIDS in the South-East Asia Region, 2009, New Delhi, 2009.)

In Nepal, harm reduction has remained the mainstay of the National Programme for IDUs. However, the coverage of the programme is very low. According to a NGO working on harm reduction in Kathmandu valley, approximately 200 (<30%) of 6500 IDUs attend the needle/syringe exchange programme. In Nepal, a reduction in sharing injecting equipment was evident. In Kathmandu, the rates of needle syringe sharing behaviour declined from 46% in 2002 to 7% in 2009. Concomitant declines of HIV prevalence among IDUs were noted from 68% in 2002 to 32.7% in 2005 to 21% in 2009. Figure 27 shows the trends in HIV prevalence among IDUs, in selected cities of South-East Asia Region from the year 2000 to the year 2008

Figure 28: Trends in HIV prevalence among IDUs, selected cities, South-East Asia Region, 2000 - 2008



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

(Source: World Health Organization, Regional Office for South-East Asia. HIV/AIDS in the South-East Asia Region, 2009, New Delhi, 2009.)

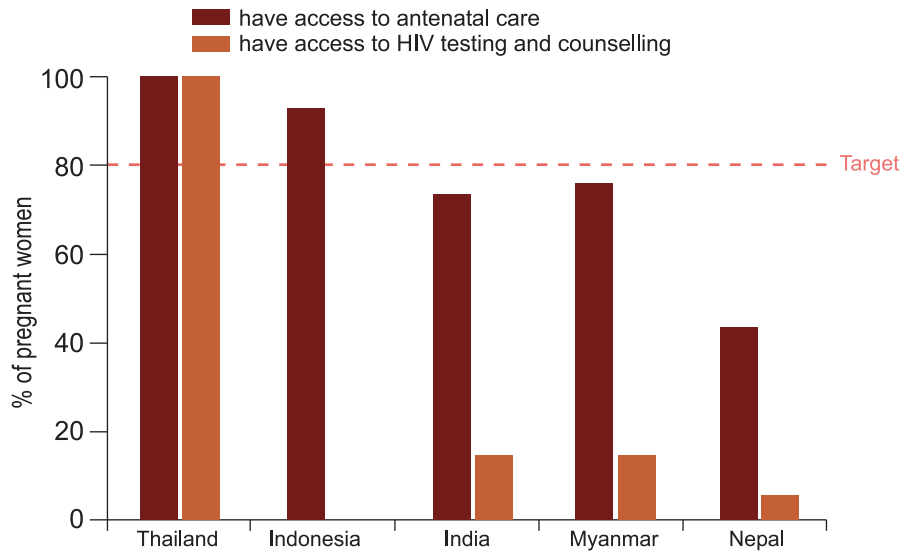
C. Prevention of HIV transmission from Infected Mother to Child:

HIV infection can be transmitted to the neonate during pregnancy, during delivery or through breast feeding. The risk of mother to child transmission can be significantly reduced through the complementary approaches of Anti-Retro Viral (ARV) regimens for the mother with or without prophylaxis to the infants, implementation of safe delivery practices and the use of safe alternatives to breast feeding. In the absence of any preventive interventions, infants born to and breastfed by HIV infected women have approximately a one in three chance of acquiring infection (30 - 35%).

All Member States of the SAARC Region are committed in scaling up HIV testing and counseling services to pregnant women, with provision of ARV prophylaxis or ARV treatment to women who require it for their own health, safer delivery care, infant feeding counseling according to the clear guidelines and HIV/AIDS care services for those who test positive for HIV. However, the coverage of PMTCT services in the SAARC region is very low as less than 5% of health care facilities that provide antenatal care also provide PMTCT services. In most of the countries in the SAARC Region, 45% to 100% pregnant mothers access antenatal care at least once during this pregnancy. Figure 28 emphasizes the significance of missed opportunities for the delivery of HIV testing for pregnant mothers attending antenatal care services in two high HIV burden Member States in SAARC Region, namely India and Nepal.

Still in India, Nepal and Bangladesh, the PMTCT services includes HIV testing and counseling, administration of a single dose of Nevirapine to the mother and the baby, safe delivery practices as well as infant feeding and counselling. The percentage of HIV infected mothers received ARV

Figure 29: Percentage of Pregnant Women with access to antenatal and HIV testing and counseling services, South-East Asia Region, 2008



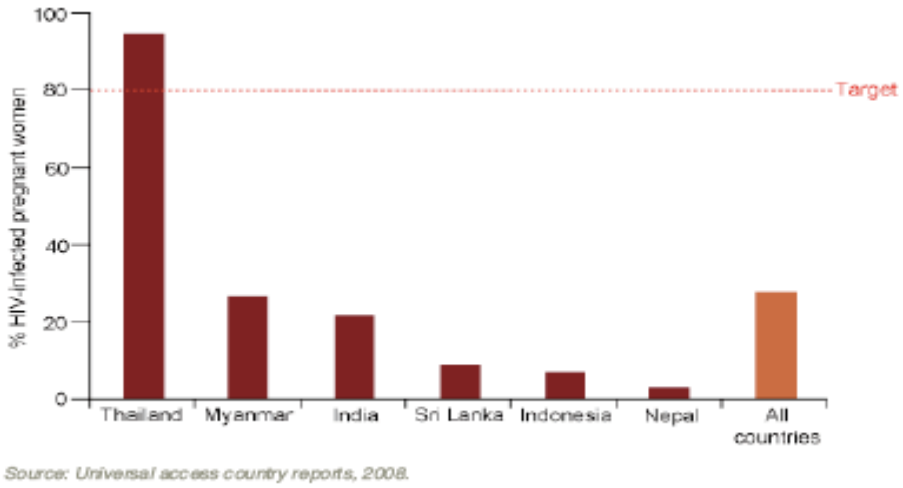
Source: Universal access country reports, 2008; World Health Statistics Report, WHO, 2009

(Source: World Health Organization, Regional Office for South-East Asia. HIV/AIDS in the South-East Asia Region, 2009, New Delhi, 2009.)

prophylaxis varies widely from 3.3% in Nepal to 22% in India in 2009. In India, there are plans to add a seven day zidovudine/lamivudine tail for all women who receive single dose nevirapine.

The prevention of mother to child transmission of HIV/AIDS programme (PMTCT) was started in India in the year 2000, at 10 teaching hospitals in the five high HIV prevalence states and which have now been designated as centres of excellence. As per the information given in the website of National AIDS Control Organization, there were more than 4000 Integrated Counseling and Testing Centres in the country as of July 2009, which offer PMTCT services to pregnant mothers. Of these counseling centres, 502 are located in Obstetrics Departments and Maternity Homes where the client load is mainly the pregnant women. Mother-to-child transmission (MTCT) of HIV accounts for 2.72 percent of the total HIV infection in India. In 2008, 4.2 million pregnant mothers were tested at 4817 public sector health facilities. Of them 19,986 were tested positive and 51% of them and their babies received ARV prophylaxis. This indicates the high level of loss to follow up after diagnosing as HIV positive. Figure 29 depicts the percentage of pregnant mothers with access to antiretroviral prophylaxis in India, Sri-Lanka and Nepal in 2008.

Figure 30: Percentage of Pregnant Women with access to ARV prophylaxis, South-East Asia Region, 2008



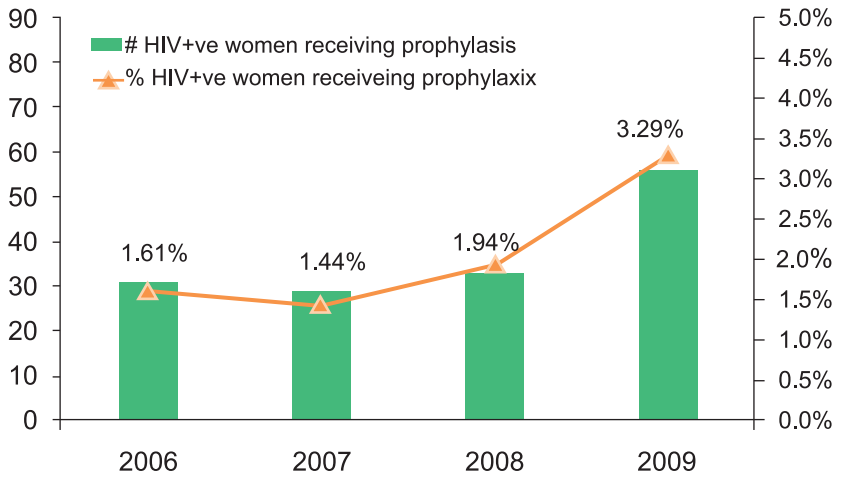
(Source: World Health Organization, Regional Office for South-East Asia. HIV/AIDS in the South-East Asia Region, 2009, New Delhi, 2009.)

In order to provide universal access to the PMTCT services further scale up is planned in India up to the community Health Centre and Primary Health Centre Level. National AIDS Control Organization (NACO) hopes to reduce the proportion of infants infected with HIV/AIDS by 50% by 2010.

Approximately 1700 pregnant mothers are in need of PMTCT in Nepal. In 2008, 33 pregnant mothers received single dose Nevirapine. In 2009, 41 received single dose Nevirapine, 21 received expanded regimens and 15 were on ARV treatment. Figure 30 shows the increasing trend of using ARV prophylaxis for PMTCT among pregnant mothers in Nepal from 2006 to 2009. However, the overall uptake of PMTCT services available as prong 1 and 2 is very low.

By December 2009, 17 PMTCT service sites were established in Nepal. In these sites, 81.47% pregnant women have received HIV counseling and testing. As of December 2009, a cumulative total of 187 pregnant mothers received antiretroviral treatment to prevent mother to child transmission in Nepal. Similarly, a total of 218 infants received antiretroviral treatment to prevent HIV transmission from their Mothers in Nepal at the end of December 2009.

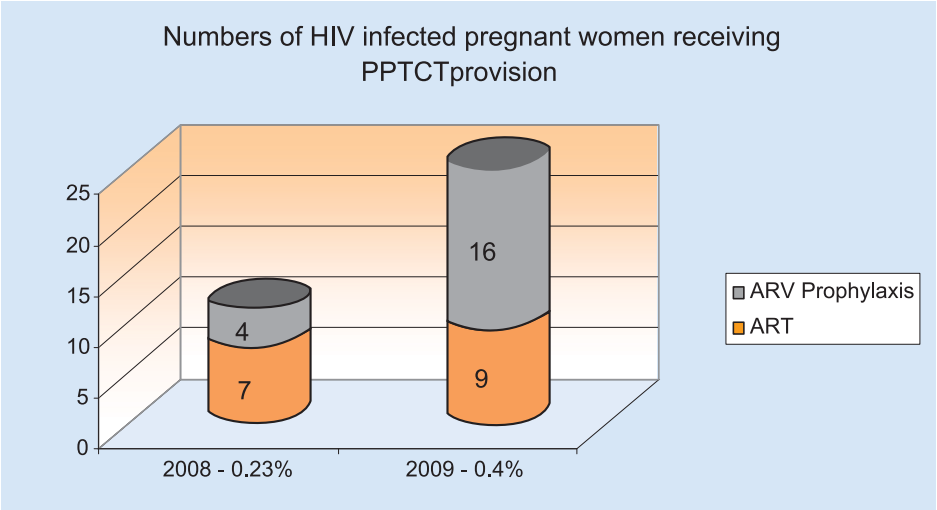
Figure 31: Uptake of PMTCT among HIV positive Pregnant Mothers in Nepal 2006 – 2009



(Source: UNAIDS, UNGASS Country Report, Nepal, 2010)

The PMTCT programme for HIV positive pregnant mothers was initiated in early 2007 in Pakistan where their programme is called as prevention of parent to child transmission (PPTCT) and there were 07 health facilities in major cities across the country providing the PPTCT services as of December 2009.

Figure 32: Uptake of PMTCT among HIV positive Pregnant Mothers in Pakistan 2006 – 2009



To prevent mother to child HIV transmission, cumulative total of 84 HIV infected pregnant mothers received antiretroviral drugs and delivered the babies. All the babies born were HIV negative. However, the total number of registered mothers is low as compared to the estimates. The estimates for the years 2008 and 2009 were 4783 and 5663 respectively. In 2008, 11 mothers availed PMTCT services from 5 centres across the country. In 2009 a total of 25 pregnant mothers registered in 7 PPTCT centres. The prophylaxis regimens in Pakistan are a combination of three ARV drugs. Figure 31 illustrates the annual trend of PPTCT services uptake in Pakistan.

Afghanistan has no PMTCT services established yet as the country considers the low prevalence of HIV currently. However, the ART treatment services were commenced in the year 2009.

In Bhutan 20 health care facilities provided the PMTCT services as of December 2009. A cumulative total of 9 pregnant mothers received antiretroviral drugs to prevent mother to child transmission up to December 2009. Bhutan used prophylactic regimens using a combination of two antiretroviral drugs. A cumulative total of 14 infants born to HIV infected mothers received antiretroviral drugs to prevent mother to child transmission.

In Bangladesh, a project on Prevention of Parent to Child Transmission (PPTCT) was started with the support of UNICEF from 2008 to 2010.The objective of the programme is to provide the full and comprehensive services related to PPTCT in Bangladesh including ARV prophylaxis and treatment. In 2008, VCT services were provided to 59 pregnant mothers of whom five were HIV positive. In 2009, services were provided to 79 pregnant mothers of whom 8 were HIV positive and received necessary treatment, care and support. Furthermore, in 2009, a technical committee on PPTCT and paediatric

HIV care, support and treatment has been formed in order to provide technical assistance to the development of PPTCT services and management of paediatric HIV care, support and treatment programme in Bangladesh.

In Maldives, pregnant mothers attending for antenatal care are screened for HIV with informed consent and need to sign a declaration form. They have freedom to opt out at their wish. In 2009, 3911 blood samples were tested and blood samples screened for PMTCT was 14% of the total number of blood samples tested in that year (3911/27753).

Sri-Lanka has very high antenatal care coverage as 99% of pregnant mothers access antenatal services during pregnancy and a well-established infrastructure, comprising of Public Health Midwives' service provision for every female in the reproductive age group in every community. In addition to that, the Government of Sri-Lanka considers antenatal services as the entry points for prevention of HIV. A PMTCT working group has developed PMTCT protocols and guidelines using four-prong approach of WHO/UNICEF. The four prongs considered are:

- Primary prevention of HIV for women of child-bearing age
- Prevention of unwanted pregnancy among HIV infected women
- Interventions to reduce mother to child transmission
- Care and support to HIV infected women, their children and family members

The paediatric antiretroviral doses and regimens are registered. PMTCT services have been piloted in two districts in 2005 – 2006. After counseling, over 90% of the pregnant mothers agreed to perform HIV test on them and all 3232 blood samples tested were HIV negative. Hence, raising the awareness on mother to child transmission, identifying the risk factors and use of "opt-in" approach for those with risk factors have been recommended as best practice in Sri-Lanka. Integration of PMTCT into Maternal and Child Health services and active involvement of obstetricians in the management of HIV positive pregnant mothers without stigma and discrimination are the main achievements during 2008 to 2009 period. The estimated total number of HIV positive pregnant women is less than 100.

In the year 2009, 5 antenatal HIV positive pregnant mothers were reported to the National AIDS Control Programme in Sri-Lanka. Of them a total of 4 mothers were on ART (02 on prophylaxis and 2 on treatment). The ARV prophylaxis involves the following

- Prepartum Zidovudine from 28 weeks of gestation
- Intrapartum Zidovudine + Lamivudine + a single dose of Nevirapine at delivery
- Postpartum Zidovudine + Lamivudine tail
- Neonates Zidovudine and Nevirapine syrups
- All babies born to HIV positive mothers enrolled in PMTCT services were formula fed.

The school based HIV/AIDS education through development of life-skills programme has included PMTCT to sensitize young boys and girls on the importance of preventing HIV infection in young men and women.

According to a latest WHO report, the estimated number of pregnant mothers living with HIV/AIDS needing antiretrovirals for PMTCT in the South Asia in the year 2008 was 52,000 with a range of 28,000 to 86,000. Of them only 10,800 HIV pregnant mothers in the SAARC Region received antiretrovirals for prevention of mother to child transmission in the year 2008. Therefore the coverage of PMTCT services in SAARC Region in the year 2008 was 21% (13% - 38%).

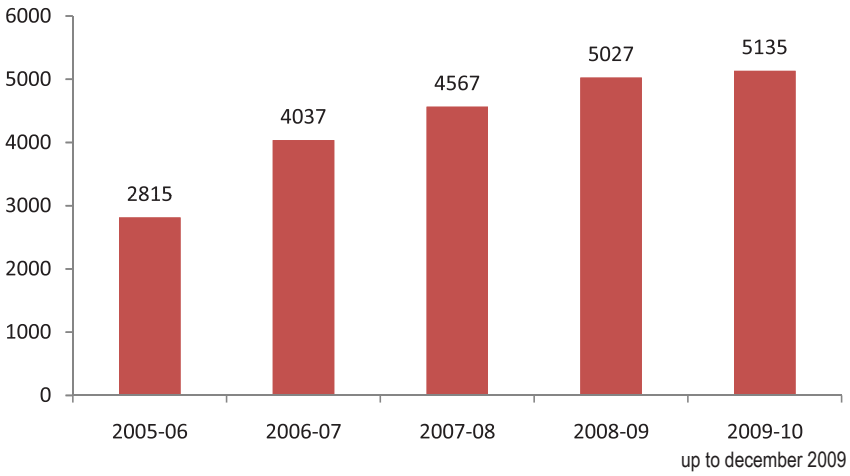
3.3.2 Counselling and Testing for HIV

HIV testing and counseling services are the gateway for HIV prevention, Care and treatment. The working towards the universal access of treatment, care and support requires many more millions of people to be tested for HIV and counseled in order to identify the infected persons who need the prevention, treatment, care and support services. The scaling up of ARV treatment is likely to generate a dramatic demand for HIV testing and counseling services. The benefits of the knowledge on HIV status can be seen at the individual level, community level and population level. However, the stigma and discrimination continues to plays a major role in stopping people from having the HIV test.

Because of the HIV associated stigma and discrimination as well as limited access to HIV testing and counseling services, the coverage of HIV testing and counseling services remains low in the SAARC Region. Almost all the Member States in the SAARC Region are expanding counseling and testing services by providing both voluntary counselling and testing and Provider initiated counseling and testing services. There is a national policy on counseling and HIV testing in the eight countries out of eleven in the South-East Asia Region.

Since 1997, HIV counselling and testing services were provided in India. Under National AIDS Control Programme – III (NACP-III), Voluntary Counselling and Testing Centres (VCTC) and services were remodelled and established the Integrated Counselling and Testing Centres (ICTC) to provide services to all clients under one roof. There were 5135 ICTC centres by the end of year 2009 in India. Under NACP-III, the target is to counsel and test 22 million clients annually by the year 2012. Figure 32 shows the scaling up of the testing services for HIV infection in India from 2005/06 to 2009/10 period.

Figure 33: Scale up of Integrated Counseling and Testing Services in India from 2005-06 to 2009-10



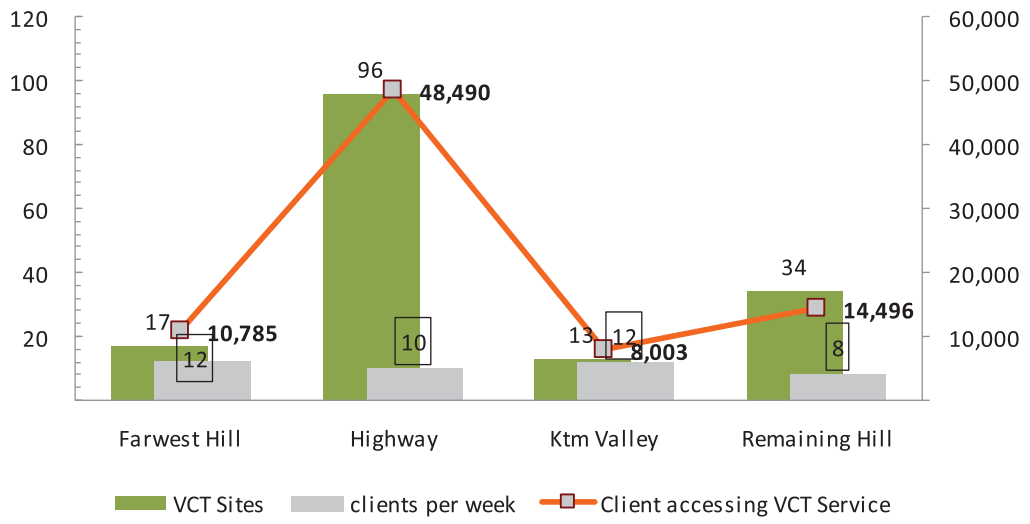
The number of people tested at these centres also has increased from 4 million in 2006 to 7.3 million in 2007. By 2008, 10.1 million were tested which was further scaled up by 3 million to reach a total of 13.4 million in 2009. This achievement was possible due to the concerted efforts taken to address certain barriers of the testing services in India.

As per the information given in the website of National AIDS Control Organization, approximately 13% of HIV positive people in the country are aware of their HIV status. The challenge before the National AIDS Control Organization is to make all HIV infected people in the country aware of their status, so that they can adopt a healthy lifestyle, access life saving care and treatment and help prevent onward transmission of HIV. Therefore, counseling and testing services are important components of prevention and control of HIV in the country.

In Nepal, the availability of VCT centres has increased through out the country from 7 in 2005 to 179 by December 2009. As a result, there is a 12% increase in the coverage for most at risk populations. But the utilization of these services by needy groups was still low in Nepal and needs more effective strategies to scale up the utilization of available services. Figure 33 shows the utilization of VCT services in the year 2009. According to the data available, utilization of VCT services varies greatly by regions.

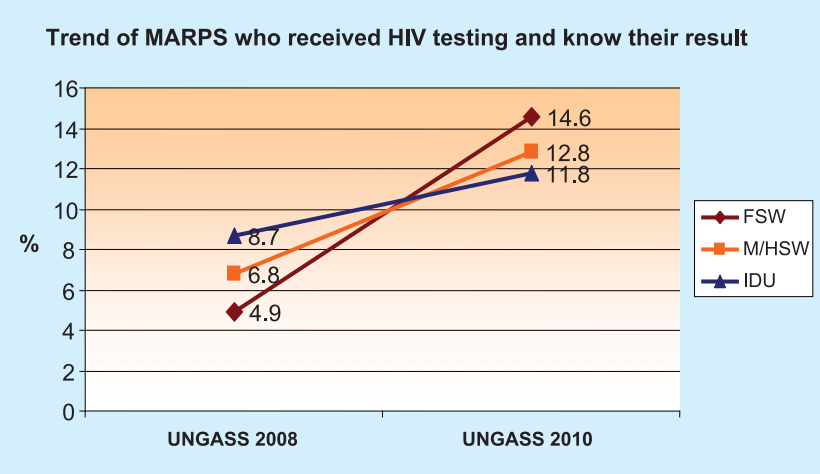
Pakistan identified the provision of VCT services as an important component of the service delivery package. All MARPs accessing the services are offered VCT services. VCT services are also available in all 13 HIV treatment and care centres across the country. In Pakistan, VCT centers are operating for general and bridging populations within or near the existing public sector testing facilities and are managed by local NGOs. Figure 34 shows the utilization of VCT services by most at risk populations from 2008 – 2010 in Pakistan. According to the analysis, VCT uptake by MARPs is still very low.

Figure 34: Utilization of Counseling and Testing Services in Nepal in 2009



(Source: UNAIDS, UNGASS Country Report, Nepal, 2010)

Figure 35: Utilization of Counseling and Testing Services by Most at risk populations in Pakistan 2008 - 2009



(Source: UNAIDS, UNGASS Country Report, Pakistan, 2010)

In Sri Lanka voluntary counseling and testing (VCT) is offered throughout the island with the help of a network of Sexually Transmitted Disease (STD) clinics. There are 26 STD clinics operating in the country. Other sectors such as Prison and uniformed services too have attempted to adopt VCT. VCT is also promoted through the network of well established preventive health care infrastructure and through the NGOs for which capacity building is carried out by the National STD and AIDS Control Programme of Sri-Lanka. The high quality of the national HIV testing programme is effectively supporting accurate diagnosis of HIV in an environment of very low HIV prevalence. The national HIV testing algorithm is consistent with international norms. Counselling guidelines exist in the country since 2003 and health care workers of the National STD and AIDS control Programme and that of major hospitals in the island have received pre and post test counseling training since 2000. By the end of December 2009, 30 centres have been providing VCT services and additional 47 centres of the public sector have also been providing counseling services.

3.3.3 Treatment, Care and Support

Antiretroviral Treatment

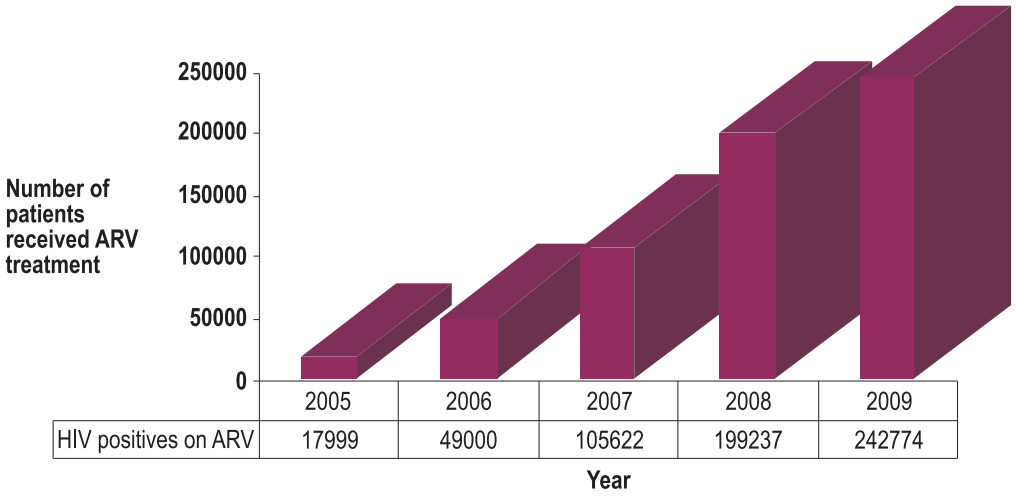
In response to the WHO/UNAIDS "3 by 5 initiative", Member States of the SAARC Region also embraced the push to expand HIV treatment access in order to move towards universal access to HIV prevention, treatment, care and support by 2010. Remarkable progress has been made in the SAARC Region on scaling up HIV antiretroviral treatment since November 2003. Over last five years, the number of people started on treatment increased more than a ten fold. However, there are wide variations in antiretroviral treatment coverage in the Member countries.

Approximately a decade after the emergence of combination antiretroviral therapy, millions of individuals in resource-limited settings including the people living with HIV/AIDS in the Member States of SAARC Region are now benefiting from these medications. Most of the Member States of the SAARC Region initiated to provide antiretroviral treatment in the year 2004.

According to the WHO latest report, 238,000 (214,000 – 263,000) adults and children in the South Asia were receiving antiretrovirals as of December 2008. The estimated number of HIV positive people in the South Asia needing antiretrovirals was 760,000 (610,000 – 960,000) in 2008. Therefore the coverage of antiretroviral therapy was 31% in the year 2008. The estimated number of HIV positive children in the SAARC Region needing antiretrovirals in the year 2008 was 31,000 (18,000 – 48,000). However, only 13,400 HIV positive children in the Region were receiving antiretrovirals in 2008. Hence, the antiretroviral coverage among HIV positive children younger than 15 years in the SAARC Region was 43% as of December 2008.

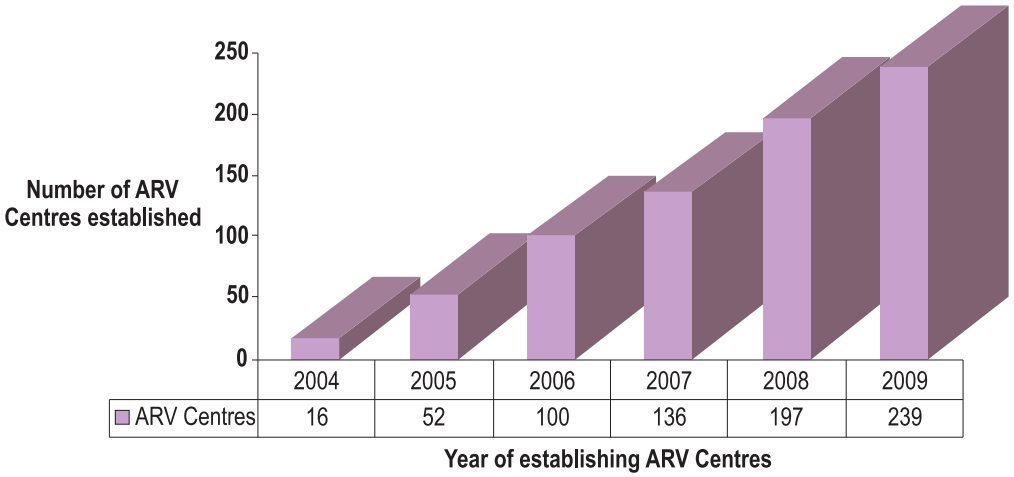
In April 2004, the Government of India launched the free antiretroviral treatment programme in eight antiretroviral treatment centres. According to the report of NACO to STAC, by December 2009, antiretroviral treatment delivery centres were scaled up to 239 and there were 242,774 persons living with HIV/AIDS who have been started on free antiretroviral treatment. The average number of patients receiving treatment per antiretroviral therapy centre in India was 1189 patients per centre in the year 2008 and was the highest for the South East Asia Region. National AIDS Control Programme in India has been highly successful in scaling up of antiretroviral access for people living with HIV/AIDS.

Figure 36: Number of Patients on Antiretroviral Treatment in India 2005 – 2009



There is a plan to scale up antiretroviral treatment provision to 300,000 patients by 2011 with the help of 250 centers across the country. Figures 35 and 36 highlight the remarkable progress in access to antiretroviral treatment made in India, from 2004 to 2009.

Figure 37: Scaling up of Access to Antiretroviral Treatment in India 2004 – 2009



Government of Nepal had launched the free antiretroviral treatment programme in 2004 from one Infectious disease Hospital in Kathmandu. By December 2009, number of ART centers providing ART were 23 and the same centres provide even second-line antiretroviral regimens if the need arises. At the end of the year 2008, Nepal has recruited 7 health care facilities with laboratory facility to carry out CD_4 cell count. The number of health care facilities with CD_4 cell count facility rose to 14 by December 2009. Figure 37 shows the rate of progression in access to antiretroviral treatment achieved by Nepal. As of December 2009, 3550 HIV infected people received ARV treatment in Nepal. Of them 1970 were males, 1375 were females and 205 were children under the age of 15 years.

Figure 38: Number of Treatment Centres providing Antiretroviral Treatment in Nepal 2004 – 2009

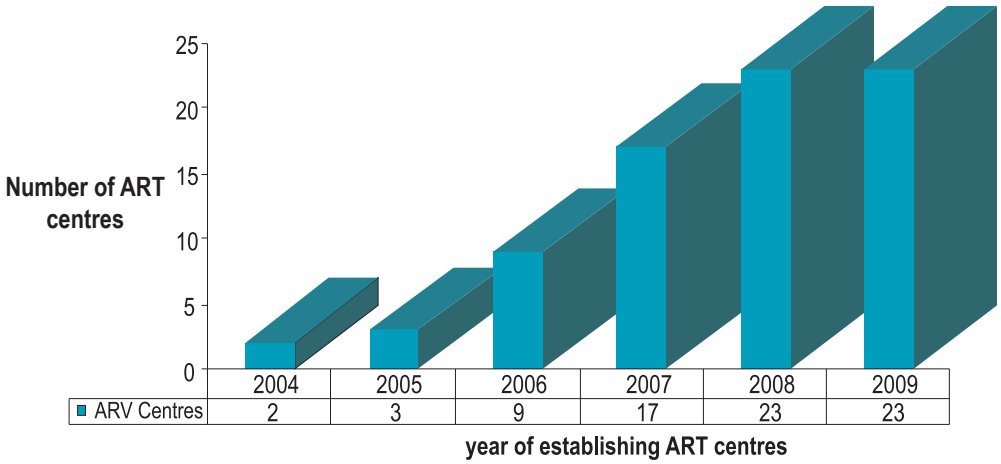
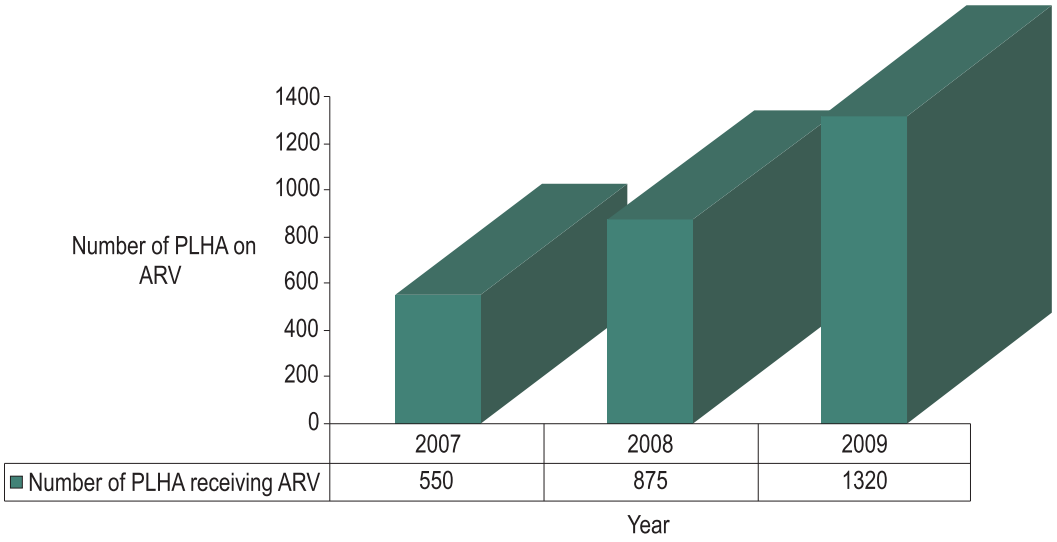


Figure 39: Number of HIV Positives with advanced disease on Antiretroviral Treatment in Pakistan 2007 – 2009

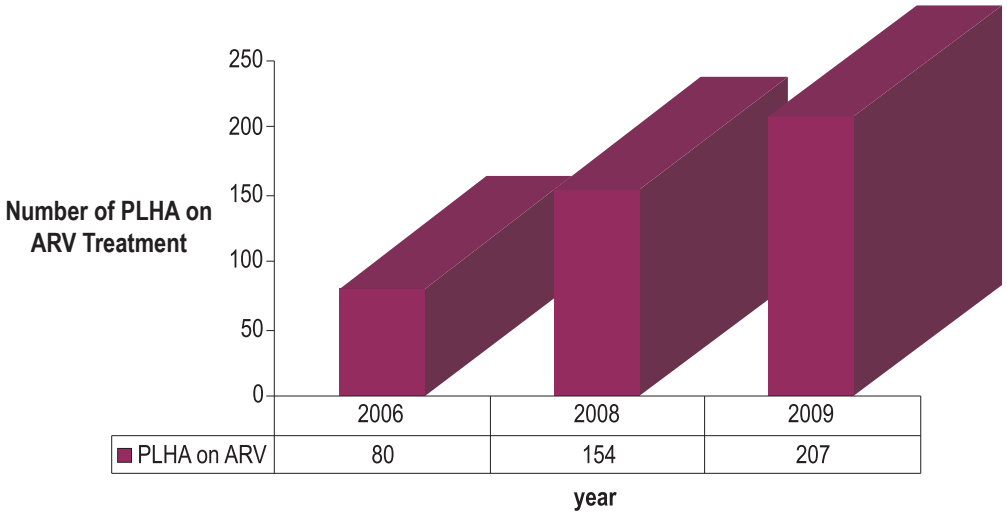


In Pakistan, there were 13 HIV treatment centres which provided the HIV care services during antiretroviral treatment to 1320 PLHA as of December 2009. Figure 38 highlights the number of PLHA with advanced disease on ARV treatment in Pakistan from 2007 – 2009. These treatment centres can provide second-line antiretroviral regimens also. There are 3 health care facilities in Pakistan to provide laboratory facilities to carry out CD_4 cell counts and viral load assessments. As of December 2009, there were 13 ART treatment centres and 7 PPTCT centres across the country to provide treatment, diagnostics, other treatment, care and support services to the people infected and affected with HIV. In these centres, as of December 2009, 2917 PLHA were registered. The percentage of adults and children with advanced HIV infection receiving ARV treatment was 7.4% in 2007 and it was increased to 9.83% in 2009. Financial support for the ARV treatment services in Pakistan was provided by Global Fund Round-2 till 2008. Since then this service was financed by Continuation of Services proposal of Global Fund Round-2 grant till May 2010.

In Bangladesh, there were 04 NGOs providing ART services for HIV positives. As of December 2009, cumulative number of 320 patients received ARV treatment in Bangladesh. There were 7 health care facilities to provide first-line antiretroviral treatment regimens and 2 of them can provide second-line regimens also. As of December 2009, health care facilities with laboratory services that can provide CD_4 cell counts were 3 and 2 of them can provide the viral load assessments also. There were six centres in the country to provide social welfare facilities to the people infected and affected with HIV.

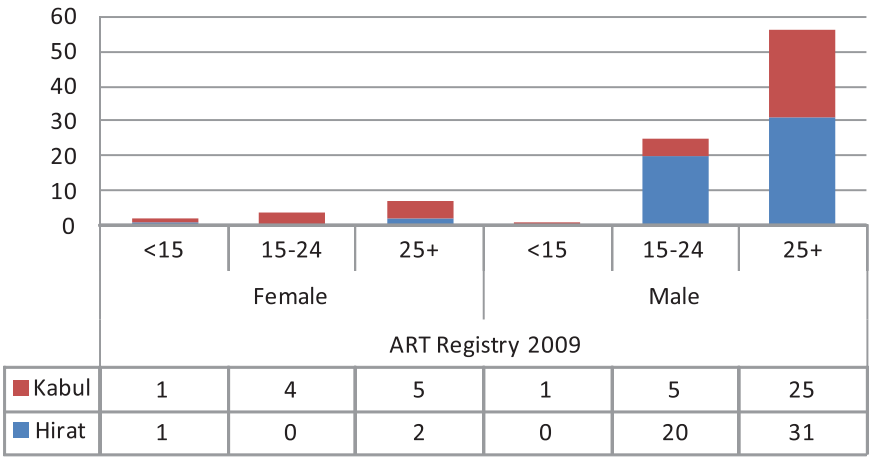
Sri-Lanka is providing free ARV treatment to eligible HIV infected since November 2004 with the help of National HIV/AIDS Prevention Project of the World Bank. The establishment of freely available public sector provision of antiretroviral treatment is a major achievement. ARV treatments were offered at 05 centres of the National STD/AIDS Control Programme. All 5 centres have the facilities to provide second-line regimens if need arises.

Figure 40: Number of HIV Positives with advanced disease on Antiretroviral Treatment in Sri-Lanka 2006 – 2009



The National STD and HIV Reference Laboratory of the National STD and AIDS Control Programme of Sri-Lanka is providing the CD_4 cell count assessment and viral load assessments to all antiretroviral recipients. In addition to that Medical Research Institute, Colombo also has facilities for CD_4 cell count assessment and viral load assessments. Figure 39 depicts the number of HIV positives started on ARV from 2006 to 2009. As of December 2009, out of 1196 people reported with HIV infection, 207 were commenced on antiretroviral treatment. As of December 2008, 154 patients were receiving ARV treatment in Sri-Lanka. Of them 110 were males, 86 were females and 11 were children under the age of 15 years. There are 3 institutions to provide social welfare facilities to people infected and affected with HIV/AIDS. National guidelines on HIV clinical care in adults were issued in 1998. National guidelines on antiretroviral treatment were issued in 2005.

Figure 41: Number of HIV Positives with advanced disease on Antiretroviral Treatment in Afghanistan 2009



	<15	15-24	25+	<15	15-24	25+
Kabul	1	4	5	1	5	25
Hirat	1	0	2	0	20	31

(Source: UNAIDS, UNGASS Country Report, Afghanistan, 2010)

In Afghanistan, there were 636 HIV positives reported to the National AIDs Control Programme by December 2009. ART services are being provided at 2 ART clinics in Kabul and Herat. Those clinics have been established in early 2009. Approximately 95 persons have been registered in these centres and of them 19 persons are on ART. Figure 40 shows the number of HIV positives on ART as of December 2009 by age and sex.

In Bhutan, there are 8 health facilities dispensing antiretroviral treatment as of December 2009. All 8 centres used CD_4 cell count monitoring for antiretroviral treatment. Of them 2 health care facilities have laboratory facilities to carry out CD_4 cell count assessments. There were 50 HIV positives on Anti Retroviral Treatment (ART) as of December 2009. Of them 22 males, 27 females and only 1 child less than 15 years of age were receiving antiretroviral treatment. In Maldives, three HIV positive received ART treatment at central hospital of Male as of December 2009.

3.3.4 Strategic Information and Programme Management

Strategic information can be defined as the information and knowledge essential to influence policy making, programme development and action. There is an increasing recognition for the need of sound strategic information for advocacy and resource mobilization. In addition to them, strategic information also need to assess the disease burden, to prioritize the strategies planned, to measure and evaluate the results and to promote the accountability in countries when they scale up their HIV response towards universal access.

As describe above in this chapter, the key activities that generate strategic information in relation to HIV response towards the universal access are as follows;

- Surveillance (HIV, Sexually Transmitted Diseases and risk behaviours)
- Monitoring and Evaluation
- Operational Research.

HIV Bio-Behavioural Surveillance:

Information generated through bio-behavioural surveillance including STI surveillance, is the basis for estimating the burden of HIV/AIDS in a country. The information gathered is also helpful in tracking the impact of the national response to HIV/AIDS in a country. At the beginning of the epidemic, HIV surveillance was limited mainly to case reporting and unlinked anonymous serological surveillance surveys.

India started HIV surveillance since 1985. In 1998, India started Annual HIV Sentinel Surveillance across the country. The sentinel sites in India were increased from 176 in 1998 to 1134 in 2007 and 1215 in 2008 and it covered all the districts in the country. The overall findings of HIV Sentinel Surveillance in 2008 are as follows;

- Antenatal Mothers – 0.48%
- STD patients – 2.5%
- IDUs – 9.19%
- MSM – 7.3%
- FSW – 4.94%

Since 2001, Nepal carried out the serological and Behavioural Surveillance Surveys among most at risk populations. HIV epidemic in Nepal is driven by unprotected sex and sharing unclean needles among IDUs. According to the annual bio-behavioural surveys, HIV prevalence among IDUs declining has steadily been increased over the period from 2002 to 2009. However, the HIV prevalence among them is still well above 5% in some areas. The HIV prevalence among female sex workers, clients of sex workers, MSMs and returning migrants remain above 1.5%. Table 05 gives the details of HIV prevalence among MARPs in Nepal from 2002 to 2009.

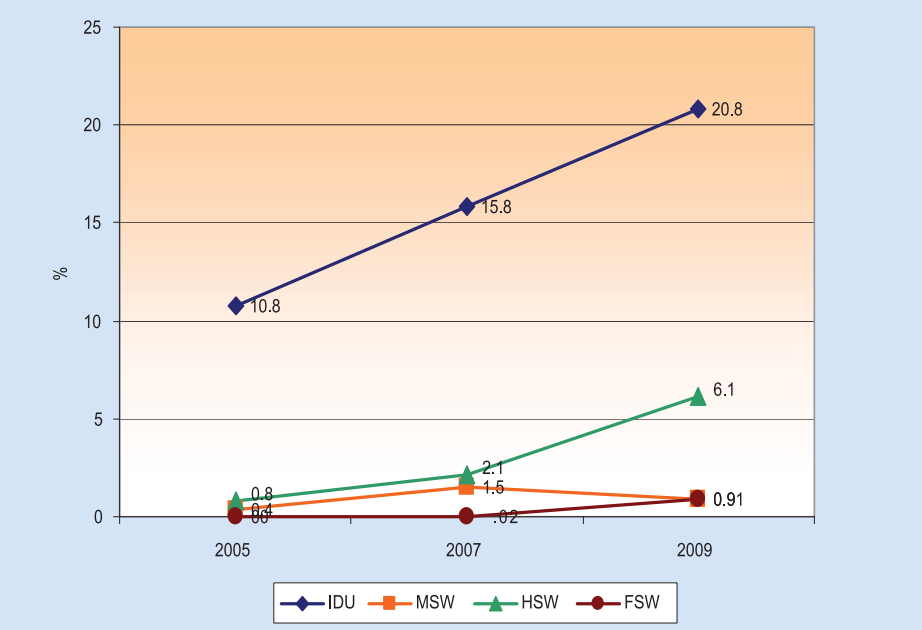
Since 1998, Bangladesh has completed several rounds of serological surveillance with the help of the WHO/UNAIDS guidelines for Second Generation HIV Surveillance. According to the latest HIV Sentinel Surveillance in 2007, the HIV prevalence among female sex workers, male sex workers and Hijras was 0.3%. However, the female sex workers living in border town in the northwest of Bangladesh had HIV prevalence 2.7%. All of them had crossed the border into India to sell sex. During this Sentinel Surveillance conducted in Bangladesh involved 6508 drug users from 28 sites. Overall HIV prevalence was 1.2%. However, a rate of 7% found among IDUs. Therefore the pattern emerging in Bangladesh shows the signs of explosive escalation of the epidemic among IDUs.

Table 05: HIV Prevalence among most at risk populations in Nepal from 2002 - 2009

MARP	Location	2002	2003	2004	2005	2006	2007	2008	2009
FSWs	Kathmandu			2.0		1.4		2.2	
	Pokhara			2.0		2.0		3.0	
	22 Terai Districts			2.0		1.5			2.3
Client of FSW (Truckers)	Terai Districts			1.8		1.0			0.0
IDUs	Kathmandu	68.0			51.7		34.8		20.7
	Pokhara		22		21.7		6.8		3.4
	E. Terai		35.1		31.6		17.1		8.1
	W. Terai				11.7		11.0		8.0
MSM	Kathmandu			3.9			3.3		3.8
MSW	Kathmandu			4.8			2.9		5.2
Migrants	Mid- and Far West					2.8		0.8	
	Western districts					1.1		1.4	
Spouses of migrants	Far west districts							3.3	

Source: IBBS (2002-2009)

Figure 42: Trend pattern of HIV Prevalence among MARPs in Pakistan from 2005 to 2009



(Source: UNAIDS, UNGASS Country Report, Pakistan, 2010)

Second generation Surveillance Survey for HIV was established in Pakistan with Canadian support in 2003 as a part of Enhanced HIV and AIDS Control programme. By 2008, Pakistan has completed three rounds of HIV Second Generation Surveillance. NACP, Pakistan with the help of UNAIDS and UNFPA conducted another round of IBBS in 2009. Findings of the survey showed that HIV prevalence among female sex workers was 0.97%. Figure 41 highlights the trend pattern of HIV prevalence among MARPs in Pakistan from 2005 to 2009.

National STD/AIDS Control Program in Sri-Lanka annually conducts HIV Sentinel Surveillance Surveys since 1993. The HIV testing for sentinel surveys is used to carry out Unlinked Anonymous Testing. The Purpose of unlinked anonymous testing is not to detect infected individuals for case finding but to obtain an idea about the prevalence of HIV infection in the country. It is a public health measure to know the epidemic. Sri Lanka has conducted the first Behavioral Surveillance Survey in 2006. The latest Sentinel Surveillance was conducted in the year 2009 in 8 selected sentinel sites. The under mentioned sentinel groups were selected and HIV prevalence among them was as follows;

- STD clinic attendees – 0.15%
- Newly diagnosed TB patients – 0%
- Female sex workers – 0%
- MSM – 0.2%
- Drug users – 0%
- Military – 0%

Maldives conducted its first IBBS among high risk populations in the year 2008. The groups selecte were female sex workers, MSM, IDUs, Sea Farers, resort workers, construction workers and youth. This bio-behavioural survey found HIV infection among male resort workers and the prevalence was 0.2%. However, the vulnerability factors to acquisition of HIV are prevailing among them.

Surveillance to assess emergence of HIV Drug Resistance:

HIV drug resistance is the ability of HIV to multiply in the presence of antiretroviral drugs. HIV drug resistance will inevitably emerge with scaling up of antiretroviral treatment in the region because of under mentioned factors.

- Occurrence of mutations during HIV replication
- Chronic nature of HIV infection
- Need for life long treatment

Programme activities dedicated to minimize the emergence of drug resistance and to reduce the spread of drug resistant virus need to be launched by the Member States. WHO has published **WHO global strategy for HIV drug resistance prevention, assessment and evaluation**. **The key elements of this strategy are**

1. **Implementation of systematic surveys to assess the prevalence of drug resistance HIV transmission among persons recently infected with HIV**
2. **Implementation of systematic surveys to assess the prevalence of acquired HIV drug resistance among persons started on first line antiretroviral drugs**
3. **Collection and analysis of HIV drug resistance "early warning indicators' which are routine ARV treatment programme based indicators that provide information on preventable HIV drug resistance**

Table 06: Availability of a National HIV/AIDS Strategic Plan in Member States of the SAARC Region as of December 2009

Country	National Strategic Plan (NSP)
Afghanistan	National Strategic framework 2006-2010 developed
Bangladesh	NSP 2004-2010 developed
Bhutan	NSP 2007-2011 developed
India	NSP 2006-2011 developed
Maldives	NSP 2007-2011 developed
Nepal	NSP 2006-2011 developed
Pakistan	National Strategic Framework 2007-2012 developed
Sri-Lanka	NSP 2007 – 2011 developed

India has already established HIV drug resistance national working groups. Surveys to assess the prevalence of transmitted HIV drug resistance have been conducted in India among selected populations and the findings showed that prevalence of transmitted HIV drug resistance was below 5%. Surveys to assess the development of acquired HIV drug resistance among persons receiving first line ARV have been implemented in India and awaiting for the findings of analysis. Collection and analysis of early warning indicators is planned in several pilot sites in India in 2009 – 2010.

Monitoring and Evaluation:

There has been a concerted effort to strengthen the monitoring and evaluation system by harmonizing information needs of various partners, improving the collection of data, up gradation of hardware and software for data processing and timely dissemination of data in all SAARC Member States. An efficient monitoring and evaluation system is the cornerstone for assessing progress in national response to HIV/AIDS epidemic. However, monitoring and evaluation systems in countries remain under implemented and under-used and cited as weak elements of the health sector that need strengthening. The essential elements of the monitoring and evaluation package recommended at WHO-SEARO consultative meeting are;

1. A national monitoring and evaluation plan
2. A monitoring and evaluation unit
3. Key performance indicators
4. Establishment of a technical working group
5. Adequate budget
6. Dedicated staff
7. Adequate infrastructure
8. Standard data collection forms
9. Channels of data flow
10. Data analyses, use and dissemination
11. Quality assurance

Research:

Research to acquire new knowledge and its application are recognized as important integral parts of a successful National AIDS Control Programme. New initiatives were undertaken by NACO, India to promote research component in the field of HIV/AIDS. A list of priority areas for operational research was prepared and finalized with the consultation of important stakeholders. A "Network of Indian Institutions for HIV/AIDS Research" comprising of 16 national institutions has been constituted to undertake research on priority areas. A research fellow scheme for graduate and post-graduate students has been announced and "NACO-Ethics Committee" was established to provide ethical clearance for research proposals.

National Strategic Planning:

As a part of the national health plan, National HIV/AIDS Strategic Plan is an essential requisite to implement programme activities in HIV/AIDS prevention, treatment and care and support effectively. The strategic planning should be carried out with full participation of all stakeholders, including PLHA. The strategic plan serves as a road map to all partners involved in programme intervention and it includes monitoring and evaluation as an integral part. All Member Countries in the Region have developed strategic plan on HIV/AIDS. Table 06 shows the status of the availability of a strategic plan on HIV/AIDS in the Member States of the SAARC Region.

HIV epidemic in the SAARC Region is an amalgam of number of diverse epidemics in the communities, villages, districts, provinces and countries. National efforts need to be based on ccurate information and to be tailored to national needs and circumstances in order to exert optimally effective impact. For that availability of strategic information is a must. Under the NACP-III, India introduced Strategic Information Management System at National and State levels to focus on strategic planning, monitoring, evaluation, surveillance and research. This system assigns clear responsibilities to all programme officers and facilitates data flow and feedback at various levels. In NACP-III, tools have been proposed to be developed in consultation with the technical partners for the evaluation of each of the proposed intervention. Under the NACP-III, National AIDS Control Organization has positioned itself as the promoter and coordinator of research on HIV/AIDS not only in India, but the entire South Asia Region through partnership and networking with National, academic and other institutions in the region.

Sri-Lanka also set up a National Strategic Information Management Unit (SIM Unit) to accurately guide the national response to HIV epidemic in the country in the year 2008. This strategic information unit has the authority to access to all needed information, guided by the National Monitoring and Evaluation Framework. The role and responsibilities of all the involved parties should be clarified and a core set of indicators defined.

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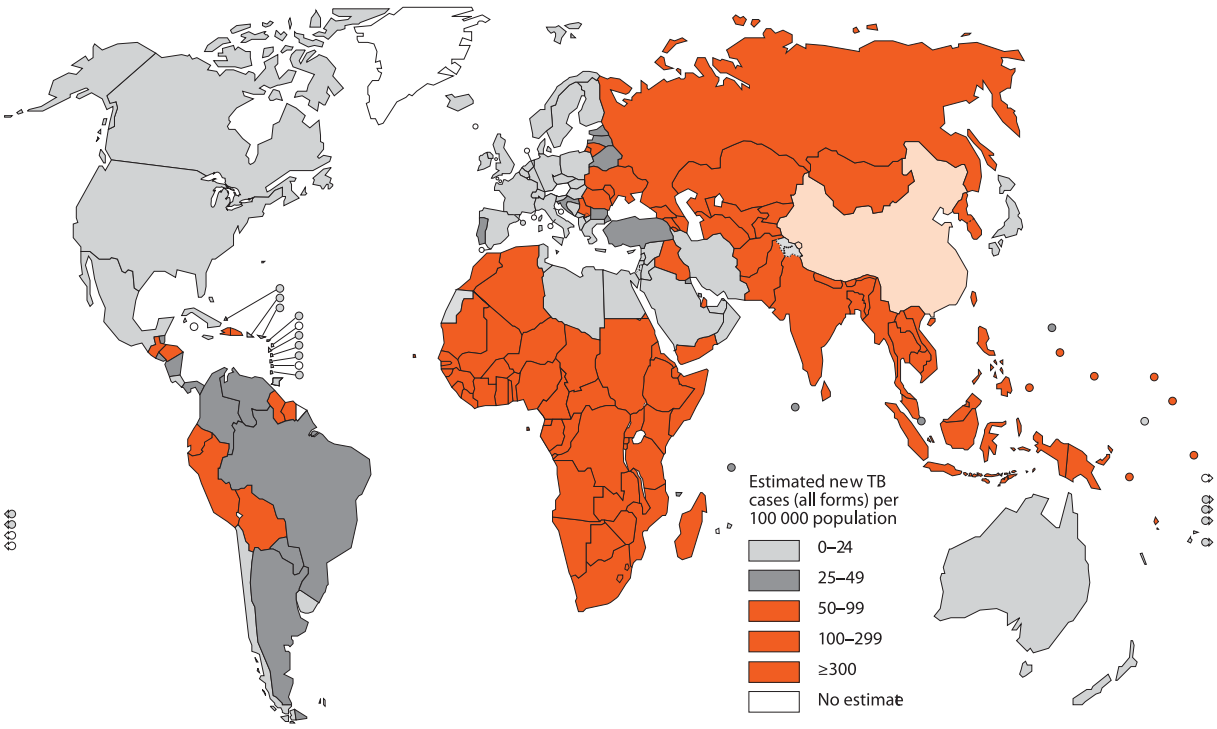
Chapter 4

4.1 TB/HIV Co-infection

HIV related immune suppression increases the risk of developing a broad range of debilitating and potentially life threatening conditions such as Tuberculosis (TB). TB remains the most common opportunistic infection for people living with HIV/AIDS, including those on antiretroviral therapy and is the leading cause of mortality for people living with HIV in low and middle income countries. Therefore, the prevention and treatment of TB is essential for effective HIV treatment and care. Figure 42 illustrates the estimated HIV prevalence among newly diagnosed TB patients in the world.

Figure 43: Estimated HIV prevalence among newly diagnosed TB patients, 2008



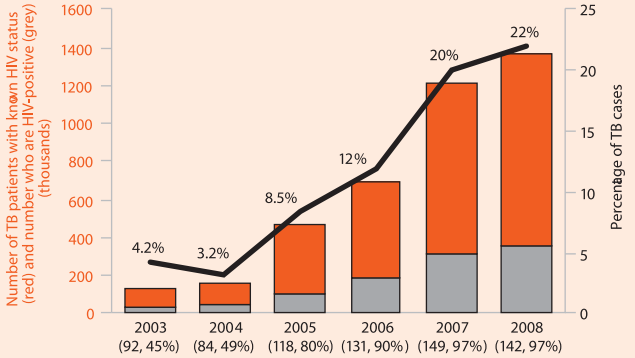
(Source: WHO, Global TB Control: A short update to 2009 report)

Among the 9.4 million incident cases of TB in 2008, an estimated 1.4 million (1.2 million – 1.6 million) were HIV positives (13% – 16%). The African Region accounted for 79% of HIV positive TB incident cases, followed by the South-East Asia Region, mainly India with 13% of total cases. The risk of developing TB disease in HIV positive people compared with HIV negative people is 20.6 times higher in countries

with generalized HIV epidemic. An estimated 400,000 deaths were among HIV positive incident TB cases and that is approximately 22% of the estimated 1.8 million HIV deaths in 2009.

Figure 44: HIV testing rates for newly diagnosed and re-treatment TB patients, 2003 - 2008

HIV testing for TB patients, 2003–2008. Number (bars) and percentage (line) of notified new and re-treatment TB cases for which the HIV status (HIV-positive in grey) of the patient was recorded in the TB register. The numbers under each bar show the number of countries reporting data,[a] followed by the percentage of total estimated HIV-positive TB cases accounted for by reporting countries.



[a] Data are only shown for countries for which data were reported on both the number of cases for whom HIV status was known and the number of cases that wereHIV-positive.

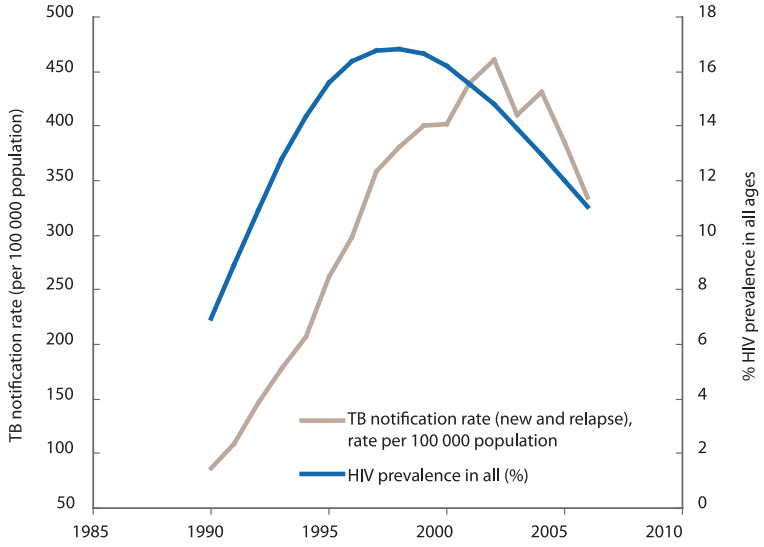
(Source: WHO, Global TB Control: A short update to 2009 Report)

The South-East Asia Region carries the highest burden of TB and the second highest burden of HIV in the world. Four Member States out of eight in the SAARC Region, namely India, Bangladesh, Pakistan and Afghanistan are ranked as first, sixth, eighth and twenty second among the 22 high burden countries respectively. As the large number of HIV infected persons are in the SAARC Region particularly in India, Bangladesh and Pakistan with high rates of TB transmission and the presence of high TB prevalence, the HIV epidemic could have significant implications on TB control in the Region. Collaborative TB/HIV activities are critical in order to ensure that HIV positive TB patients are identified and treated and also to prevent active TB disease in latently infected HIV positive people. HIV Testing for TB patients is a critical entry point for both treatment and prevention. There was a significant progress in offering HIV testing for TB patients between 2002 and 2009 as health care providers initiated the “provider initiated HIV testing” for newly diagnosed TB patients. Figure 43 shows the increasing trend of HIV testing rate for newly diagnosed and re-treatment TB patients from 2003 to 2008

Figure 44 illustrates the synergic relationship between HIV and TB which shows the declining number of TB patients subsequent to the reduction in HIV prevalence in Zimbabwe. Because of this synergistic impact between HIV and TB, Africa is experiencing the worst TB epidemic since the advent of antibiotics. (About half of the children living with HIV in South Africa are co-infected with TB).

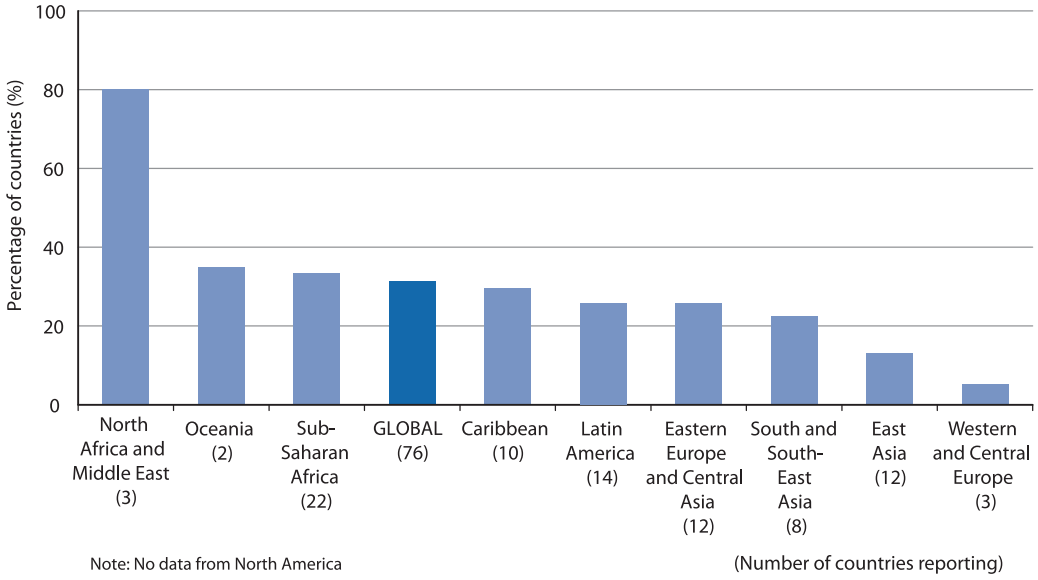
Treatment of TB for individuals living with HIV follows the same basic approach as for patients not infected with HIV. However, despite the existence of affordable, well understood treatments for TB, only 32% of TB/HIV co-infected patients received both antiretroviral and anti-TB drugs. This fact was revealed through the UNGASS data provided by countries in 2008 .

Figure 45: Relationship between TB case notification rate and HIV prevalence Zimbabwe 1990 - 2006



Source: WHO Global TB control report 2008 (WHO, 2008a); UNAIDS HIV prevalence estimates.

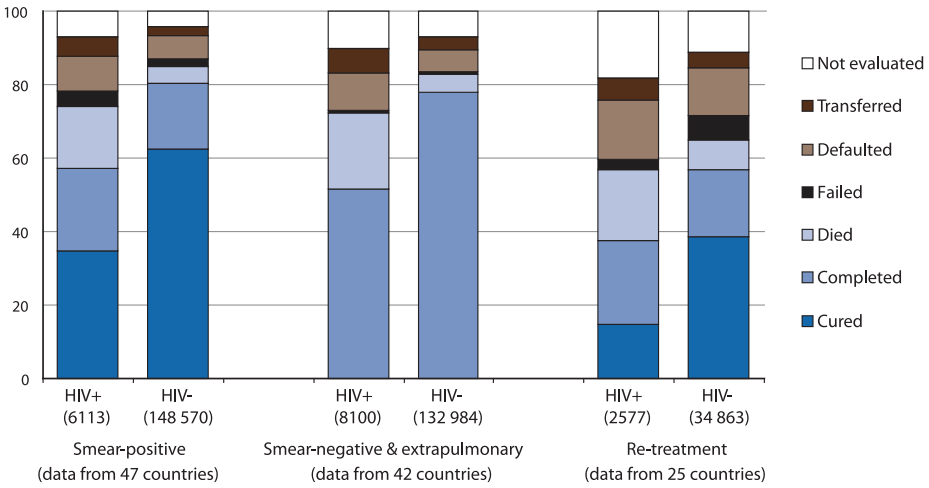
Figure 46: Percentage of Incident TB patients among people living with HIV receiving both antiretroviral treatment and anti-TB treatment 2007



Note: No data from North America

Non HIV infected TB patients, in comparison to TB patients who are living with HIV have lower treatment success rates, primarily due to an increased risk of death and to a lesser extent, higher default rates. Figure 46 illustrates the treatment outcomes for HIV positive and HIV negative TB patients in 2005.

Figure 47: Treatment outcomes for HIV positive and HIV negative TB patients 2005



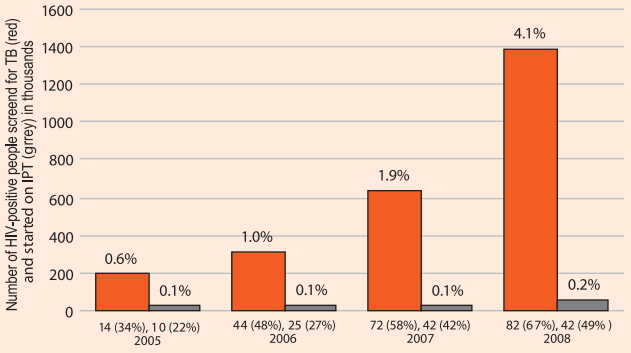
Source: WHO Global tuberculosis control: surveillance, lanning, financing. World Health Organization, Geneva.

It is recommended that HIV positive TB patients routinely receive co-trimoxazole, which can result in a 40% reduction in mortality. Regardless of HIV status, careful adherence to TB regimens is essential to avoid the emergence of drug resistance. People living with HIV have been shown to be twice as likely to have multi-drug resistant TB as people who do not have HIV infection. It is very important to prevent active TB in people living with HIV/AIDS. Therefore, it is recommended that all people living with HIV be screened regularly for active TB disease.

According to the WHO recommendations, in the absence of evidence of active disease, individuals should be considered for treatment of latent TB infection with 6 – 9 month course of preventive therapy. According to the UNAIDS Report on the Global AIDS epidemic 2008, only 42% of countries with generalized epidemics have implemented routine TB screening for HIV positive patients and only 27% provide TB preventive therapy for people living with HIV. Globally, only 27,000 HIV positive people in low and middle income countries were started on isoniazid preventive therapy (IPT) in 2006 and nearly all of them were in Botswana. Figure 47 highlights the slow progress made by the countries in the world in provision of IPT from 2005 – 2008. There has been major progress in implementing interventions such as testing TB patients for HIV and providing co-trimoxazole preventive therapy (CPT) and antiretroviral treatment (ART) to HIV positive TB patients. Figure 48 highlights the rates of notified TB patients with known HIV status.

Figure 48: Intensified TB screening and Isoniazid Prophylaxis Therapy Provision among HIV positive people 2005 - 2008

Intensified TB case-finding and IPT provision among HIV-positive people. Numbers (bars) and percentages (above bars) of estimated HIV-positive people screened for TB (red) and started on IPT[a] (grey). Numbers under bars show the number of countries reporting data followed by the percentage of total estimated HIV-positive people accounted for by reporting countries.

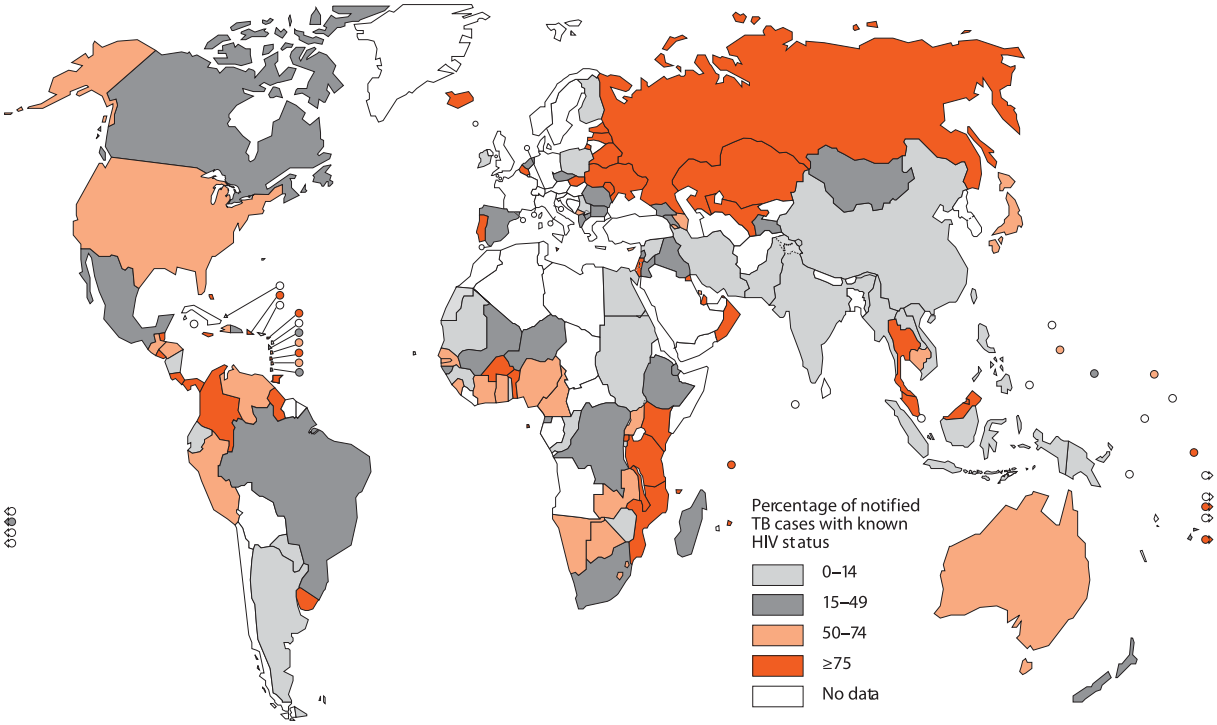


[a] Percentages for IPT figures are calculated using the estimated number of HIV-positive people without active TB.

(Source: WHO, Global TB Control: A short update to 2009 report)

Globally almost 1.4 million TB patients (22% of notified cases) knew their HIV status in 2008. Despite the progress that has been made with scaling up of collaborative TB/HIV activities, HIV testing is outpacing the provision of co-trimoxazole preventive therapy and antiretroviral treatment. The number of HIV positive TB patients being treated with CPT and ART is small when compared with the estimated 1.4 million HIV positive TB incident cases. Figure 49 illustrates the rate of progression of the Provision of Co-trimoxazole Preventive Therapy and Antiretroviral therapy for HIV positive TB patients 2003 – 2008.

Figure 49: HIV Testing for TB Patients 2008



(Source: WHO, Global TB Control: A short update to 2009 report)

There has been major progress in implementing interventions such as testing TB patients for HIV and providing co-trimoxazole preventive therapy (CPT) and antiretroviral treatment (ART) to HIV positive TB patients. Figure 48 highlights the rates of notified TB patients with known HIV status.

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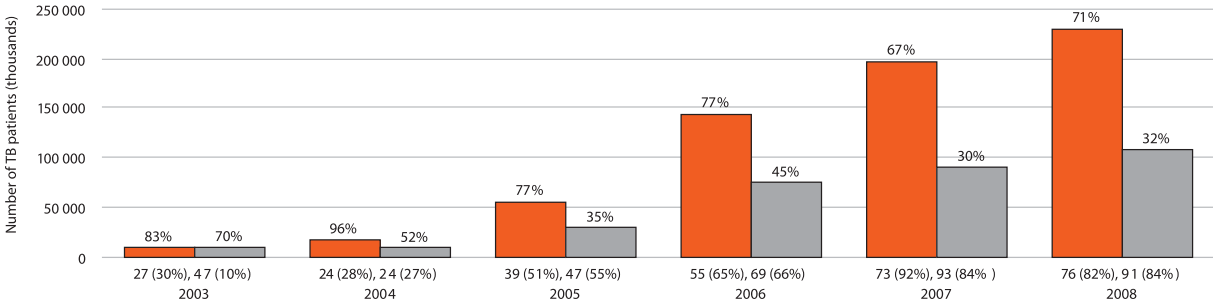
Figure 50: Rate of Progression of the Provision of Co-trimoxazole Preventive Therapy and Antiretroviral therapy for HIV positive TB patients 2003 - 2008

Co-trimoxazole preventive therapy and antiretroviral therapy for HIV-positive TB patients, 2003–2008. Numbers (bars) and percentages (above bars) of estimated HIV-positive people started on CPT (red) and ART (grey). The numbers under each bar show the number of countries reporting data, followed by the percentage of total estimated HIV-positive TB cases accounted for by reporting countries.



(Source: WHO, Global TB Control: A short update to 2009 report)

India

TB is the commonest opportunistic infection amongst HIV-infected individuals. A low cost and highly effective curing treatment for TB is provided by the Revised National TB Control Programme (RNTCP) which is implementing the DOTS strategy nationwide. TB-HIV collaborative activities started in 2001, in six states with high HIV prevalence (Andhra Pradesh, Karnataka, Maharashtra, Manipur, Nagaland and Tamil Nadu). The collaborative activities were extended to eight additional States (Delhi,Gujarat, Himachal Pradesh, Kerala, Orissa, Punjab, Rajasthan and West Bengal) in the year 2004. In 2007 – 2008, TB-HIV collaborative activities were to be extended to the entire country and have been included as an integral part of NACP-III and RNTCP-II.

Table 07: Data on detection and treatment for HIV in TB patients in India 2007

Category	Number or Percentage
Number of TB patients with known HIV status	80,425
Number of TB patients with known HIV status as a percentage of all notified TB patients	5.5%
Number of TB/HIV co-infected patients	9,324
Number of TB/HIV co-infected patients as a percentage of estimated TB/HIV co-infected cases	9%
Number of TB/HIV co-infected patients on Co-trimoxazole Preventive Therapy	724
Number of TB/HIV co-infected patients on Co-trimoxazole Preventive Therapy as percentage of notified TB/HIV co-infected cases	7.8%
Number of TB/HIV co-infected patients on Antiretroviral treatment	162
Number of TB/HIV co-infected patients on Antiretroviral treatment as a percentage of notified TB/HIV co-infected cases	1.7%

Table 08: Data on screening of HIV positive patients for TB in India 2007

Category	Number or Percentage
Number of HIV positive patients registered for HIV care	277,760
Number of HIV positive patients screened for TB	50,586
Number of HIV positive patients screened for TB as a percentage of HIV positive patients registered for HIV care	18%
Number of HIV positive patients with active TB disease started on TB treatment	7130
Number of HIV positive patients with active TB disease started on TB treatment as a percentage of registered for HIV care	2.6%
Number of HIV positive patients without active TB disease started on Isoniazid Prophylaxis Treatment	-

(Data source: WHO, Global TB Control, 2009)

Key activities identified for TB/HIV coordination were as follows:

1. Establishment of coordination mechanisms at various administrative levels.
2. Service delivery coordination and cross referrals and establishment of linkages between service delivery sites such as ART centres, ICTCs, care and support centers and RNTCP diagnostic and treatment services. Figure 28 illustrates the progress achieved by cross referral system implemented in India between service delivery points of AIDS Control Programme and TB Control Programme.
3. Involvement of NGOs working in NACP and RNTCP in TB/HIV collaborative activities.
4. Operational research to improve the implemented of TB/HIV collaborative activities.
5. Implementation of feasible and effective infection control measures.

Bangladesh:

The overall prevalence of HIV infection is less than 0.1% among the general population. However, HIV Surveillance among high-risk groups has found increasing HIV prevalence in these most at risk populations. A national TB/HIV coordinating body has been established. Programmatic guidelines for MDR TB and TB/HIV co-infection were developed in 2008.

Pakistan:

Collaborative TB/HIV activities were planned under the National AIDS Control Programme of Pakistan. National AIDS Control Programme and National Tuberculosis Control Programme collaborate for staff training in management of TB/HIV co-infection. Pakistan has established the referral system for diagnosis and treatment of HIV in Tuberculosis patients. However, collaborative TB/HIV activities have not yet been scaled up.

Afghanistan:

Despite the difficult situation prevailing in the country, Afghanistan achieved a case detection rate of 61% (51% - 76%) in 2008. The treatment success rate among new smear positive cases was 87% for the 2007 cohort of TB patients. Afghanistan is a low prevalence country for HIV infection but is one of the high burden countries in the

world for TB. Hence it is cost effective to screen all the reported HIV patients for TB to find out whether they are having active TB disease or the latent infection in order to take measures to minimize the morbidity and mortality among people living with HIV. Several important components of TB control have not yet been addressed. They are management of MDR-TB, implementation of the contact investigation and the development of the collaborative TB/HIV activities.

Bhutan, Maldives & Nepal:

In Bhutan, the cumulative number of 185 HIV patients was reported as at the end of December 2009. Number of TB/HIV co-infected persons reported was 11 as at the end of 2007. All TB patients are offered HIV Testing in Bhutan. Since 2003, Maldives initiated to screen all HIV patients for TB and all TB patients were offered HIV testing as a collaborative activity of both National AIDS Control Programme and National TB Control Programme. Nepal conducts HIV Surveillance among incident cases of TB since 1993 at five assigned sentinel sites. A technical working committee was established in Nepal for TB/HIV co-infection in 2006.

Sri-Lanka:

Sri-Lanka initiated HIV Sentinel Surveillance since 1993 which included incident TB cases as one of the sentinel groups. Because of the civil war situation of the North and Eastern Provinces in the country from 1993 to 2001 surveillance was carried out in seven provinces out of nine provinces in the island. Since 2002 Sri-Lanka has started to screen incident TB cases in all the provinces in the country. This activity conducted as a collaborative annual event of both National STD/AIDS Control Programme and National TB Control Programme of Sri-Lanka. Furthermore, National STD/AIDS Control Programme in Sri-Lanka screens all the registered HIV infected patients for TB as a routine procedure.

Table 09: Prevalence of TB/HIV Co-infection in Member States of SAARC Region 2007 and 2008

Country	HIV Prevalence in Incident TB cases, 2007 (%)	HIV Prevalence in Incident TB cases, 2008 (%)
Afghanistan	*<0.05%*	-
Bangladesh	*0*	0.1%
Bhutan	1.7%	Data not available
India	*5.3%*	6.7%
Maldives	*0.8%*	Data not available
Nepal	*2.4%*	2.4%
Pakistan	*2.1%*	1.3%
Sri Lanka	*0.1%*	<0.01%

(Data source: WHO, Global TB Control 2009 and WHO, A short update to 2009 report)

4.2 Global response to minimize the burden of TB/HIV Co-infection

The **Stop TB Strategy** is the approach recommended by WHO to reduce burden of TB in line with global targets set for 2015. Among the six major components of the strategy, second component is to address the TB/HIV along with MDR-TB and the needs of poor and vulnerable populations.

THE STOP TB STRATEGY	
VISION	A TB-free world
GOAL	To dramatically reduce the global burden of TB by 2015 in line with the Millennium Development Goals and the Stop TB Partnership targets
OBJECTIVES	• Achieve universal access to quality diagnosis and patient-centred treatment • Reduce the human suffering and socioeconomic burden associated with TB • Protect vulnerable populations from TB, TB/HIV and drug-resistant TB • Support development of new tools and enable their timely and effective use • Protect and promote human rights in TB prevention, care and control
TARGETS	• MDG 6, Target 6.c: Halt and begin to reverse the incidence of TB by 2015 • Targets linked to the MDGs and endorsed by Stop TB Partnership: – 2015: reduce prevalence of and deaths due to TB by 50% – 2050: eliminate TB as a public health problem

COMPONENTS
1. **Pursue high-quality DOTS expansion and enhancement** a. Secure political commitment, with adequate and sustained financing b. Ensure early case detection, and diagnosis through quality-assured bacteriology c. Provide standardized treatment with supervision, and patient support d. Ensure effective drug supply and management e. Monitor and evaluate performance and impact
2. **Address TB/HIV, MDR-TB, and the needs of poor and vulnerable populations** a. Scale-up collaborative TB/HIV activities b. Scale-up prevention and management of multidrug-resistant TB (MDR-TB) c. Address the needs of TB contacts, and of poor and vulnerable populations
3. **Contribute to health system strengthening based on primary health care** a. Help improve health policies, human resource development, financing, supplies, service delivery, and information b. Strengthen infection control in health services, other congregate settings and households c. Upgrade laboratory networks, and implement the Practical Approach to Lung Health (PAL) d. Adapt successful approaches from other fields and sectors, and foster action on the social determinants of health
4. **Engage all care providers** a. Involve all public, voluntary, corporate and private providers through Public-Private Mix (PPM) approaches b. Promote use of the International Standards for Tuberculosis Care (ISTC)
5. **Empower people with TB, and communities through partnership** a. Pursue advocacy, communication and social mobilization b. Foster community participation in TB care, prevention and health promotion c. Promote use of the Patients' Charter for Tuberculosis Care
6. **Enable and promote research** a. Conduct programme-based operational research b. Advocate for and participate in research to develop new diagnostics, drugs and vaccines

(Source: WHO, Global TB Control: A short update to the 2009 report)

The **Stop TB Partnership's Global Plan to Stop TB, 2006 – 2015** (Global Plan) sets out the scale at which the interventions included in the Stop TB Strategy need to be implemented in order to achieve the 2015 targets. Among the seven targets set there are two targets to achieve in relation to TB/HIV Co-infection. The two targets are as follows;

- **HIV testing of 85% of TB patients by 2010, with this level sustained in subsequent years**
- **Enrolment of 320,000 HIV positive TB patients on antiretroviral treatment by 2010, equivalent to 80% of the TB patients estimated to be in need of such treatment at the time, the Global Plan was developed**

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4.3 Introduction

SAARC

The South Asian Association for Regional Cooperation (SAARC) is a manifestation of the determination of the people of South Asia. This manifestation of determination of people of South Asia is to work together towards finding solutions to their common problems in a spirit of friendship, trust and understanding and also to create an order based on mutual respect, equity and shared benefits. SAARC comprises of eight countries in South Asia namely Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri-Lanka.

SAARC Tuberculosis and HIV/AIDS Centre (STAC)

The STAC is one of the Regional Centre of SAARC, located in Kathmandu, Nepal. The Heads of States or Governments of SAARC Member States, at their Fifth Summit, held in Male from 22nd to 23rd November 1990 decided that SAARC Tuberculosis Centre would be set up in Nepal. It was established in 1992 and became fully functional in 1994.

The initial mandate of the centre was to work for the prevention and control of TB in the Region, which has been extended to include the prevention & control of both HIV/AIDS and TB/HIV Co-infection in the Region. Therefore, the Centre has been renamed as SAARC TB & HIV/AIDS Centre, in November 2005. The vision, mission, goal and objectives of the STAC are as under.

Vision : SAARC TB AND HIV/AIDS CENTRE (STAC) BE THE LEADING INSTITUTE TO SUPPORT AND GUIDE SAARC MEMBER STATES TO MAKE THE REGION FREE OF TB AND HIV/AIDS.

Mission : The Mission of the SAARC TB and HIV/AIDS Centre is to support the efforts of National TB and HIV/AIDS Control Programmes through evidence based policy guidance, coordination and technical support.

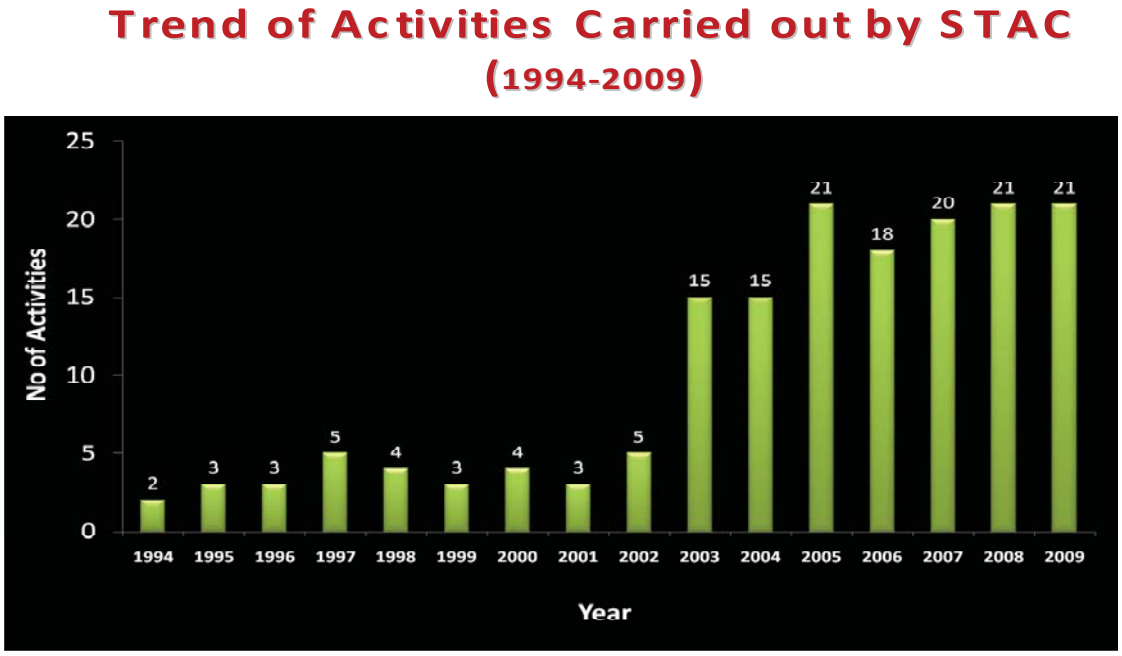
Goal : The goal of the SAARC TB and HIV/AIDS Centre is to minimize the mortality and morbidity due to TB and HIV/AIDS in the region and to minimize the transmission of both infections until TB and HIV/AIDS cease to be major public health problems in the SAARC Region.

Objective : To work for prevention and control of TB and HIV/AIDS in the Region by coordinating the efforts of the National TB Programmes and National HIV/AIDS Control Programmes of the SAARC Member States.

The regular Activities: According to the decision of the Governing Board Meetings, STAC has been conducting trainings, workshops, seminars, Meetings, Research, Advocacy & Awareness etc. in close collaboration with National HIV/AIDS Control Programmes of Member States. The following Table No… shows the numbers of activities carried out by the Centre on TB and HIV/AIDS

4.4 SAARC Regional Strategy for TB/HIV Co-infection:

According to the mandate given by the Eleventh SAARC Summit, a Regional Strategy on TB/HIV Co-infection has been developed in consultation with SAARC Member States, civil society in the Region, the relevant international organization and with technical support from Health Canada, in 2003. The strategy presents an overview of interaction between the two epidemics and the impact of the co-infection on the epidemiology and control of both the diseases. The expected outcomes were:



- Establishment of collaboration between National TB and HIV/AIDS programs
- Strengthening of Regional and National Epidemiological Surveillance Network for TB, HIV/AIDS and TB/HIV Co-infection
- Conducting Operational Research on pertinent issues
- Development and implementation of Regional and National communication plans

The Regional Strategy on TB/HIV Co-infection Strategy was revised in the year 2009. The revised strategy was discussed with Programme Managers of the Member States who attended the Programme Managers Meeting Maldives in December 2009 and was endorsed by them.

4.5 SAARC Regional Strategy on HIV/AIDS:

The countries of the Region are linked to age-old cultural, social and historical traditions that enrich the interaction of ideas, values, cultures and philosophies among the people and the states. The commonalities constitute solid foundations for regional cooperation in more effectively addressing the economic and social needs of the people. The size of the region, its diversity, the multitude of social and economic forces at work in SAARC presents both opportunities and challenges to a regional approach against HIV/AIDS.

On the directive of the Twelfth Summit of SAARC, a Regional Strategy on HIV/AIDS has been developed through a consultative process and close collaboration with the Joint United Nations Program on HIV/AIDS (UNAIDS) in 2005, which has been approved by 31st Session of Standing Committee of SAARC held in Dhaka, Bangladesh on November 9 – 10 in 2005. The Regional Strategy on HIV/AIDS 2005 – 2010 was reviewed by SAARC experts on HIV/AIDS in February 2010 which was organized by the SAARC Secretariat, Nepal.

4.6 SAARC Conference on TB, HIV/AIDS and Respiratory Diseases:

SAARC First Conference on TB, HIV/AIDS and Respiratory Diseases was held from 14th to 17th of December 2004 in Kathmandu, Nepal. Around 600 participants from Member States and other countries participated in the conference. SAARC Second Conference on TB, HIV/AIDS & Respiratory Diseases was organized in Kathmandu, Nepal from 15th to 18th December 2008. The theme of the conference was "Working together to fight against TB, HIV/AIDS & Respiratory Diseases". More than 650 participants from SAARC Member States and other countries participated in the conference as it provided a conducive platform to share information and experiences among the members of the scientific community.

Chapter 5

Country Profiles

5.1 Afghanistan

Islamic Republic of Afghanistan is one of the eight countries of the SAARC Region. Afghanistan is a land-locked country, surrounded by Pakistan, Iran, Turkmenistan, Uzbekistan, Tajikistan and China. The land area is 652,225 square kilometers. The primary administrative unit in Afghanistan is a Province which is governed by a Governor. Afghanistan consists of 34 Provinces and 398 Districts.

Population of Afghanistan is approximately 28 million in 2009 (Source: UNAIDS, UNGASS country programme report 2010) Of that approximately 22% is categorized as urban dwellers. Afghanistan is one of the least developed countries in the world with 70% of the population living in extreme poverty and health vulnerability. Years of conflict has taken a devastating toll on human, social and economic indicators in Afghanistan, resulting in some of the lowest human development indicators in the world. Table 10 illustrates some of the important demographic indicators, socio-economic indicators, human and physical resources indicators and health status indicators. The figures indicate health and development situation in Afghanistan.

Table 10: Country Profile of Afghanistan
Important socio-demographic and health indicators

Demographic Indicators		
Indicator	Value	Reference Year
Crude Birth Rate	48/1000 population	2007
Crude Death Rate	22/1000 population	2002
Population Growth Rate	2%	2007
Total Fertility Rate	6.3/woman	2005
Socio-economic Indicators		
Adult Literacy Rate (Total)	28%	2006
Adult Literacy Rate (Male)	43%	2005
Adult Literacy Rate (Female)	20%	2005
Human & Physical Resources Indicators		
Physicians per 10,000 population	2	2007
Dentists per 10,000 population	5	2007
Pharmacists per 10,000 population	0.3	2007
Nurses & Midwives per 10,000 population	0.3	2007
Hospital Beds per 10,000 population	4.2	2007
Primary Health Care units & centres per 10,000 population	0.6	2003
Primary Health Care Services Indicators		
Contraceptive Prevalence Rate	16%	2006
Antenatal Care Coverage	32%	2006
Births attended by skilled personnel	19%	2006
Infants attended by trained personnel	20%	2003
Health Status Indicators		
Total life expectancy at birth	43.8 years	2007
Life expectancy at birth (male)	47.0 years	2003
Life expectancy at birth (female)	45.0 years	2003
Neonatal Mortality Rate per 1000 live births	60.0	2006
Infant Mortality Rate per 1000 live births	157.0	2007
Under five Mortality Rate per 1000 live births	191.0	2006
Maternal Mortality Rate per 100,000 live births	1600	2006

(Source: WHO website – www.emro.who.int/afghanistan & UNAIDS, UNGASS country programme report 2010)

According to the Afghanistan National Strategic Framework for HIV/AIDS (2006 – 2010), only 28.7% of Afghans over the age of 15 years can read or write. Life expectancy in Afghanistan is 44.5 years at birth and it is at least 20 years lower than that of neighbouring countries. The mean maternal mortality rate is 1600/100,000 live births that is death of a woman every 30 minutes in Afghanistan from causes related to pregnancy and child birth

HIV/AIDS Situation:

Systematic data on the prevalence of HIV/AIDS and other sexually transmitted infections are scarce. The current sources of data on HIV/AIDS are the Central Blood Bank, Kabul and the Voluntary Counselling and Testing Centres in Kabul which were established in 2005. The data of the Central Blood Bank indicates the detection of first HIV positive person in Afghanistan in 1989. Since 1989 till 2005 the Central Blood Bank reported 67 HIV positive cases out of 125,832 blood samples screened in the country using rapid testing kits. Of them 30 were refugees or returnees from neighbouring countries. According to the National data provided to the SAARC TB and HIV/AIDS Centre by the National AIDS Control Programme of Afghanistan, there were 636 HIV positives detected since 1989 till December 2009. UNAIDS and WHO estimate that there could be between 1000 – 2000 Afghans living with HIV/AIDS. The HIV epidemic is at an early stage in Afghanistan, and is concentrated among high risk groups, mainly injecting drug users (IDU) and their partners.

Emerging HIV epidemic of Afghanistan is likely to be fueled by a combination of injecting drug use and unsafe paid sex. According to the Afghanistan UNGASS Country Report 2010 issued on data in relation to 2008 and 2009 years, HIV prevalence among general population was less than 0.5% and High Risk Groups identified were Injecting Drug Users (IDUs) who share needles, female sex workers and men who have sex with men.

A study done in 2005 in Kabul, Heart and Mazar expressed that 53% of IDUs reported of using sterile injecting equipments at last time they injected drugs and only 16% of them reported using a condom at the last time they had sex. Meanwhile 24.3% of sex workers reported of using a condom with their most recent client. Afghanistan HIV/AIDS Prevention Project reported 46% of Most at Risk Populations (IDUs, Sex Workers, truckers, Prisoners) was able to correctly identify two ways of preventing HIV transmission.

According to the Integrated Bio-Behavioural Surveillance (IBBS) conducted among high risk groups in Kabul, Heart and Mazar in 2009, the HIV prevalence among IDUs was estimated to be 1 – 18%. Of the IDUs involved in this survey, 94% used sterile needles in their last injection. The improvement from 2005 to 2009 can be partly explained through the scaled up interventions directed to them and partly due to the selection bias of the same sites for the survey as well as for the interventions.

Risk and vulnerabilities:

Afghanistan is considered to be a country of low HIV prevalence but at high risk for rapid spread of HIV infection. The reasons for that are several:

- Over two decades of protracted armed conflict
- Extremely low socio-economic status of women
- Existing high levels of illiteracy
- Low levels of condom use
- Large numbers of internally and externally displaced Afghans
- Extremely poor social and public health infrastructure
- Drug production and drug trafficking
- Injecting drug use
- Low level of blood safety
- Unhygienic injecting practices

These risk factors warrant early interventions to prevent a potentially exponential spread of HIV in Afghanistan. The under mentioned risks and vulnerabilities that play a major role in spreading HIV/AIDS from most at risk populations through bridging groups to the general population require further investigation to track the magnitude of the problem and the trends over the years.

- **Drug abuse**: Afghanistan is one of the largest producers of opium in the world. Opium and heroin abuse appear to be more severe in areas where those drugs are produced. There is currently no data on the number of Afghans who inject drugs, a reliable report from Gardez town in Paktia province suggests that there are well over 100 IDUs, injecting heroin, morphine and pentazocine. A research conducted by John Hopkins Bloomberg School of Public Health on Pakistani and Afghan drug users at high HIV risk indicates that only 16% of the study participants had heard of HIV/AIDS. All the Afghan drug users who had sex had never used a condom. Of the respondents 6.3% had reported injecting drug use and 43% of this group had shared injecting equipment, on an average shared with 4 – 6 users at one time. A study conducted by UNODC in 2006 on Kabul Heroin Users indicates that heroin abuse is spreading in the city. They found that there were at least a minimum of 7015 heroine addicts in Kabul city, of them more than 400 were injecting drug users.

  A recent UNODC and Ministry of Counter Narcotics Study reports that there were 920,000 estimated drug users (3.8% of the total population) in the country with an estimated 15% of 50,000 heroin users were injecting the drugs. Because of the intensification of the war against drugs may lead to reduction in the availability of the inhalational form of heroin which may in turn increase the drug users turning towards injecting drugs. The above situation combined with poverty and the lack of information can lead to widespread increase in injecting drug use and to share the contaminated injecting equipments. The use of non-sterile injecting equipments can kick off the HIV epidemic with a resultant exponential increase in HIV prevalence. According to IBBS in 2009, the key driver of the HIV epidemic in Afghanistan is shared needles by IDUs.

  Latest IBBS in 2009 shows only 29% of IDUs could correctly identify ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission. IDUs in Mazar have the least knowledge as only 5% knew about HIV; among younger IDUs the knowledge level is 0%. Approximately 22% of the IDUs have ever been tested and know their HIV status.

Risk behaviour of IDUs goes beyond just sharing of needles; high risk sexual activity with male and/ or female is reported to occur. About 55% - 70% of IDUs have ever bought sex from a sex worker; 9% - 12% of the IDUs have bought sex within the period of six months prior to the IBBS in 2009. Of them, only 17% - 32% used a condom in their last sexual encounter. About 1% - 3% of the IDUs have had sex with another man.

- **Commercial Sex Work:** There are findings of the two research studies conducted among commercial sex workers in Afghanistan. The ORA International Study, conducted in 4 districts of Kabul province found that knowledge on HIV/AIDS among 126 sex workers was less than 1%. The same study revealed that only 1% of sex workers were using condoms. Of the female sex workers 78% were married. There are an estimated 1160 female sex workers in Kabul, Herat and Mazar.

- **Men who have sex with men:** About 100 MSMs were identified by a study conducted in 2009 by Naz Foundation in Afghanistan. Currently there are no robust estimates or behavioural or biological measures for MSMs in Afghanistan.

- **Prisoners:** HIV prevalence among prisoners in Afghanistan is growing. According to the recently conducted IBBS, the HIV sero-positivity rate among prisoners was 0.57% - 1.57%. There were 10590 prisoners and detainees in 35 prisons in Afghanistan in the year 2007.

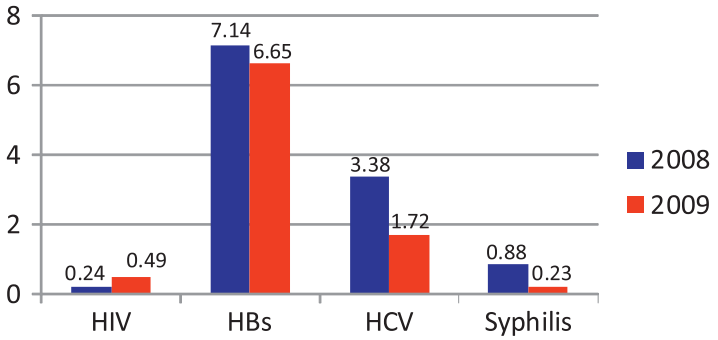
- **Mobile Populations (Refugees, Internally Displaced People, Long distance truckers and Migrant Workers):** Refugees and internally displaced people are particularly vulnerable to HIV for various reasons. Among the subjecting to sexual abuse, violence and lack of access to information, education and basic preventive services are affecting them significantly. Over five million Afghans have been living as refugees or displaced persons in the past decade and over two million of those refugees living in Pakistan. Afghan truck drivers can be considered to be a high risk group for acquiring and transmitting HIV as they travel to the surrounding countries with the growing burden of HIV/AIDS and other sexually transmitted infections. There is an estimated number of 60,000 truckers living and operating in Afghanistan. A study conducted by Action Aid found, 34% of truck drivers had heard of HIV/AIDS, 7% of the participants admitted having paid sex in the last 12 months prior to the survey. Of them less than 25% had used a condom during last sexual encounter. However, IBBS in 2009 has shown that HIV sero-positivity among truckers was 0% inspite of buying sex (23%) and not having protected sex (49%).

  An estimated figure of 1 million Afghans leave Afghanistan annually for employment in neighbouring countries. These migrant workers are spending long periods away from their homes and families putting them at vulnerable position to indulge in risky behaviours. However, no data is available on risk behaviours and on HIV prevalence among Afghan migrant workers.

- **Blood Safety:** The prevailing standard of the blood transfusion services through out the Afghanistan is of primary concern to the National AIDS Control Programme. An estimated 22 hospitals in the country out of 44 perform surgeries without systematically testing blood units for HIV prior to transfusion. Approximately 60,000 transfusions were given annually in Afghanistan. In 2008 and 2009, 31239

blood units were collected from public blood banks. In six out of 12 blood banks, screening for transfusion transmissible infections is carrying out in a quality assured manner. Therefore, blood transfusion is of major concern in order to minimize blood borne infections including HIV/AIDS and Hepatitis B and C. Figure 50 illustrates the prevalence of transfusion transmissible infections among clients attending the VCT sites in Afghanistan from 2008 to 2009.

Figure 51: Prevalence of Transfusion Transmissible Infections among clients of VCT sites in Afghanistan 2008 -2009



(Source: UNAIDS, UNGASS Country Progress Report, Afghanistan, 2010)

- **Sexually Transmitted Infections (STIs):** There is no confirmed data on the prevalence of STIs in Afghanistan. However, according to the findings of the clinical records of the private clinics in large cities suggest that there is high prevalence of STIs in the country. Gonorrhoea is the most common STI.

- **Condom use and knowledge on HIV/AIDS:** According to the final version of Afghanistan National Strategic Framework for HIV/AIDS, 2% of married women in South Eastern Region and 8% of them in Eastern Region of Afghanistan use some form of modern contraceptives. The most common form of contraception was Depot Medroxy Progesterone Acetate injection and the use of condoms was very low. Condoms are available through MCH clinics, pharmacies, shops and even with the road side sellers. However, according to a study done in 2005, the use of condoms was very low even among commercial sex workers as only 1% of them were using condoms during the casual commercial sexual encounters.

- **Gender and Socio-economic Aspects:** Two decades of conflict, human loss and displacement together with the low status of women imparted a severe impact on health sector of the Afghanistan with women being hardest hit. Women's health is extremely poor due to malnutrition, frequent pregnancies with out basic care and trained delivery assistance and lack of access to services or at least to information. According to the Afghanistan National Strategic Framework 2006 – 2010, 54% of girls under the age of 18 were reported to be married. Violence against women, women and girls trafficking for prostitution, rapes, and sexual assaults were not sparse and to be addressed as a matter of urgency.

HIV epidemic in Afghanistan is in its early stages and largely concentrated within the high risk groups especially IDUs. The potential for a rapid increase in this group is very real. Because of the sexual networking between high risk groups in Afghanistan, low level of knowledge and low levels of safe sex practices among female sex workers, there is a possibility of exponential rise of HIV prevalence among high risk groups who currently have 0% HIV prevalence (Female sex workers, MSMs, prisoners and truckers).

Important Aspects of National Response:

National AIDS Control Programme of Ministry of Public Health Afghanistan has already taken initiative to act early through a rigorous and comprehensive multi-sector response with the help of Afghanistan National AIDS Strategic Framework (2006 - 2010). **The Goal of the National Strategic Framework of Afghanistan is to maintain the low level of HIV prevalence in order to reduce the morbidity and mortality associated with HIV/AIDS by the end of 2010. National AIDS Control Programme of Afghanistan planned to achieve this goal by fulfilling following six objectives:**

1. To strengthen strategic information to guide policy formation, programme planning and implementation in line with national targets as well as internationally agreed targets and commitments.
2. To gain political commitment and mobilize resources necessary to implement the National HIV/AIDS /STI Strategy
3. To ensure development and coordination of multi-sectoral HIV/AIDS response and develop institutional capacity of all the sectors involved.
4. To raise public awareness on HIV/AIDS and STI prevention and control, ensure universal access to behaviour change communication on HIV, especially targeting vulnerable and high risk groups
5. To ensure access to prevention, treatment and care services for high risk and vulnerable populations
6. To strengthen the health sector capacity to implement an essential package of HIV/AIDS prevention, treatment and care services within the framework of Basic Package of Health Services (BPHS) and Essential Package of Health Services (EPHS).

Table 11 shows the country summary report of Afghanistan on UNGASS Indicators which has been published in the UNAIDS Global HIV Report 2010.

Table 11: Afghanistan Country Summary Report on UNGASS Indicators in 2008 - 2009

Summary of indicators and progress:

Percentage of most at risk populations who received an HIV test in the last 12 months and who knows their results (UNGASS Indicator 8)
22 % of IDUs (ever tested) and 4 % of FSWs (last 12 months) – IBBS 2009. There are no significant differences in geographical locations or across two age strata (18-24 and 25+).

Percentage of most at risk populations reached with HIV prevention programmes (UNGASS Indicator 9)
17 % of IDUs and 0.1 % of FSWs (IBBS-2009).

17 % of the IDUs report being reached with services (i.e. at least two critical services) while only 0.1 % of FSWs report being reached. However, programme data shows 17 % of IDUs (of the estimated 19,000) and 30 % of FSWs (of estimated 1200) are being reached. Currently there are no programmes to reach MSMs. Of the long distance truckers, 1 % (of the estimated 60,000) are being reached. The IDU data could be slightly biased as the data was collected in the cities where interventions were in place Other problems include the lack of definition of 'reach' and the lack of robustness of the denominators.

Percentage of most at risk populations who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about the HIV transmission I UNGASS Indicator 14)
Latest IBBS (2009) shows only 29 % of the IDUs could correctly identify ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission.

Correct knowledge levels on HIV amongst FSWs is abysmally low – only 2 % could both correctly identify ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission. It is only 0.7 % in the case of younger sex workers (18-24 years).

Percentage of female and male sex workers reporting the use of a condom with their most recent client (UNGASS indicator 18)
58 % of female sex workers report using condom with their most recent client (IBBS-2009)

Percentage of men reporting the use of a condom the last time they has anal sex with a male partner (UNGASS Indicator 19)
Not available. Current interventions do not cover MSM or male sex workers.

Percentage of injecting drug users reporting the use of a condom the last time they had sexual intercourse (UNGASS Indicator 20)
Of the IDUs reporting sexual intercourse in the last six months, 35 % or 237/ 548 of IDUs report using a condom.

Percentage of injecting drug users reporting the use of sterile injecting equipment the last time they injected (UNGASS Indicator 21)
94 % (IBBS 2009). In three major cities of Kabul, Herat and Mazar, 94%, 86 % and 98% respectively used sterile needles in the last time they injected. There are no significant differences in age pattern across the cities in terms of sharing needles (18-24 and 25+).

(Source: UNAIDS, UNGASS Country Report, Afghanistan, 2010)

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5.2 Bangladesh

People's Republic of Bangladesh is one of the Member States of the SAARC Region. It is a coastal country in South Central Asia. It shares the land borders with India and Myanmar and has an irregular coastline of Bay of Bengal to the south. Bangladesh has six Divisions and these Divisions in turn are divided into 64 Districts or Zila.

Population of Bangladesh is 144.5 million (Source: National Report, NASP, Bangladesh 2010) and it is one of the most densely populated countries in the world. The capital of Bangladesh, Dhaka is bearing the highest population density. Bangladesh is a developing country with 36% of the population living with a per capita income below US$ 1 per day. The human development in Bangladesh is slow and steady and ranking the country at 137 among 177 countries in 2004. Table 12 shows some of the important demographic, socio-economic, human and physical resources and health status indicators.

Table 12: Country Profile of Bangladesh
Important socio-demographic and health indicators

Demographic Indicators		
Indicator	Value	**Reference Year**
Crude Birth Rate	20.79/1000 population	**2008**
Crude Death Rate	5.77/1000 population	**2008**
Population Growth Rate	1.39%	**2008**
Total Fertility Rate	3.0/woman	**2004**
Socio-economic Indicators		
Adult Literacy Rate (Total)	49.6%	**2002**
Adult Literacy Rate (Male)	55.5%	**2002**
Adult Literacy Rate (Female)	43.4%	**2002**
Human & Physical Resources Indicators		
Physicians per 10,000 population	3	**2005**
Population per Nurse	6442	**2005**
Hospital Beds per 10,000 population	3.43	**2005**
Number of Health Centres	1385	**2004**
Primary Health Care Services Indicators		
Contraceptive Prevalence Rate	58.1%	**2004**
Antenatal Care Coverage	27.2%	**2004**
Births attended by skilled personnel	13.4%	**2004**
Health Status Indicators		
Total life expectancy at birth	66.7 years	**2008**
Life expectancy at birth (male)	64.5 years	**2002**
Life expectancy at birth (female)	65.4 years	**2002**
Infant Mortality Rate per 1000 live births	52.0	**2008**
Under five Mortality Rate per 1000 live births	74.0	**2008**
Maternal Mortality Rate per 100,000 live births	380	**2002**

(Source: WHO website – www.searo.who.int/bangladesh and NASP Bangladesh Report 2010)

The Constitution of the People's Republic of Bangladesh ensured that the health is the basic right of every citizen of the Republic as health is fundamental to human development. The successive health plans of the country emphasize Primary Health Care (PHC) as the key approach for improving health status of the people. In Bangladesh, 38% of the population was under 15 years, 55% in the age group of 15 – 59 years and remaining 7% was in the age group of 60 years and above in 2008. According to the National report furnished by National AIDS and Sexually Transmitted Disease Programme (NASP), the population aged less than 15 years was 54.4 million in 2008 in Bangladesh

HIV/AIDS situation:

The first HIV positive patient was detected in 1989 in Bangladesh. Bangladesh continues to bear the low HIV prevalence rate in general population (<0.1%) and estimated number of 7500 PLHA were living in Bangladesh as at the end of year 2009. Many risk factors are prevalent in country which makes it more vulnerable to exponential spread of HIV infection. However, the factors like religious influence, cultural values and bond between family members help Bangladesh to maintain the low prevalence among general population.

A cumulative total of 1745 cases of HIV/AIDS have been reported as of December 2009. A cumulative total of 619 AIDS cases were detected till the end of December 2009 and 204 have already died of AIDS as of December 2009. The estimated figure for HIV/AIDS continues to remain at 7500 also in 2009 according to the NASP, Bangladesh. Table 13 illustrates HIV/AIDS situation in Bangladesh from 2003 – 2009, Table 14 shows the sex distribution of the reported HIV/AIDS data in the year 2009 and Figure 51 shows the probable mode of transmission of HIV in 2009.

Table 13: HIV/AIDS Situation in Bangladesh 2003 - 2009

	2003	2004	2005	2006	2007	2008	2009
People living with HIV	363	465	NA	874	1207	1495	1745
AIDS Cases	57	87	NA	NA	365	476	619
Death Cases	31	44	NA	109	123	165	204
Newly infected	NA	102	NA	NA	333	288	250

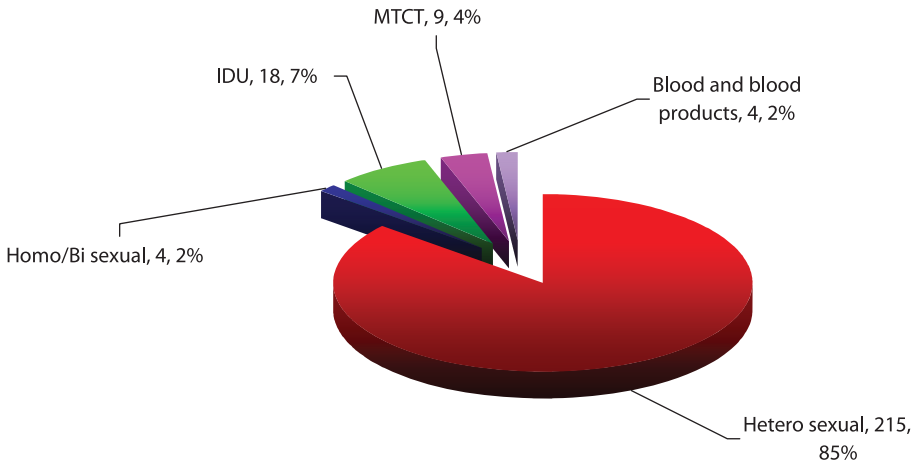
(Source: SAARC HIV/AIDS Update 2009 & National report submitted by NSAP Bangladesh to STAC, Nepal in 2010)

Table 14: Sex Distribution of newly reported HIV/AIDS data for the year 2009

Sex	Number of HIV Positives	Number of AIDS Patients	Number of AIDS Deaths
Male	169	98	30
Female	76	45	09
TG	04	-	-
Unknown	01	-	-
Total	250	143	39

(Source: National report, NSAP Bangladesh)

Figure 52: Probable modes of HIV Transmission in Bangladesh 2009

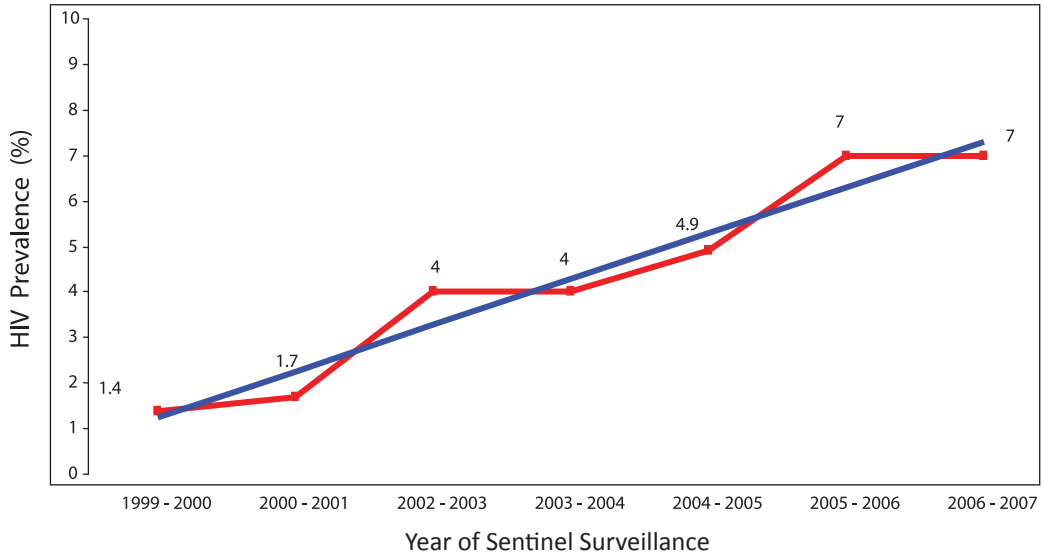


Considering the high caseload of HIV in neighboring countries, the social stigma and discrimination and the limited access to HIV counseling and testing services, Bangladesh faces potential risk of an HIV epidemic. According to the findings of most recent HIV Sero-Surveillance in 2006 – 2007, the country is currently going through the phase of a "concentrated epidemic" among IDUs, with a nationwide prevalence of 7%. The risk factors for the rapid spread of HIV at least among most at risk populations are prevailing in Bangladesh. They are hidden but with significant implications for the whole nation. The recognized risk factors are sex industry, low level of condom use, increasing injecting drug use, persistent sharing of contaminated injecting equipments and established concentrated HIV epidemic among IDUs. Figure 52 highlights the increasing trend of HIV prevalence among IDUs in Dhaka, Bangladesh from 1999 – 2007.

National STD and AIDS Programme of Bangladesh has taken the initiative to track the epidemic since 1998 by conducting Sentinel Sero-Surveillance and little later the Behavioural Surveillance in the country. The Behavioural Surveillance Survey is a significant milestone in understanding and monitoring the levels of risk behaviours associated with the spread of HIV infection within selected most at risk populations in Bangladesh. It also focuses the trends of risk behaviours among most at risk populations between the behavioural surveillance rounds. The most recent Behavioural Surveillance Survey was conducted in 2006 – 2007. The country was divided into six geographical locations on the basis of administrative divisions and conducted the survey among under mentioned ten different groups of most at risk populations in each geographical location.

- Injecting Drug Users
- Heroin smokers
- Brothel based female sex workers
- Street based female sex workers
- Hotel based female sex workers
- Males who have sex with males
- Male sex workers
- Transgender (Hijras)
- Rickshaw pullers
- Truckers

Figure 53: HIV Prevalence Trend among Injecting Drug Users in Dhaka from 1999 to 2007



Sixth round of the behavioural surveillance survey interviewed 7,167 respondents from all the selected MARPs using a structured questionnaire. The most recent BSS revealed that the risk behaviours exist despite the presence of many interventions for HIV prevention. Hence, to yield a positive impact the service providers need a critical assessment to ensure that the most at risk populations have exposed to adequate information, gathered adequate knowledge and have expanded accessibility to commodities to practice safer behaviours.

Figure 54: Overall HIV Prevalence Rates among Most at Risk Populations 2000 - 2007

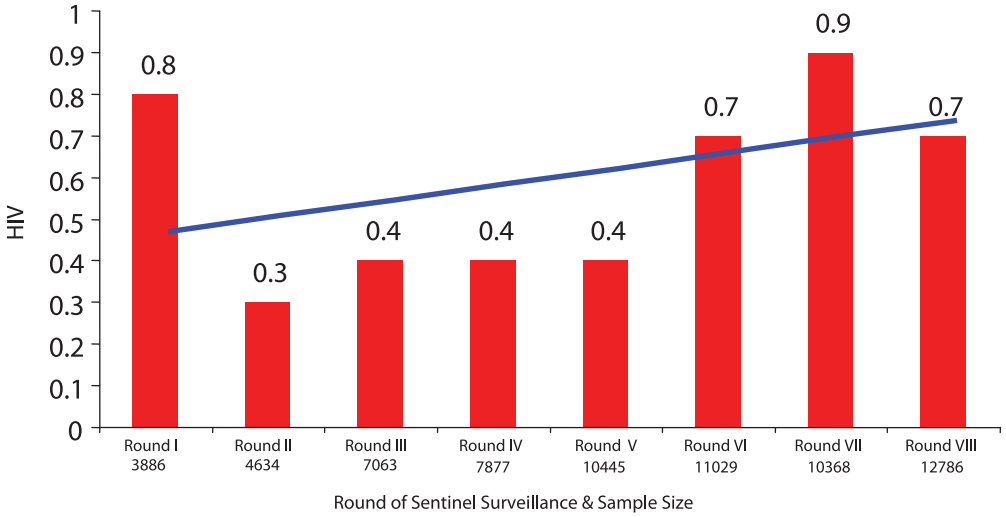


Figure 53 illustrates the increasing trend of HIV prevalence rates among most at risk populations in Bangladesh over the period of 2000 to 2007 rising slowly but steadily. The data were based on the round 1 to round 8 of HIV Sentinel Sero-Surveillance.

Risk and vulnerabilities:

Bangladesh is vulnerable to an expanded HIV/AIDS epidemic due to the prevalence of behavior patterns and risk factors that facilitate the rapid spread of HIV. Risk factors include the following:

- **Needle-sharing among Injecting Drug Users:** The 7th and 8th rounds of sentinel surveillance show that there was a concentrated epidemic among IDUs in Bangladesh and the HIV prevalence among IDUs was 7% during both rounds. There were 20,000 – 40,000 estimated IDUs in Bangladesh according to the National report of NASP, Bangladesh. The results of the 2006 – 2007 BSS revealed that 61.7% to 80.1% of the IDUs in different locations of the geographical settings of the survey either lent or borrowed used injecting equipment in their last injection within a two month period. This level of infection among IDUs and the risk behaviours among them pose a significant threat to the society as the infection can spread exponentially within the group, then through the bridging groups into the general population.

- **Commercial Sex work:** There were 54,000 – 90,000 estimated number of female sex workers in Bangladesh. Brothel-based female sex workers in all 14 brothels through out the country indicated that they initiated sexual activities in their early adolescence. On an average a brothel based female sex worker had 19 clients in the week preceding the survey. Only 3.7% of the brothel based sex workers perceived themselves as at high risk of acquiring HIV/AIDS. Street-based sex workers were interviewed at three locations in Bangladesh during most recent BSS. On an average 8 – 15 clients were visiting them per week. Hotel based sex workers reported of having as high as 61 clients during the week preceding the most recent BSS.

- There were 50,000 – 165,000 estimated Men who have Sex with Men, Male sex workers and Transgender persons in Bangladesh. In general male sex workers in Bangladesh are young with their average age ranging between 20 years to 22 years. They had approximately 04 - 10 clients in the week preceding the sixth round of BSS in 2006 – 2007. On an average, Hijras in Dhaka had their sexual debut at 12 years of age. They had nearly 30 clients in the week preceding the sixth round of BSS.

- **Low Levels of Consistent Condom Use:** According to the National report of NASP, Bangladesh the use of condoms among brothel based and street based sex workers during last sex with clients increased significantly. This significant improvement in condom use was noticed in most recent BSS round conducted in 2006 – 2007 as compared with the previous rounds of BSS. Among male sex workers in Dhaka, the use of condoms during last anal sex in sixth round of BSS had declined slightly than that of the fifth round. Nearly two thirds of the Hijras used condoms with new clients during the last sex in the week preceding the sixth round of BSS.

- **High Risk behaviour among Men who have Sex with Men (MSM):** The MSM in Bangladesh reported having approximately five sexual partners of all types in the preceding month of the sixth round of BSS. More than one tenth of the MSM also reported having group sex in the last month before the survey. The mean number of five sexual partners was in the group. The use of condoms among MSM was low. The use of condoms during last sex with male sex worker or with a Hijra decreased notably in sixth round of BSS than that of fifth round. Only 7% of MSM in Dhaka reported consistent condom use during sex with male sex workers.

- **Risk behaviour among Rickshaw Pullers and Truckers:** According to the report of the sixth round of BSS, the rickshaw pullers in Bangladesh were young (mean age 16 -17 years) and most of them were internal migrants. Nearly two thirds of rickshaw pullers had sex with female sex workers in the preceding year of the sixth round of BSS. The mean number of sex workers with whom they had sex was five. Less than one tenth of this group had sex with male sex workers or with Hijras in the preceding year. More

than 25% of them experienced group sex in the previous year. However, 53% of them reported using a condom during the commercial sexual encounters and 7% - 12% of them consistently used condoms. The consistent condom use among rickshaw pullers increased over the rounds of BSS. Less than 3% of rickshaw pullers perceived that they were at high risk of HIV acquisition. However, almost all rickshaw pullers were aware on HIV/AIDS and none of them in the geographical area "Chittagong" had been exposed to any intervention programme.

Most of the truckers interviewed during sixth round of BSS were internally migrant workers. The mean age of the group was 18 years and 87.8% of them had sex with female sex workers in the preceding year. The mean number of the female sex workers with whom they had sex was eight. Approximately one tenth of them had sex with male sex workers or with Hijras and 28.4% had group sex during the previous year. However, only 23% of the truckers who had commercial sexual encounters in the previous year used condoms and only 6.9% consistently used condoms. When compared to fifth round of BSS, the condom use by the truckers was increased during the sixth round. Almost all truckers were aware on HIV/AIDS but, only 1.5% perceived that they are at high risk of acquiring HIV. Only 11 out of 473 truckers were exposed to intervention programmes.

- **Sexually Transmitted Infections among most at risk populations:** Prevalence rates of sexually transmitted infections can be taken as a proxy indicator of the prevalence of unprotected sexual intercourse and also as a risk factor for acquiring HIV infection. Of the brothel based sex workers who participated in sixth round of BSS, 63% reported at least one symptom suggestive of STI during the preceding year. Of the street based sex workers 19.4% to 67.2% in the various geographic locations in Bangladesh reported experiencing at least one symptom suggestive of an STI. The percentage of hotel based sex workers reporting at least one symptom suggestive of STIs in the year preceding the sixth round of BSS was also high. More than one third of male sex workers and Hijras reported at least one symptom suggestive of STIs in the preceding year and nearly half of both groups did not seek any formal medical treatment.

Important aspects of National Response:

National AIDS and STD Programme of Bangladesh currently implements three special projects to contain the HIV epidemic in the country. As a national response to HIV/AIDS epidemic, NASP launched a programme within Health, Nutrition and Population Support Programme (HNPSP) for 2006 – 2010. The objectives of the programme are;

1. To increase the access and use of quality targeted interventions for the most vulnerable groups
2. To increase the access and use of prevention services for the general population
3. To increase access to a quality blood transfusion services. Efforts to promote voluntary blood donation and mandatory screening of donated blood have reduced the practice of professional blood donation remarkably from 70% in 2001 to 16% in 2006.
4. To increase access and use of quality treatment, care and support services for people living with HIV/AIDS
5. To increase the concerted action to reduce the impact of HIV on society and communities
6. To increase the capacity of National AIDS and STD Programme in order to coordinate a national multi-sectoral response

In addition to above, NASP of Bangladesh launched two additional projects with the help of Global Fund Round 2 and 6. In Global Fund Round 2, Bangladesh implemented the project on "Prevention of HIV/AIDS among youth and adolescents in Bangladesh" Under the management of "Save the Children – USA", 16 Non-Governmental Organizations (NGO) are working all over the country to implement this project. The goal of the project is to prevent HIV infection in young people aged 15 – 24 years and thereby help avert a generalized HIV epidemic in Bangladesh.

Table 15: Most at risk populations reached by prevention programmes in Bangladesh 2005 and 2009

Population Groups	% of Reach 2005	% of Reach 2009	% of Increase
Female Sex Workers	6.9	7.4	0.5
Male Sex Workers	20.4	18	-2.4
Hijra	1.46	22.3	20.84
MSM	0.66	8.1	7.44
IDU	3.54	2.1	-1.44
Heroin smokers	0.55	2.1	1.55
Rickshaw pullers	0	0.2	0.2
Truckers	1.1	0	-1.1
All risk groups	5.2	7.2	2
	Source: BSS 2003-04	Source: BSS 2006-07	

Table 16: Progress of Most at risk populations tested and knew the HIV status in Bangladesh 2007 and 2009

Population group(s)	*Indicator Value (%)*		% of change
	2007	2009	
Female sex workers	1.6	4.1	2.5
Male sex workers	1.1	4.1	3
Hijra	0	14.3	14.3
MSM	0	2.5	2.5
IDU	3.2	4.7	1.5
Heroin smokers	0.5	1.3	0.8
Rickshaw pullers	0	0	0
Truckers	0.	2 0	-0.2
All risk groups	1.3	3.8	2.5
Source: BSS 2003-04 Source: BSS 2006-07			

(Source: UNAIDS, UNGASS country Report, Bangladesh, 2010)

The Global Fund round 6 aims to limit the spread and impact of HIV in Bangladesh by improving the coverage and quality of essential HIV services for the most vulnerable, high risk populations while emphasizing primary prevention and risk reduction for especially vulnerable young people. Table 15 and Table 16 show the progress made by NASP, Bangladesh in reaching the MARPs from 2005 to 2009 and progress made on testing and knowing the HIV status from 2007 to 2009 respectively.

The following three main objectives of the Global Fund Round 6 project address the priority areas in National HIV/AIDS Strategy of Bangladesh.

1. To increase the coverage, quality and comprehensiveness of interventions for vulnerable populations at highest risk of HIV in Bangladesh
2. To increase coverage and quality of HIV prevention interventions for young people in Bangladesh with focus on those especially vulnerable to HIV
3. To build capacity of Government and NGO partners at national and district levels to scale up standardized, high quality interventions, to monitor and improve coverage and quality and to improve coordination

This project will scale up essential services for female sex workers and for IDUs. The essential service package for sex workers includes a component for scaling up of condom use and STI services. The essential service package for IDUs includes needle syringe exchange programme and drug dependence treatment for IDUs. Currently 38 NGOs, Community Based Organizations (CBO) and academic organizations are implementing the activities in Bangladesh. The period of this project is from 2007 – 2012.

Table 17: Services available for HIV infected and affected people in Bangladesh, as of December 2009

Service	Number of Health Facilities providing services at the end of December 2009
Health care facilities with voluntary counseling and testing	98
Health care facilities with voluntary counseling	-
Health care facilities with laboratory facility for CD4 count	03
Health care facilities with laboratory facility for viral load	02
Health care facilities with ARV treatment – first line regimen	07
Health care facilities with ARV treatment – second line regimen	02
Health care facilities with PMTCT services	01
Health care facilities with post-exposure prophylaxis for health care workers	-
Centres providing social welfare facilities	06

Table 17 illustrates the services available for HIV infected and affected people in Bangladesh, as of December 2009. The cumulative total of 320 PLHA were on antiretroviral treatment, as of December 2009. Of them, 217 were adult males, 96 were adult females, 03 and 04 were less than 15 years male and female children respectively.

The country report on UNGASS indicators which has been published in the UNGASS Country Progress Report, 2010, UNAIDS is given as Table 18.

Table 18: Bangladesh Country Report on UNGASS Indicators in the year 2009

Indicator	*Population group(s)*	*Indicator Value (%)*		
		2005	*2007*	2009
3. Percentage of donated blood units screened for HIV in a quality assured manner [7]	All	Not available	Not available	100% [8] Reported for only 116 SBTP centres (including Red crescent) Source: Health Bulletin DGHS, 2009

4. Percentage of adults and children with advanced HIV infection receiving antiretroviral therapy	PLHIV	Not available	13.3%	47.7% (353/740) Source: Numerator: AAS, CAAP and MAB Denominator: GTZ supported and IHP conducted projection made in 2008.
5. Percentage of HIV-positive pregnant women who receive antiretroviral to reduce the risk of mother-to-child transmission	HIV positive pregnant women	Not available	Not available	Not available
6. Percentage of estimated HIV positive incident TB cases that received treatment for TB and HIV	Incidence of TB cases in people living with HIV	Not available	Not available	Not available
7. Percentage of women and men aged 15-49 who received an HIV test in the last 12 months and who know the results	Women and men aged 15-49	Not available	Not available	Not available

Indicator	***Population group(s)***	***Indicator Value (%)***		
		2005	***2007***	**2009**
8. Percentage of most-at-risk populations that have received an HIV test in the last 12 months and who know the results [9]	Female sex workers Male sex workers Hijra MSM IDU Heroin smokers Rickshaw pullers Truckers All risk groups	1.6 1.1 0.0 0.0 3.2 0.5 0.0 0.2 1.3 Source: BSS 2003-04	4.1 4.1 14.3 2.5 4.7 1.3 0.0 0.0 3.8 Source: BSS 2006-07	4.1 4.1 14.3 2.5 4.7 1.3 0.0 0.0 3.8 Source: BSS 2006-07
9. Percentage of most-at-risk populations reached with HIV/AIDS prevention programmes [10]	Female sex workers Male sex workers Hijra MSM IDU Heroin smokers Rickshaw pullers Truckers All risk groups	6.9 20.4 1.46 0.66 3.54 0.55 0.0 1.1 5.2 Source: BSS 2003-04	7.4 18.0 22.3 8.1 2.1 2.1 0.2 0.0 7.2 Source: BSS 2006-07	7.4 18.0 22.3 8.1 2.1 2.1 0.2 0.0 7.2 Source: BSS 2006-07
10. Percentage of orphans and vulnerable children whose households received free basic external support in caring for the child	OVC	Not available	Not available	Not available

Indicator	Population group(s)	Indicator Value (%)		
		2005	2007	2009
11. Percentage of schools that provided life-skills based HIV/AIDS education within the last academic year	Schools providing Life Skills Based Education.	Not available	Not available	26/19017 =0.14% Source: Numerator: UNICEF Denominator: Total secondary school in Bangladesh (Statistical pocket book 2008)
12. Current school attendance among orphans and among non-orphans aged10–14	All children aged 10-14	Not available	Not available	Not available
13. Percentage of young women and men aged 15–24 who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission[11]	Males Females All 15-24	Not available Not available Not available	10.4 10.0 10.2 Source: National Baseline HIV/AIDS survey among youth in Bangladesh 2005 NASP, Save-USA, ICDDR,B	22.4 13.4 17.7 Source: National End Line HIV/AIDS Survey among Youth in Bangladesh, 2008, NASP, SC USA, ICDDR,B
14. Percentage of most-at-risk populations who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission	Female sex workers Male sex workers Hijra MSM IDU Heroin smokers Rickshaw pullers Truckers All risk groups	24.0 28.2 3.7 13.2 14.3 4.8 6.0 19.8 17.0 Source: BSS 2003-04	30.8 29.6 55.2 27.3 20.2 19.4 12.1 7.7 25.9 Source: BSS 2006-07	30.8 29.6 55.2 27.3 20.2 19.4 12.1 7.7 25.9 Source: BSS 2006-07

Indicator	Population group(s)	Indicator Value (%)		
		2005	2007	2009
15. Percentage of young women and men who have had sexual intercourse before the age of 15 [12]	Males 15-24 Females 15-24 All 15-24	Not available Not available Not available	11.6 35.7 27.1 Source: National Baseline HIV/AIDS survey among youth in Bangladesh 2005 NASP, Save-USA, ICDDR,B	11.8 30.6 24.3 Source: National End Line HIV/AIDS Survey among Youth in Bangladesh, 2008, NASP, SC USA, ICDDR,B
16. Percentage of adults aged 15–49 who have had sexual intercourse with more than one partner in the last 12 months [13]	Females Males	Not available Not available	Not available 12.9% Source: Assessment of Sexual behaviour of men in Bangladesh FHI/ICDDRB 2006	Not available 12.9% Source: Assessment of Sexual behaviour of men in Bangladesh FHI/ICDDRB 2006
17. Percentage of adults aged 15–49 who had more than one sexual partner in the past 12 months who report the use of a condom during their last intercourse [14]	Females Males	Not available Not available	Not available 35.0% Source: Assessment of Sexual behaviour of men in Bangladesh FHI/ICDDRB 2006	Not available 35.0% Source: Assessment of Sexual behaviour of men in Bangladesh FHI/ICDDRB 2006
18. Percentage of female and male sex workers reporting the use of a condom with their most recent client (new clients)	Female sex workers Male sex workers Transgender/Hijra	30.9 44.1 15.6 Source: BSS 2003-04	66.7 43.7 66.5 Source: BSS 2006-2007	66.7 43.7 66.5 Source: BSS 2006-2007

Indicator	*Population group(s)*	*Indicator Value (%)*		
		2005	*2007*	2009
19. Percentage of men reporting the use of a condom the last time they had anal sex with a male partner	MSM Commercial sex Non-commercial sex	 49.2 37.0 Source: BSS 2003-04	 29.5 24.3 Source: BSS 2006-2007	 29.5 24.3 Source: BSS 2006-2007
20. Percentage of injecting drug users who report the use of a condom at last sexual intercourse	**Male IDU:** Commercial Non-comm. sex **Female IDU:** Commercial sex Non-comm. sex	 23.6 18.9 78.9 43.9 Source: BSS, 2003-2004 for male IDUs and Cohort study by ICDDR,B for female IDUs baseline in Dec 2004-May 2005	 44.3 30.5 54.8 42.1 Source: BSS, 2006-2007 for male IDUs and Cohort study by ICDDR,B for female IDUs 3rd round in July-Nov 2006	 44.3 30.5 54.8 42.1 Source: BSS, 2006-2007 for male IDUs and Cohort study by ICDDR,B for female IDUs 3rd round in July-Nov 2006
21. Percentage of injecting drug users who reported using sterile injecting equipment the last time they injected	Male IDU: Female IDU:	51.8 60.0 Source: BSS, 2003-2004 for male IDUs and Cohort study by ICDDR,B for female IDUs baseline in Dec 2004-May 2005	33.6 73.8 Source: BSS, 2006-2007 for male IDUs and Cohort study by ICDDR,B for female IDUs 3rd round in July-Nov 2006	33.6 73.8 Source: BSS, 2006-2007 for male IDUs and Cohort study by ICDDR,B for female IDUs 3rd round in July-Nov 2006
22. Percentage of young women and men aged 15–24 who are HIV infected	young women and men aged 15–24 who are HIV infected	Not available	Not available	Not available

Indicator	*Population group(s)*	*Indicator Value (%)*		
		2005	*2007*	2009
23. Percentage of most-at-risk populations who are HIV infected	Female sex workers Male sex workers Hijra MSM MSM and MSW combined Male IDU [15] Female IDU Combined IDU and HS Heroin smokers All risk groups	0.3 0.0 0.8 0.0 0.4 1.5 [16] (4.9) 0.0 Not sampled 0.5 0.6 Source: National HIV Serological Surveillance, 2004-2005	0.1 0.7 0.6 0.2 Not sampled 1.9 [17] (7.0) 0.8 0.0 0.0 0.9 Source: National HIV Serological Surveillance, 2006	0.3 0.3 0.3 0.0 0.3 1.6 [18] (7.0) 1.0 0.1 0.2 0.7 Source: National HIV Serological Surveillance, 2007 (unpublished)
24. Percentage of adults and children with HIV known to be on treatment 12 months after initiation of antiretroviral therapy	Adult and children with HIV	Not available	Not available	209/232 =90.1% Source: AAS, MAB and CAAP
25. Percentage of infants born to HIV infected mothers who are infected	Infants	Not available	Not available	Not available

(Source: UNAIDS, UNGASS Country Report, Bangladesh, 2010)

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5.3 Bhutan

The Royal Government of Bhutan is a land locked country situated in the South Asia and is a Member State of the SAARC. Bhutan shares its borders with China and India. It has a land area of 38,394 square kilometers and the altitude varying from 180m to 7,550m above sea level. Bhutan is divided into 20 administrative districts.

The total population of Bhutan was estimated to be 683, 407 in the year 2007 (Source: National report provided by NASP, Bhutan in July 2010) The population is largely rural as approximately 69.1% of them living in villages. Bhutan has a precious environment and a rich cultural heritage. The vision document of Bhutan 2020has clearly stated the commitment to improve the quality of life of the people through improving health and education, preserving it's rich cultural heritage and maintaining it's precious environment. Table 19 illustrates some of the important demographic, socio-economic, human and physical resources and health status indicators.

Table 19: Country Profile of Bhutan
Important socio-demographic and health indicators

Demographic Indicators		
Indicator	Value	**Reference Year**
Crude Birth Rate	20/1000 population	**2008**
Crude Death Rate	7/1000 population	**2008**
Population Growth Rate	1.3%	**2005**
Total Fertility Rate	2.5/woman	**2000**
Socio-economic Indicators		
Adult Literacy Rate (Total)	47.3%	**2000**
Adult Literacy Rate (Male)	61.1%	**2000**
Adult Literacy Rate (Female)	33.6%	**2000**
Human & Physical Resources Indicators		
Physicians per 10,000 population	2.3	**2005**
Nurses per 10,000 population	8.3	**2005**
Hospital Beds per 10,000 population	17	**2005**
Number of Health Centres	719	**2006**
Primary Health Care Services Indicators		
Contraceptive Prevalence Rate	31%	**2000**
Antenatal Care Coverage		
Births attended by skilled personnel	52%	**2005**
Health Status Indicators		
Total life expectancy at birth	66.1 years	**2008**
Life expectancy at birth (male)	66 years	**2003**
Life expectancy at birth (female)	66.2 years	**2003**
Infant Mortality Rate per 1000 live births	40.1	**2005**
Under five Mortality Rate per 1000 live births	61.5	**2005**
Maternal Mortality Rate per 100,000 live births	**255**	**2000**

(Source: WHO website – www.searo.who.int/bhutan, National Report, NASP Bhutan)

HIV/AIDS Situation in Bhutan:

The first person infected with HIV in the Kingdom was reported in 1993. As of December 2009, National STD/HIV/AIDS Prevention and Control Programme reported a cumulative total of 185 HIV infected persons. Males and females in the Kingdom were almost equally affected. As of December 2009, 34 cumulative number of AIDS deaths were reported among infected Bhutanese. The most common mode of transmission was the heterosexual route (89.7%) followed by mother to child transmission (9.2%). The first infant with mother to child transmission in Bhutan was reported in 2001 while the first person with intravenously transmitted HIV infection probably through intravenous drug use was detected in January 2006. UNAIDS and WHO estimate that less than 500 people were living with HIV/AIDS in Bhutan as at the end of 2009. The HIV prevalence rate in Bhutan was less than 0.1% in 2009.

Figure 55: Reported HIV Positives in Bhutan 1993 – 2009

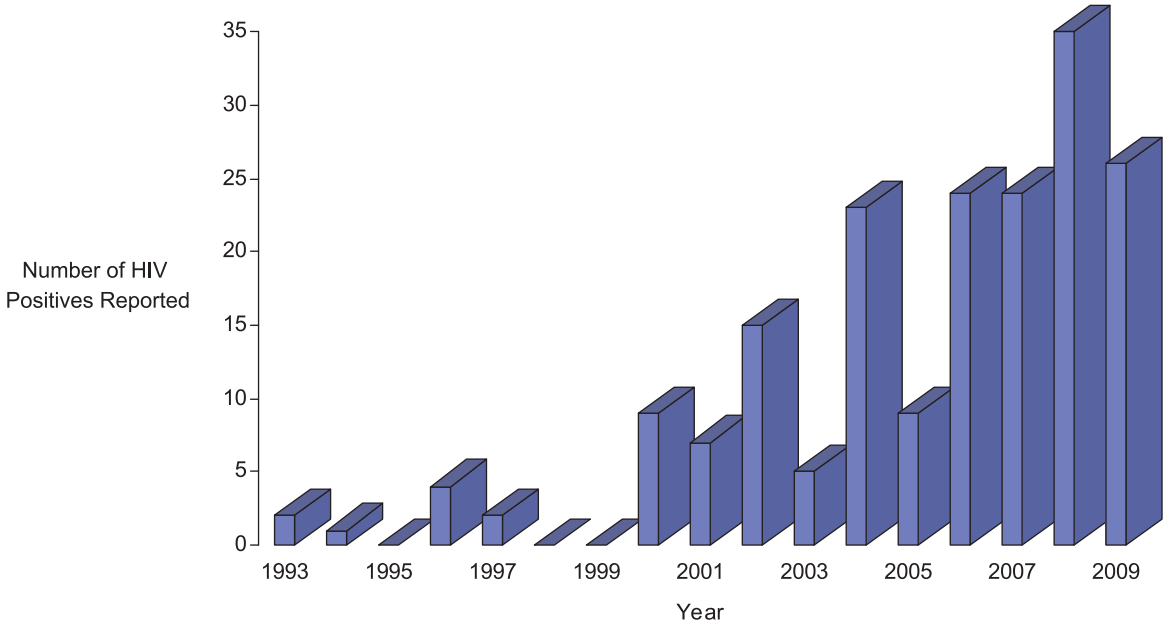
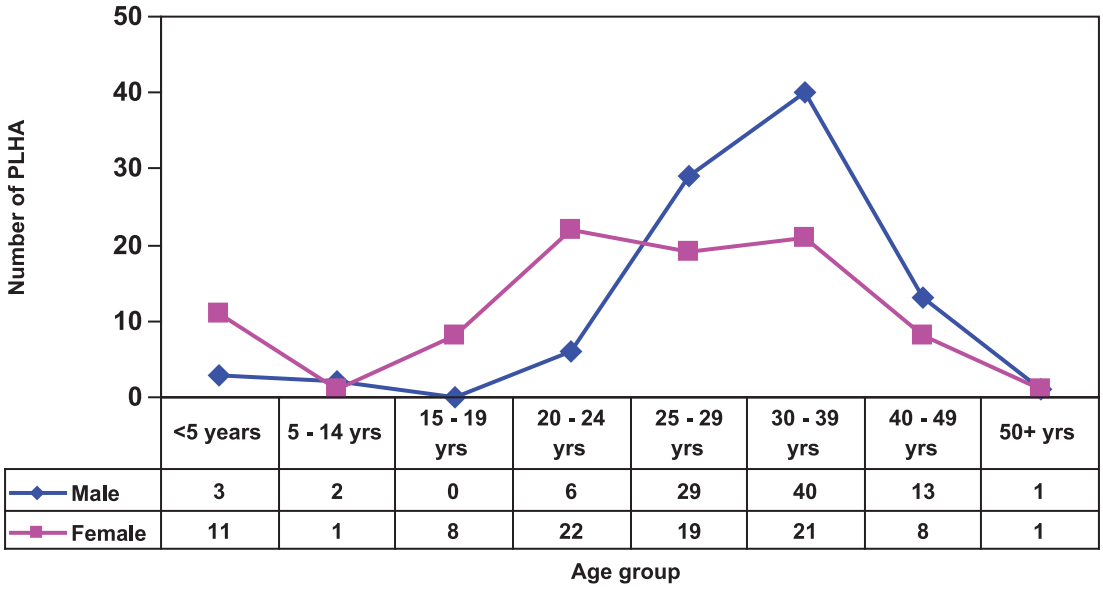


Figure 54 shows the reported HIV positive persons in Bhutan from 1993 – 2009. So far, the maximum number of HIV positives in Bhutan was reported in the year 2008. Figure 55 illustrates the age and sex distribution of the HIV positives reported to National STD/HIV/AIDS Prevention and Control Programme of Bhutan since 1993. It highlights that majority of HIV infected males were in age group of 24 to 49 years and females were in the age group of 19 to 49 years

Figure 56: Age and sex distribution of Reported HIV cases in Bhutan as of December 2009

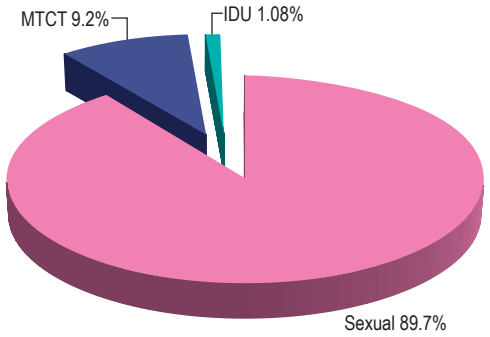


	<5 years	5 - 14 yrs	15 - 19 yrs	20 - 24 yrs	25 - 29 yrs	30 - 39 yrs	40 - 49 yrs	50+ yrs
Male	3	2	0	6	29	40	13	1
Female	11	1	8	22	19	21	8	1

The Ministry of Health in Bhutan has been using the following approaches to detect HIV positives in the country.

1. Medical screening
2. Blood donor screening
3. Surveys
4. Contact tracing
5. Voluntary counseling and testing
6. Screening infants born to HIV positive mothers

Figure 57: The modes of transmission of HIV infection in Bhutan as of December 2009



According to Figure 56 the sexual intercourse among men and women (hetero-sexual) was the main mode of transmission of HIV in Bhutan followed by the Mother to Child Transmission.

Reported HIV positives in Bhutan were from diverse occupations. There were government servants, farmers, female sex workers and housewives. The main category affected by the HIV infection was housewives and this is to be regarded as a significant and important finding in planning and implementation of preventive interventions in Bhutan.

Table 20 shows the services available for vulnerable people and for PLHA as at the end of year 2009 in Bhutan. As of December 2009, cumulative total of 50 PLHA were on antiretroviral drugs in Bhutan. Of them 22 were adult males, 27 were adult females and 01 was a child less than 15 years of age.

Table 20: Services available for HIV infected and affected people in Bhutan, as of December 2009

Service	Number of Health Facilities providing services at the end of December 2009
Health care facilities with voluntary counseling and testing	29
Health care facilities with voluntary counseling	178
Health care facilities with laboratory facility for CD4 count	2
Health care facilities with laboratory facility for viral load	1
Health care facilities with ARV treatment – first line regimen	8
Health care facilities with ARV treatment – second line regimen	1
Health care facilities with PMTCT services	20
Health care facilities with post-exposure prophylaxis for health care workers	20

Risks and Vulnerabilities:

Despite the low prevalence of HIV infection in Bhutan, the presence of a range of risk factors and vulnerabilities could fuel the spread of a widespread epidemic. These factors include high rates of sexually transmitted infections in the society, relatively high rates of unprotected sex and partner concurrency (the tendency for Bhutanese men and women to have more than one partner at the same time), internal and international migration, porous borders, spread of commercial sex work, risk of substance abuse, less rigid sexual norms etc.

- **Sexually Transmitted Infections (STIs):** STIs are important cofactors that facilitate HIV transmission in a society. Prevalence of STIs in a society is also a sensitive marker of the rate of unprotected sexual intercourse in that society. Despite the very low prevalence of HIV, the rates of other STIs and risk behaviours are highly prevalent in Bhutan. Syphilis rates as high as 13% have been documented in community based surveys. Prevalence of syphilis among pregnant women who have been screened at the National referral Hospital in Bhutan was more than 2%. Among the military personnel in Bhutan, the prevalence of syphilis was 5%. High rates of gonorrhoea have also been reported with an annual estimated incidence of about 2% among adult population in Bhutan. HIV/AIDS General Population Survey conducted in 2006 in Bhutan revealed that 5 – 6% of men and 8% of women had had a symptom suggestive of STIs. The knowledge on STI symptoms was low especially among females.

  According to the HIV/AIDS General Population Survey conducted in 2006 in Bhutan, knowledge on HIV transmission and prevention was better than that for STIs. A substantial proportion did not know the mode of transmission of STIs. The populations with inadequate knowledge on STIs were higher among rural residents and among females. This is a significant finding to be considered seriously when planning and implementing HIV/STI prevention interventions. According to the findings of the survey, the main barriers in seeking STI services were the issues related to maintenance of the confidentiality and the STI services were not being user friendly.

- **Commercial Sex Work:** As in any other country in the SAARC region, much of the commercial sex work particularly in the interior districts is informal and more difficult to identify. The commercial sex work in the border town of Phuntsholing remains as a high-transmission zone. Sex work is perceived to be spreading into other border towns and interior districts such as Paro, Trongsa, and Mongar.

- **Substance Abuse:** The first HIV patient with possible transmission through injecting drug use was reported in 2006 in Bhutan. However, heroin use and injecting drug use are currently minimal in Bhutan when compared to neighbouring and bordering countries; Nepal and northeastern parts of India and southern parts of China. Alcohol consumption in the country is extensive. Substance abuse is associated with a higher risk of HIV infection as they can depress the higher centres of the brain and as a result of that increase the chances of adopting risk taking behaviours.

- **Sexual Norms:** In comparison to other countries in SAARC region, Bhutan is having less stringent sexual norms for both men and women. According to the findings of the HIV/AIDS General Population Survey in 2006, extramarital and premarital sexual encounters were common in both urban and rural areas. One fifth of all married people have engaged in extramarital sex in the year preceding the general Population Survey and 14% of the unmarried people had sex during the same period. Despite the high levels of reported casual sexual encounters, 13 - 15% of urban males bought sex from commercial sex workers in the year preceding the survey.

  According to the report of Commission on AIDS in Asia 2008, one of the key determinants that drive the HIV epidemic is the number of clients per sex worker. If the proportion of men buying sex is high and the numbers of the sex workers are low, the risk of HIV transmission is greater. Hence, the country is very vulnerable to an HIV epidemic as stated in the Editorial of the Volume 1, Issue 2 (April – June 2008) Quarterly Morbidity and Activity Report of the Ministry of Health, Government of Royal Kingdom of Bhutan.

- **Mobility:** Internal and international migration is relentlessly posing a threat of HIV transmission across the globe. Migration often increases the pressure and opportunities to engage in casual and commercial sexual encounters. Four groups of migrant populations were identified as the focus of HIV-prevention efforts. They were international migrants (students and businessmen), military personnel, migrant workers from neighbouring countries and internal or external migrant workers such as truck drivers and traders.

- **Porous Borders:** The borders are increasingly porous with greater commerce and trading relationships between neighbouring countries. Some of the bordering areas of the Nepal and northeastern India are already experiencing concentrated HIV epidemics.

Important Aspects of National response:

The Royal Government of Bhutan took early initiative to prevent HIV/AIDS in the country. Five years prior to detection of first HIV infected person in Bhutan, the Royal Government established the National HIV/AIDS and STD Control Programme in 1988. The Royal Decree on HIV/AIDS issued by His Majesty the Fourth King on 24th May 2004 serves as the guiding principle in the fight against HIV/AIDS. The Royal Decree calls for all members of the society to help prevent HIV/AIDS and provide care and compassion to those infected.

Prevention will continue to be the main stay of the National Strategic Plan. The current focus is geared towards the following aspects;

- Strengthening institutions and capacity of service providers
- Care, support and treatment for HIV/AIDS and STIs
- Voluntary Counselling and Testing
- Improving strategic information through research and surveillance
- Monitoring and Evaluation

Intensifying preventive measures and interventions among the vulnerable populations is of greatest priority in order to maintain the low HIV prevalence status. Strengthening care, support and universal access to treatment for people living with AIDS are also important components. Providing care and compassion for infected people will ensure that they will not go underground fuelling its spread. By addressing these components, National HIV/AIDS Control Programme will be able to achieve the impact of slowing and ultimately reversing the spread of HIV infection.

For a country like Bhutan with a low HIV prevalence, a focus on controlling STIs can be an effective strategy for reinforcing prevention and ensuring that conditions remain unfavourable for HIV transmission. Hence, the National AIDS and STI Control Programme made strong initial efforts to strengthen HIV prevention within the broader context of controlling sexually transmitted infections. The Government of Royal Kingdom of Bhutan launched the National Strategic Plan for prevention and control of STIs and HIV/AIDS in the country in January 2009. The National Strategic Plan (NSP) will guide the STI and HIV/AIDS response in Bhutan, in line with the Tenth Five Year Plan for 2008 – 2013. The scope of the NSP extends beyond the medical response. The strategic framework ensures a multi-sectoral approach that is innovative, interactive and deliberative with the aim of improving collaboration between government sector, NGOs, international organizations, communities, institutions, private sector and the media. The main strategies of the NSP are

- Promotion of safe sex behaviours
- Promotion of condom use including condom social marketing
- Ensuring clear accurate information concerning HIV/AIDS, TB/HIV co-infection and STIs and increasing IEC
- Strengthening access to STI services and regularly updating STI prevention and control policies
- Enhancing surveillance and access to VCT
- Prevention interventions among the general population with additional focus on vulnerable population groups
- Continuing treatment, care and support of infected and affected population with a special focus on children infected and affected
- Decentralization of antiretroviral treatment to districts
- Enhancing coordination and collaboration between stakeholders
- Generating local evidence/information on HIV vulnerabilities in Bhutan
- Capacity building, integration of STI and HIV/AIDS interventions within health sector, community mobilization and empowerment, leadership and mainstreaming, coordination and networking

Table 21 shows the country report on UNGASS indicators which has been published in the UNAIDS Global HIV Report 2008. No UNGASS Country Progress Report 2010 for Bhutan was found in UNAIDS website.

Table 21: Bhutan Country Report on UNGASS Indicators in the year 2007

Indicator Number	*UNGASS Indicator*	*Reported Value in the year 2007*	*Remarks*
03	Percentage of donated blood units screened for HIV in a quality assured manner	50%	
04	Percentage of adults and children with advanced HIV infection receiving antiretroviral combination therapy	Not calculated as total need is less than 500	**Number reported as 18 as of December 2007**
05	Percentage of HIV positive pregnant women who received antiretrovirals to reduce the risk of mother to child transmission	-	
06	Percentage of estimated HIV positive incident TB cases that received treatment for TB and HIV	-	
07	Percentage of women and men aged 15 – 49 who received HIV test in the last 12 months and know their results	-	
08	Percentage of most at risk populations who received HIV test in the last 12 months and who know their results	-	
09	Percentage of most at risk populations reached with HIV prevention programmes	-	
10	Percentage of orphaned and vulnerable children whose households received free basic external support in caring for the child	-	
11	Percentage of schools that provided life skills based HIV education within the last academic year	-	
12	Current school attendance among orphans and non-orphans aged 10 - 14	-	
13	Percentage of young people aged 15 – 24 who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission	-	
14	Percentage of most at risk populations who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission	-	
15	Percentage of young women and men aged 15 – 24 who have had sex before the age of 15	-	
16	Percentage of women and men aged 15 – 49 who have had sex with more than one partner in the last 12 months	-	
17	Percentage of women and men aged 15 – 49 who have had more than one sexual partner in the past 12 months who report the use of condom during their last sexual intercourse	-	
18	Percentage of female and male sex workers reporting the use of a condom with their most recent client	-	
19	Percentage of men reporting the use of a condom the last time they had anal sex with a male partner	-	
20	Percentage of injecting drug users who report using a condom the last time they had sex	-	
21	Percentage of injecting drug users who report using sterile injecting equipment the last time they injected	-	
24	Percentage of adults and children with HIV known to be on treatment 12 months after initiation of antiretroviral therapy	-	

(Source: UNAIDS, UNGASS Country Progress Report, Bhutan, 2008)

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1. National Report submitted to STAC, Nepal by National HIV/AIDS Control Programme, Bhutan in July 2010
2. National Report submitted to STAC, Nepal by National HIV/AIDS Control Programme, Bhutan in March 2009
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4. Country Cooperation Strategy – Bhutan, WHO http://www.searo.who.int/EN
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8. A Summary – HIV/AIDS General Population Survey 2006, Quarterly Morbidity and Activity Report, Health Information and Research Unit, Policy and Planning Division, Ministry of Health, Bhutan, September 2008 www.health.gov.bt/qmar.php
9. National Health System Profile, Bhutan http://www.searo.who.int/LinkFiles/Bhutan referred in August 2009
10. SAARC HIV/AIDS Update 2009
11. UNGASS Country Report 2007, downloaded from UNAIDS site in July 2009

5.4 India

Republic of India is the largest country in SAARC Region. With more than 1160 million people, India is the second most populous country in the world accounting for 17% of the population of the world. The land area is 3,287,263 square kilometers. The country is surrounded by Bangladesh, Bhutan, China, Nepal, Pakistan and the Indian Ocean. The primary administrative unit in India is a state. The country is divided into 35 states and they in turn divided into 593 districts.

The estimated population of India was 1,160,813,000 in 2009 as per NACO. Of the population, 71% were living in rural areas in 2005. The population aged less than 15 years age group was 410,342,614 in 2009. Table 29 shows some of the important demographic, socio-economic, human and physical resources and health status indicators.

Table 22: Country Profile of India
Important socio-demographic and health indicators

Demographic Indicators		
Indicator	**Value**	**Reference Year**
Crude Birth Rate	22.8/1000 population	2009 country report
Crude Death Rate	7.4/1000 population	2009 country report
Population Growth Rate	1.2%	2009 country report
Total Fertility Rate	2.7/woman	2005 - 2006
Socio-economic Indicators		
Adult Literacy Rate (Total)	61%	2000 - 2004
Adult Literacy Rate (Male)	73.4%	2000 - 2004
Adult Literacy Rate (Female)	47.8%	2000 - 2004
Human & Physical Resources Indicators		
Physicians per 10,000 population (modern system)	7	2005
Nurses per 10,000 population	7.85	2004
Hospital Beds per 10,000 population	9	2006
Number of Primary Health Centres per 100,000 rural population	3.2	1999 - 2000
Primary Health Care Services Indicators		
Contraceptive Prevalence Rate	56.3%	2005 - 2006
Antenatal Care Coverage (at least 3 visits)	51%	2005 - 2006
Births attended by skilled personnel	48%	2005 - 2006
Health Status Indicators		
Total life expectancy at birth Male Female	69.89 years 63.87 years 66.97 years	2009 country report 2001 - 2006
Infant Mortality Rate per 1000 live births	53.0	2009 country report
Under five Mortality Rate per 1000 live births	72.0	2009 country report
Maternal Mortality Rate per 100,000 live births	450	2009 country report

(Source: WHO website – www.searo.who.int/EN, mini-profile 2007 and Country report, India)

Health sector of India is diverse and includes modern system of medicine as well as multiple traditional systems. Maternal and child health issues are significant. Mixed progress has been made among the states in reproductive, maternal, newborn and child health. Communicable diseases account for about 38% of the disease burden with large variations across states. New or re-emerging diseases have highlighted the importance of strengthening public health systems, including surveillance, rapid response capacity, infection control and timely health information.

HIV/AIDS Situation:

The first HIV positive person was a sex worker detected from Chennai in India in 1986. Since then, the national prevalence has steadily grown not only among most at risk populations but also in the general population in some states of India. At the end of 2009, adult HIV prevalence rate was estimated as 0.29% (0.25% - 0.43%) and an estimated 2.27 million (1.8 – 2.9 million) people living with HIV in the country. HIV situation in the country is assessed and monitored through regular annual sentinel surveillance mechanism established since 1992. The estimates for the year 2009 were calculated as per the recent estimates using the internationally comparable workbook method and using multiple data sources namely expanded sentinel surveillance system, National Family Health Survey – III, Integrated Bio-Behavioural Surveillance (IBBS) and Behavioural Surveillance Survey. The estimated adult HIV prevalence rate was 0.29% and it is greater among males (0.44%) than among females (0.23%).

The overall HIV prevalence among different population groups in 2009 continues to portray the concentrated epidemic in India, with a very high prevalence among IDUs (9.2%), MSM (7.3%), FSW (4.9%) and STD clinic attendees (2.5%). The HIV prevalence among antenatal clinic attendees was low (0.48%) and is the proxy measure for general population **(Provisional HSS Estimate 2008 – 2009)**.

Figure 58: Adult HIV prevalence rate and estimated number of people living with HIV/AIDS in India 2002 - 2009

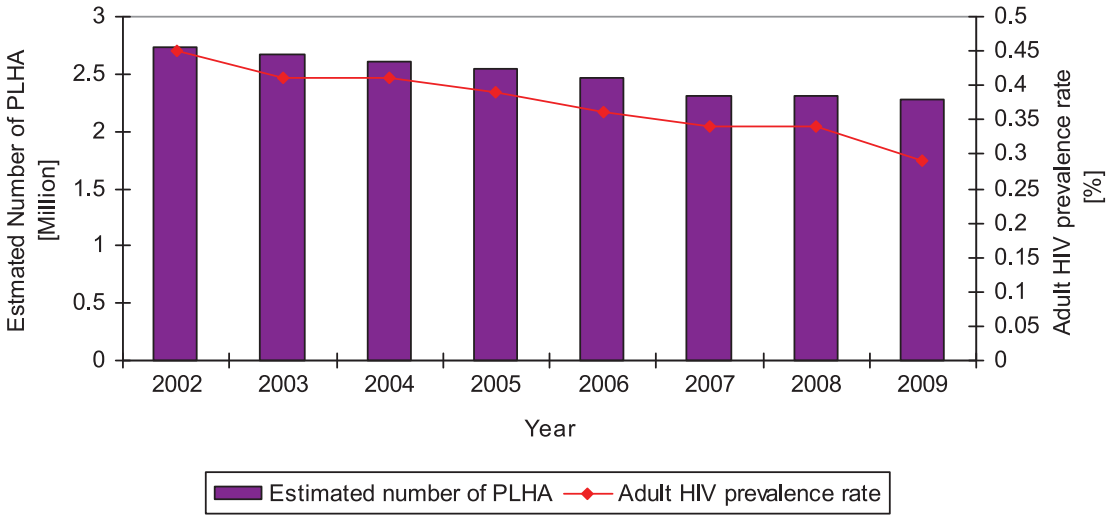
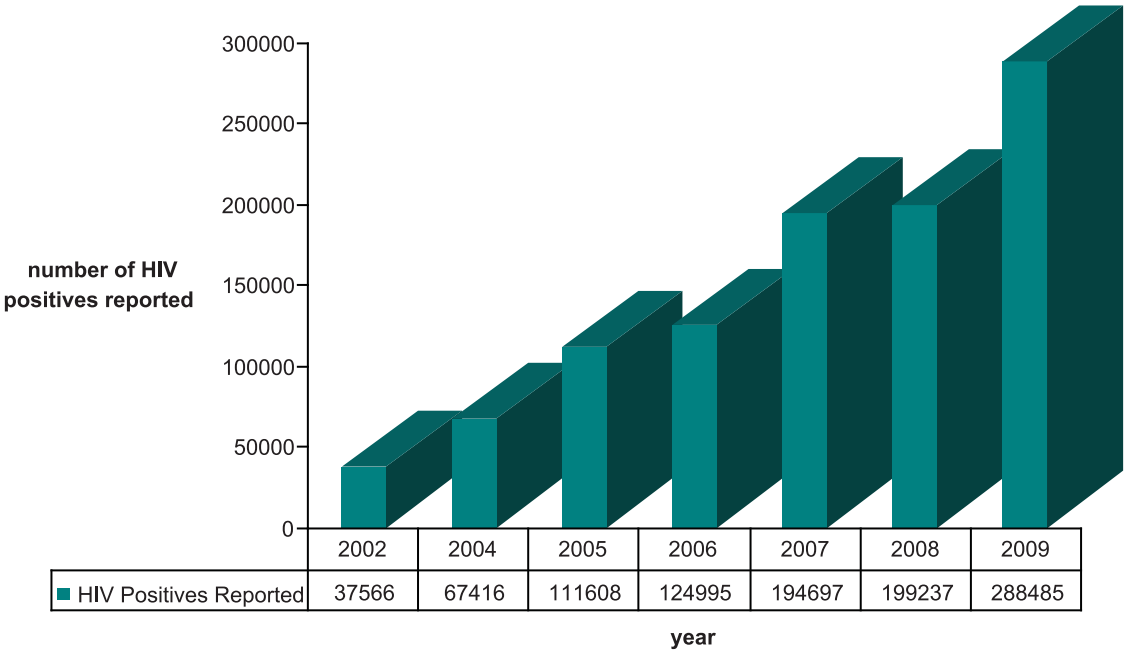


Figure 57 illustrates the HIV prevalence rate and estimated number of people living with HIV in India from 2002 to 2009. According to the report of National AIDS Control Programme in India, the adult prevalence rate of HIV infection has stabilized since 2004. Figure 58 depicts the increasing cumulative numbers of

reported HIV positives to the National AIDS Control Organization, India from July 2002 to December 2009. Figure 59 highlights the age and sex distribution of HIV infection among adults and children from 2002 to 2009, according to the National AIDS Control Organization in India. The transgenders were also added to the total. As they were in small numbers could not visualize as a separate line in this chart due to practical difficulty.

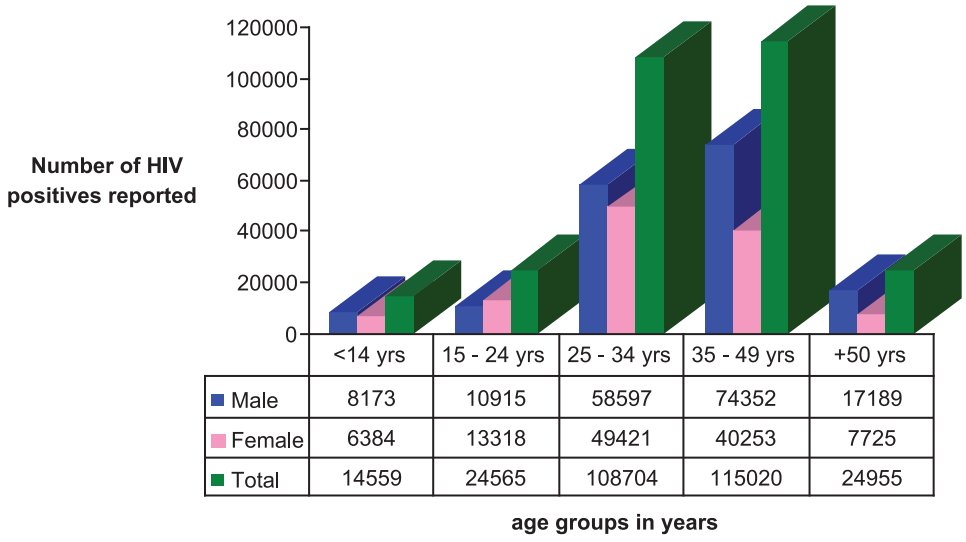
Figure 59: Cumulative number of reported HIV/AIDS Cases in India 2002 –2009



	2002	2004	2005	2006	2007	2008	2009
HIV Positives Reported	37566	67416	111608	124995	194697	199237	288485

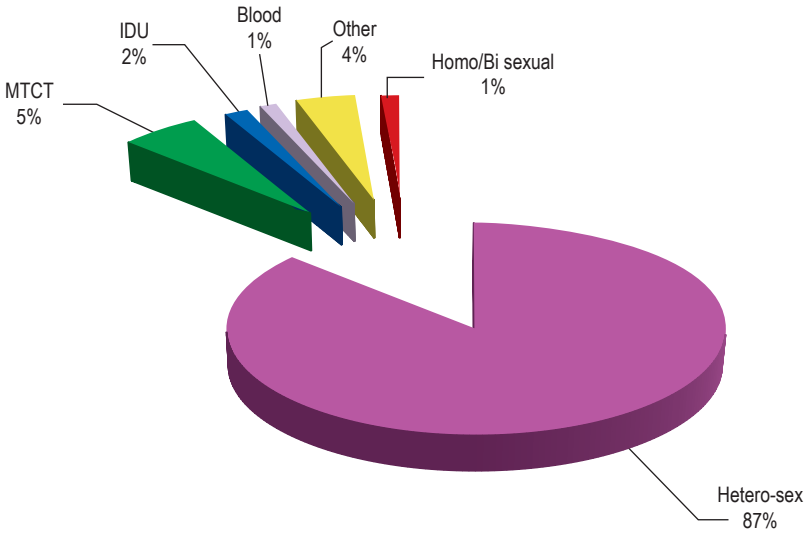
The surveillance data shows that there are multiple and diverse HIV sub-epidemics in the country. Heterosexual route is the predominant mode of transmission. Of the HIV infection 87% were transmitted through the hetero-sexual route, 1% through homo/bi sexual route, 5% were through mother to child transmission, 2% and 1% of the infection were acquired through injection drug use and contaminated blood and blood products respectively. Figure 60 depicts the modes of transmission of HIV infection according to the findings of cumulative number of reported HIV positives till December 2009. A significant proportion of new infections are occurring in women who are married and who have been infected by husbands.

Figure 60: The age and sex distribution of cumulative total of HIV positives in India as of December 2009



	<14 yrs	15 - 24 yrs	25 - 34 yrs	35 - 49 yrs	+50 yrs
Male	8173	10915	58597	74352	17189
Female	6384	13318	49421	40253	7725
Total	14559	24565	108704	115020	24955

Figure 61: Mode of transmission of HIV infection among reported HIV positives in India in 2009



Six states with high prevalence contribute over two thirds of the HIV burden in the country. India has 195 priority districts that are identified according to HIV prevalence rates over the last three years of focused programmatic interventions. An overall decline in HIV prevalence among antenatal mothers is noted in high prevalence states. However, there is an increase in some low and moderate prevalence states.

Since 1998, HIV sentinel surveillance has been conducted annually to track the HIV epidemic in the country. High quality data generated through sentinel surveillance surveys were the corner stones in assessing the evolution of the HIV epidemic in India. Over the years, the numbers of sentinel sites were increased from 176 in 1998 to 1134 in 2007 and 1215 in 2008/2009. The population groups monitored in HIV Sentinel Surveillance 2008/2009 were ANC Mothers, STD clinic attendees, female sex workers, MSM, IDUs, high risk migrants/single male migrants and long distance truckers. Figure 61 highlights that the highest HIV prevalence rate was among IDUs and lowest prevalence rate was among ANC attendees. Figure 62 depicts the trend pattern of HIV prevalence among sentinel groups in India from 2003 to 2008/2009 HIV Sentinel Surveillance Surveys.

Figure 62: HIV prevalence rate among sentinel groups in India in 2008/2009a

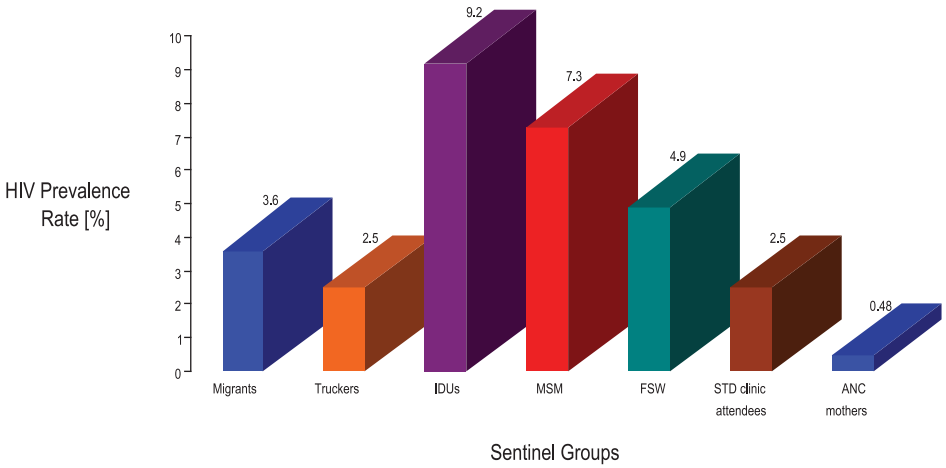
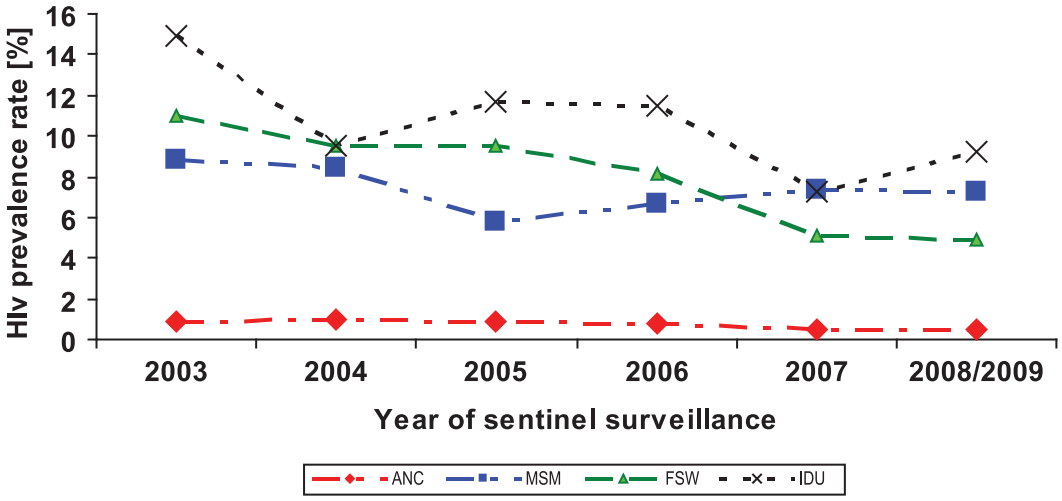


Figure 63: Trend pattern of HIV prevalence among sentinel groups in India 2003 – 2008/2009



Overall in India, the trend of HIV prevalence among ANC clinic attendees as well as among and FSWs showed a decline, however, among IDUs, HIV prevalence increased in comparison to 2005 and 2007 rates. The HIV prevalence among female sex workers is highest in Maharashtra (18%). Pockets of high HIV prevalence among MSMs are identified in high prevalence as well as in the low prevalence states (Delhi, Gujarat and West Bengal). The highest HIV prevalence among IDUs was reported in Amristar, Punjab and the figure was 30%.

The salient findings of HIV sentinel surveillance conducted in 2008/2009 are as follows;

- The overall HIV prevalence among different population groups in 2008/2009 continues to portray the concentrated epidemic in India among most at risk populations.
- An overall decline in HIV prevalence among antenatal mothers is noted in high prevalence states. However, there is an increase in some low and moderate prevalence states.
- At national level, there is an evident decline among female sex workers, while the epidemic is stable among MSMs and rising trend is noted among IDUs.

Risks and Vulnerabilities:

In India, after the detection of first HIV positive in Chennai in 1986, the virus spread rapidly across the nation in both urban and rural areas. The HIV epidemic has established itself with the greatest speed in six states namely, Andhra Pradesh, Maharashtra, Manipur, Nagaland, Karnataka and Tamil Nadu. The injecting drug use driven epidemic was established in Northeastern part of the country (Manipur and Nagaland) and sex work driven epidemic was mainly established in the southern part of the country. Several factors drive the country in danger of experiencing rapid spread of HIV. The risk factors and vulnerabilities include;

- **Unsafe Sex and Low Condom Use:** Sexual transmission is responsible for 88% of reported HIV cases in India and HIV prevalence is high among sex workers (both male and female) and their clients. A large proportion of women with HIV appear to have acquired the virus from regular partners who were infected during paid sex. HIV prevention efforts targeted at sex workers are being implemented in India.

However, the context of sex work is too complex to address the issues with effective HIV prevention and treatment efforts. The use of condoms is limited especially when commercial encounters take place in 'risky' locations. The prevention interventions usually tend to target brothel-based sex workers, who represent a minority of sex workers. HIV information and awareness among sex workers appears to be low, particularly among the street based sex workers. The prevention intervention to social marketing of condoms among peer sex workers run by organized sex workers themselves in Sonagachi and Kolkata. These interventions have successfully encouraged safe paid sex practices and have been associated with lower HIV prevalence.

- **Men Who Have Sex with Men:** The role of sex between men in HIV epidemic in India is largely unknown. However, a few studies have been conducted among men who have sex with men. The findings of those studies showed that a significant proportion of men in India do have sex with other men. According to National AIDS Control Organization, HIV prevalence of 6.8% and 9.6% were found among MSM in Chennai and Mumbai, respectively in 2004. In 2007, HIV prevalence of 12 percent was found among MSM seeking voluntary counseling and testing services in Mumbai, and 18 percent prevalence was found at 10 clinics in Andhra Pradesh. In some areas, a substantial proportion of MSM also sell sex. Poor knowledge of HIV has been found in groups of MSM. Pockets of high HIV prevalence among MSMs are identified in high prevalence as well as in the low prevalence states (Delhi, Gujarat and West Bengal).

- **Injecting Drug Use (IDU):** Injecting drug use is the main driving factor for HIV epidemic in the northeastern part of India particularly in Manipur, Mizoram and Nagaland. According to the findings of the National AIDS Control Organization in India in 2005, the injecting drug use was increasingly responsible for the HIV epidemic of major cities like Chennai, Mumbai and New Delhi. The highest HIV prevalence among IDUs was reported in Amristar, Punjab and the figure was 30%. Repeated use of contaminated injecting drug equipment among peer drug users is the main risk factor for HIV infection in the northeastern part of the India. Current interventions targeting IDUs tend to be inconsistent, and imparting in small scale to yield demonstrable results. Harm reduction programs need to be extended and expanded as a matter of urgency in those parts of India with injecting drug use related HIV epidemics.

- **Migration:** One of the main factors responsible for the HIV epidemic in India is extensive internal and international labour migration. Migration for work takes people away from their families and from their usual social environment. This can lead to an increased likelihood of engaging in risky behaviour. In addition to above, a high proportion of female sex workers in India are also mobile. The mobility of sex workers is another major factor contributing to HIV transmission by expanding and interconnecting high-risk sexual networks.

- **Low Status of Women:** As the epidemic spreads through bridging population groups into the general population, HIV prevalence rates have been on the increase among women and infants in some states of India. As in many other countries, unequal power relations and the low status of women are prevailing in India too. Low social status of women, due to limited access to human, financial, and economic assets has suppressed the ability of women to negotiate safer sex both within and outside of marriage. In addition to above factors low literacy levels of women particularly in rural areas and limited awareness on HIV/AIDS and sexuality increase their vulnerability in acquisition of HIV.

- **Widespread Stigma and discrimination:** As in other Member States in SAARC region, stigma and discrimination towards people living with HIV is widespread in India too. The prevailing misconceptions

in relation to sex and HIV/AIDS strengthen and perpetuate existing discrimination. The most affected groups which are often marginalized have little or no access to legal protection to protect their basic human rights. By creating an enabling environment to address the issues related to human rights violations, increasing the knowledge on HIV/AIDS/STIs among general population and among most at risk population groups and promoting protective behavior changes are extremely important to fight against HIV/AIDS in India.

Important aspects of National Response:

The Government of India established the National AIDS Control Programme, shortly after reporting the first AIDS patient in 1986.The principal activity of the programme was limited to monitor HIV infection rates among risk populations in selected urban areas.

Phase-I of the National AIDS Control Programme (1992 – 1999) was implemented across the country with the objective to slow the spread of HIV to reduce future morbidity, mortality and the impact of AIDS by initiating a major effort in the prevention of HIV transmission.

Phase-II (1999 – 2006) was aimed at reducing spread of HIV infection in India and strengthening capacity of India to respond to HIV epidemic on long term basis. Some of the important achievements of Phase-I and Phase-II of the National AIDS Control Programme were;

- Scaling up of prevention of mother to child transmission and voluntary counseling and testing services particularly in the high prevalence states.
- Increasing access to free antiretroviral was one of the major achievements of Phase-II.
- Recognition of the need of care and support for people living with HIV/AIDS and scaling up of community care centres.
- The effectiveness of the condoms as one of the safest methods to prevent and control the spread of HIV and other STIs has been well established
- Initiating the process for developing draft legislation on HIV/AIDS

Phase-III of National AIDS Control Programme (2007 – 2012) is based on the experiences and lessons drawn from Phase-I and II. The specific goal of this Phase is to reverse and stabilize the spread of AIDS by reducing the rate of incidence by 60% in high prevalence States and by 40% in vulnerable States.

The strategic objectives of the Phase-III (2007 – 2012) are;

- To prevent infections through saturation of coverage of high risk groups with targeted interventions and scaled up interventions in the general population
- To provide greater care, support and treatment to more people living with HIV/AIDS
- To strengthen the infrastructure, systems and human resources in prevention, care, support and treatment programmes at District, State and National levels
- To strengthen the nationwide Strategic Information Management System

The prioritized areas identified for planning and implementation in the Phase-III (2007 – 2012) are as follows.

- Phase-III places the highest priority on preventive efforts as more than 99% of the population in the country is free from HIV infection and integrate prevention with care, support and treatment services
- Sub-populations that have the highest risk of exposure to HIV will receive the highest priority in the intervention programmes
- This phase ensures that all people who need treatment would have access to prophylaxis and management of opportunistic infections. People who need access to antiretroviral treatment would also have access to first line antiretroviral drugs
- Universal provision of prevention of mother to child transmission services and infected children are assured the access to paediatric antiretroviral treatment
- Address the needs of the infected and affected people by HIV particularly the children by making arrangements to provide nutritional support, opportunities for income generation and other welfare services to mitigate the impact of HIV/AIDS
- Invest in community care centres to provide psycho-social support, outreach services, referrals and palliative care
- Work with other agencies involved in vulnerability reduction for women groups, youth groups, trade unions etc. in order to integrate HIV prevention into their activities.

Table 23: Services available for HIV infected and affected people in India, as of December 2009

Service	Number of Health Facilities providing services at the end of December 2009
Health care facilities with voluntary counseling and testing	5135
Health care facilities with voluntary counseling	5135
Health care facilities with laboratory facility for CD4 count	209
Health care facilities with laboratory facility for viral load	07
Health care facilities with ARV treatment – first line regimen	239
Health care facilities with ARV treatment – second line regimen	17
Health care facilities with PMTCT services	5135
Health care facilities with post-exposure prophylaxis for health care workers	239
Centres with social welfare facilities	287

Table 23 illustrates the services available for HIV infected and affected people in India as at the end of December 2009. Table 24 shows the country progress report 2010 on UNGASS indicators which has been published in the UNAIDS website.

Table 24: India Country Report on UNGASS Indicators in the year 2010

No.	Indicator	UNGASS 2008	Current Status	
			2008	2009
1.	**Domestic and international AIDS spending by categories and financing**	USD 171 million during 2006-2007 (April 2006 to March 2007) Source: NACO	USD 146 million (rounded off) (April 2008 to March 2009) Source: NACO	USD 140 million (rounded off) (April 2009 to January 2010) Source: NACO
2.	**National Composite Policy Index**	Annex	Annex	Annex
3.	**Percentage of donated blood units screened for HIV in a quality assured manner**	100% (January 2006 to November 2007) Source: NACO-CMIS	100% Source: NACO-CMIS	100% Source: NACO-CMIS
4.	**Percentage of adults and children with advanced HIV infection receiving antiretroviral therapy**	19.6% of adults and 35.1% of children with advanced HIV infection are receiving ART by December 2007 Source: NACO-CMIS	32.2% of adults (15+) Source: NACO-CMIS & Provisional Estimates from EPP-Spectrum	45.3% of adults (15+) Source: NACO-CMIS & Provisional Estimates from EPP-Spectrum
5.	**Percentage of HIV infected pregnant women who received antiretroviral** to **reduce the risk** of **mother** to **child transmission**	In 2006, 7.5% of HIV infected pregnant women received Nevirapine Prophylaxis to reduce the risk of transmission to child and it increased to 8.3% in 2007 Source: NACO-CMIS	16.42% Source: NACO-CMIS	17.39% Source: NACO-CMIS
6.	**Percentage of estimated HIV positive incident** TB **cases that received treatment for** TB **and HIV**	Of the 85,000 patients with co-infection, 23% (14,200 in 2006 and 19,400 up to October 2007) are estimated to be under treatment	4.3% Source: RNTCP	Data not available
			programme monitoring data and NACO-CTD study in 13 states	
7.	**Percentage of women and men aged 15-49 years who received** an **HIV test** in **the last** 12 **months and who know their results**	3% women and 33% men had an HIV test and know their results Source: NFHS 3 40.3 lakh were tested in 2006 and 54.7 lakh were tested in this year till October 2007	3.2% males and 3.2% females had an HIV test in last one year and know their results *Source: BSS Manipur, 2009	
			Andhra Pradesh : 33%, Karnataka	
			0.8% ; Tamil Nadu : 1% Uttar Pradesh : 1.2%	

8.	**Percentage** of **most at risk populations who received an** HIV test **in the last 12 months and** who know **their results**	Female sex workers (FSW) : 34.2% Men who have sex with men (MSM) : 3 to 67% across survey locations Injecting Drug Users (IDU): 3 to 70% across survey locations Source: BSS 2006	FSW: 31.8% MSM: 17.0% IDU: 20.7% **Source: BSS Manipur, 2009* FSW : Andhra Pradesh = 74.1% Karnataka = 54.7% Tamil Nadu = 73.7% Uttar Pradesh: 10.7% **MSM :** Tamil Nadu = 46.3% **IDU :** Uttar Pradesh : 2.9% *Source : BSS 2009*
9.	**Percentage of most at risk populations reached with HIV prevention programmes**	56% of the FSW, 17-97% of the MSM (across survey locations) and 10-83% of the IDU (across survey locations) received interpersonal communication on HIV-AIDS in the last one year Source: BSS 2006	FSW: 31.1% MSM: 18.1% IDU: 14.8% **Source: BSS Manipur, 2009* FSW : Andhra Pradesh = 80.7% Karnataka = 49.4% Tamil Nadu = 89.5% Uttar Pradesh: 10.2% **MSM :** Andhra Pradesh = 1.8% Karnataka = 5.6% Tamil Nadu = 63.4% **IDU :** Uttar Pradesh : 5% *Source : BSS 2009*
10.	**Current school attendance among orphans and non orphans aged 10-14**	Data not available	Data not available
11.	**Percentage of schools that provided life skills based HIV education in the past academic year**	114,345 schools (79%) have been covered out of 144,409 government secondary schools in the country (Programme started in 2006-07) Source: NACO-CMIS	30.9% (47,000 schools out of 1,52,051) were covered during 2008-09 under Adolescence Education Programme.
12.	**Percentage of orphaned and vulnerable children aged 0-17 whose households received free basic external support in caring for the child**	Not applicable: Only for high prevalence country. Please see text for national policy on children affected by AIDS	Data not available

13.	**Percentage of young women and men aged 15-24 who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about the HIV transmission**	Comprehensive correct knowledge about HIV transmission and prevention: 28% Source: BSS 2006	39.8%* *Source: BSS Tamil Nadu, 2009** Andhra Pradesh: 18.6% Karnataka: 9.8%
14.	**Percentage of most at risk populations who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about the** HIV **transmission**	FSW: 38% MSM: 16-75% IDU: 14-77% Source: BSS 2006	- FSW who answered all five questions correctly : Manipur: 23.9% Andhra Pradesh : 47.4% Karnataka : 39.7% Uttar Pradesh: 20.1% - **MSM** who answered all five questions correctly : Manipur MSM: 30.3% Andhra Pradesh : 56.7% Karnataka : 20.7% Uttar Pradesh: 17.4% - IDU who answered all five questions correctly : Manipur IDU: 26.9% Uttar Pradesh : 17.8% Source: BSS, 2009
15.	**Percentage of young women and men aged 15-24 who have had sexual intercourse before the age of 15**	Youth BSS shows that 3% of the young men and women aged 15-24 years had first sexual intercourse before the age of 15 years Source: BSS 2006	0.04% **Source: BSS Tamil Nadu, 2009*
16.	**Percentage of women and men aged 15-49 who have had sexual intercourse with more than one partner in the last 12 months**	Overall: 6% Men: 9% Women: 3% Source: BSS 2006	Andhra Pradesh 5.2%, Karnataka 0.3%, Tami Nadu 0.5%, Manipur 1.1% *Source: BSS 2009*
17.	**Percentage of women and men aged 15-49 who have more than one partner in the past 12 month reporting the use of a condom during their last sexual intercourse**	58% Source: BSS 2006	Andhra Pradesh 77%, Karnataka 87%, Tami Nadu 78%, Manipur 73%, Maharashtra 80% and Uttar Pradesh 67% **Source: BSS 2009*
18.	**Percentage of female and male sex workers reporting the use of a condom with their most recent client**	FSW with the paying client: 88% used condoms Source: BSS 2006	Condom use during last sex with occasional client: Manipur: 83.0% Andhra Pradesh: 99.6% Karnataka: 98.7% Tamil Nadu: 92.6% Uttar Pradesh: 84.5% ** Source:* 855 2009

19.	**Percentage of men reporting the use of a condom** the last **time they had anal sex with** a **male partner**	13-87% across survey locations Source: BSS 2006	Condom during the last anal sex with regular male partner: Manipur: 57.6%* Tamil Nadu: 48.9% **Source: BSS 2009*
20.	**Percentage of injecting drug users reporting the use of a condom the last time they had sexual intercourse**	44-100% across survey locations Source: BSS 2006	Manipur: 15.9% Uttar Pradesh: 94% Andhra Pradesh: 95% Karnataka: 92% Tamil Nadu: 79% Maharashtra: 77% **Source: BSS 2009*
21.	**Percentage of injecting drug users reporting the use of sterile injecting equipment the last time they injected**	29-88% across survey locations (BSS 2006)	Manipur: 86.5%* Uttar Pradesh: 73.1% **Source: BSS 2009*
22.	**Percentage of young women and men aged 15-24 who are HIV infected**	HIV prevalence among ANC clinic attendees aged 15-24 years is 0.57% Source: HIV Sentinel Surveillance 2006	0.49% *Source: Provisional estimate of 2008-2009 HSS* *(ANC clinic attendees)*
23.	**Percentage of most at risk populations who are HIV infected**	FSW show a percent positivity of 4.9 percent, IDU highest prevalence at 6.92% and MSM at 6.41% Source: HIV Sentinel Surveillance 2006	FSW: 4.9% MSM: 7.3% IDU: 9.2% *Source: Provisional estimate of 2008-2009 HSS*
24.	**Percentage of adults and children with HIV known to be on treatment 12 months after initiation of antiretroviral therapy**	WHO Cohort Study at 11 centres show that 80.1% patients were alive after 12 months on ART Source: WHO Cohort Studies, CMIS	89.3% Source: Cohort Study of PLHA from PLHA Software
25	**Percentage of infants born to HIV infected mothers who are infected**	Not reported	Data not available

** BSS 2009 was conducted in six states of India - Andhra Pradesh, Karnataka, Maharashtra, Tamil Nadu, Uttar Pradesh and Manipur - and is not a nationally representative sample. The results from these surveys cannot be combined to provide a value for the country. Hence, individual state figures are provided.*

(Source: UNAIDS, UNGASS Country Progress Report, India, 2010)

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5.5 Maldives

Republic of Maldives is a country formed by a number of natural atolls plus a few islands and isolated reefs which form a pattern from North to South. The islands are located southwest of the Indian subcontinent stretching 860 km north to south and 80 – 129 km east to west. For administrative purposes, the Country has been organized into seven provinces which consist of twenty one administrative divisions (20 administrative "atolls" and Male' city).

The population of Maldives was over 300,000 as at the end of year 2009.(Source: National Report HIV/AIDS Strategic plans 2007-2011 Maldives) Of which approximately one third of the population is living in the island of Male, the capital. The remaining two-thirds of the population are spread out over 198 islands. The economy of the Maldives depends mainly on tourism, fishing trade, shipping and construction. Resort islands, and modern hotels in Male are the main attractions for the increasing numbers of tourists during the winter months. Table 25 illustrates the important socio-demographic, socio-economic, human and physical resources and health status indicators.

Table 25: Country Profile of Maldives
Important socio-demographic and health indicators

Demographic Indicators		
Indicator	Value	**Reference Year**
Crude Birth Rate	19/1000 population	**2005**
Crude Death Rate	3/1000 population	**2005**
Population Growth Rate	1.69%	**2000 - 2006**
Total Fertility Rate	2.8/woman	**2000**
Socio-economic Indicators		
Adult Literacy Rate (Total)	96.3%	**2004**
Adult Literacy Ratio (females as a percentage of males)	99.8%	**2002**
Human & Physical Resources Indicators		
Population per Physician	959	**2004**
Nurses per 10,000 population	33	**2003**
Population per Hospital Bed	381	**2004**
Number of Health Centres	65	**2004**
Primary Health Care Services Indicators		
Contraceptive Prevalence Rate	22%	**2005**
Antenatal Care Coverage	100%	**2004**
Births attended by skilled personnel	87%	**2004**
Health Status Indicators		
Life expectancy at birth (male)	70.4 years	**2003**
Life expectancy at birth (female)	71.3 years	**2003**
Infant Mortality Rate per 1000 live births	12	**2005**
Under five Mortality Rate per 1000 live births	16	**2005**
Maternal Mortality Rate per 100,000 live births	72	**2005**

(Source: WHO website – www.searo.who.int/maldives)

HIV/AIDS Situation:

The first HIV positive person in Maldives was reported in 1991. There were 257 cumulative number of HIV positives among expatriate workers reported to the National AIDS Control Programme in Maldives as of December 2009. Only 14 cumulative total of Maldivians with HIV infection was reported to the centre as of December 2009. Of the 14 HIV positive nationals, 10 died. Twelve of the 14 HIV positives were males. As of December 2009, three HIV positives were on antiretroviral treatment. One of the 14 detected HIV positives was diagnosed as having TB and treated in 2004. Hence, only four reported HIV infected persons are living in Maldives. Figure 63 depicts the detection of HIV positive persons in Maldives since 1991 to 2009. Figure 64 shows the cumulative number of HIV positives in Maldives from 1991 - 2009.

Figure 64: Reported HIV Positives in Maldives 1991 – 2009

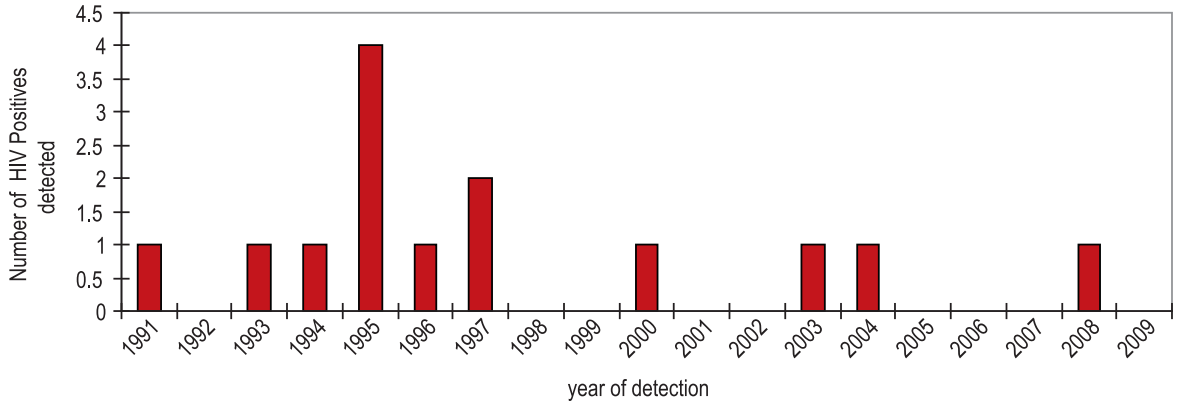


Figure 65: Cumulative number of Reported HIV Positives in Maldives 1991 - 2009

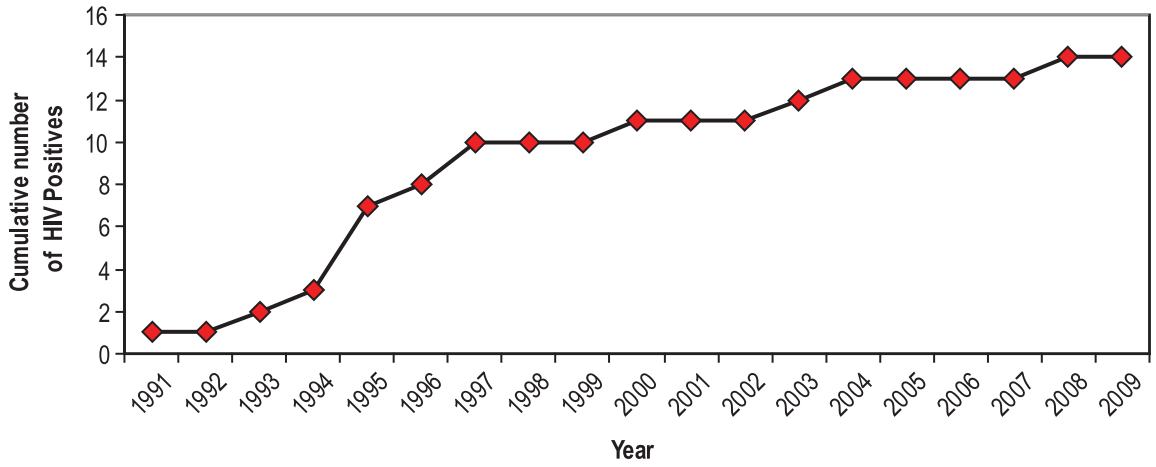
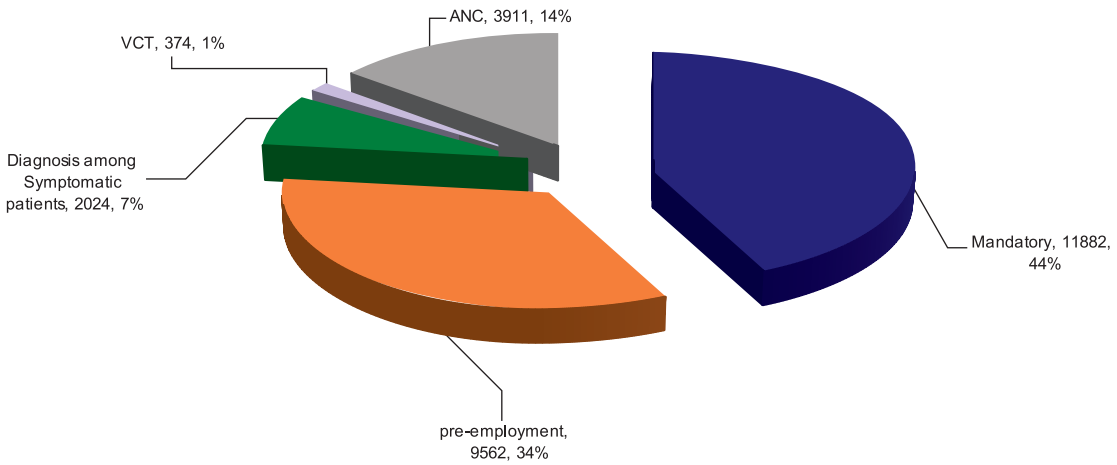


Figure 66: Types of HIV testing in Maldives in 2009



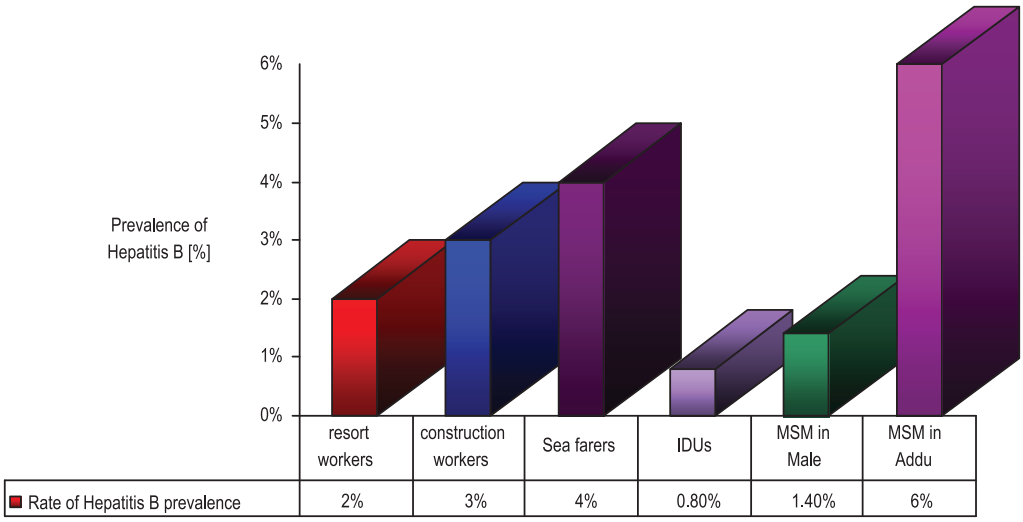
All infections were reportedly acquired through heterosexual transmission. Despite the high level of drug use and the increasing popularity of injecting drug use, no needle or syringe related transmission has been reported yet. So far in Maldives, no mother to child transmission was reported.

Maldives is a low HIV prevalence country with the estimated prevalence among adult population was less than 0.1%. The estimated number of people living with HIV/AIDS was less than 100 as of December 2009. Total number of HIV tests carried out in Maldives was 27,753 in the year 2009. Mandatory testing was 44% of total number of tests done and was done for pre-surgery patients, medical, screening blood donors and work permit applicants. Number of voluntary counseling and testing was 1.35% of the total number of tests done and Maldives has to take measures to strengthen this important measure in prevention of HIV/AIDS. Figure 65 highlights the types of HIV testing conducted in Maldives in the year 2009.

A reproductive health survey was conducted in Maldives in 2004. Of the study participants 99% had heard of HIV/AIDS. Of them, 91% knew at least one way of HIV transmission. However, only 50% of the respondents agreed that condoms can prevent the transmission of HIV and 34% did not know that a healthy looking person may have HIV infection. A sub-sample of youth of the reproductive health survey conducted in 2004 responded to the questions related to sexual practices. Of them, 14% of male participants and 5% of female participants under the age of 18 years admitted that they were sexually active. Of the sexually active youth, 45% never used a condom.

The first Biological Behavioural Survey (BBS) on HIV/AIDS was carried out in 2008 among vulnerable populations surveyed. The vulnerable populations surveyed were female sex workers, MSMs, IDUs, sea farers, resort workers, construction workers and youth. However, HIV infection was found among male resort workers. The HIV prevalence rate among male resort workers was 0.2%. However, the prevalence rate of syphilis was 1.2% among resort workers who have been identified as male clients of female sex workers. The prevalence rate of Hepatitis B among high risk groups surveyed during BBS in 2008 is highlighted in the figure 66.

Figure 67: Prevalence rate of Hepatitis B among high risk groups in Maldives surveyed during BBS in 2008



The prevalence of Thalasseamia is high in Maldives. Approximately one out of five Maldivians carries the genetically determined Thalasseamia trait. Thalasseamic patients obtain frequent blood transfusions, the most efficient way of HIV transmission. However, so far no transfusion associated HIV infection has been notified in Maldives.

Risks and Vulnerabilities:

Despite the low prevalence of HIV epidemic in the country, Maldives is not free from risks and vulnerabilities that may worsen the current HIV/AIDS situation. The recognized risks and vulnerabilities for the Maldives HIV epidemic are as follows.

- **Drug Use**: The prevalence of drug use is on the rise in Maldives and injecting drug is becoming more common. The National Narcotics Bureau reported that the estimated drug addict population was 3000 in 2006. A research study conducted in 2004 found that 8% of the drug users were practicing injecting drug use. Approximately 90% of the drug users were male and of them 20% were less than 20 years of age. Drug use is a risk factor for HIV/AIDS in Maldives. About 3% of sexually active drug users reported same sex experiences in a study conducted by UNDP in 2002. It appears that rising prevalence of injecting drug use, combined with the practice of needle and syringe sharing is the most likely entry point for the HIV epidemic in Maldives.

- **High rates of sexual Practices and low level of condom use**: According to the findings of a reproductive health survey conducted in Maldives in 2004 with the help of UNFPA, 14% of male participants and 5% of female participants under the age of 18 years admitted that they were sexually active. Of the sexually active youth, 45% never used a condom. High rates of divorce and remarriage in the Maldives create conducive environment to spread HIV and other STIs. Since symptoms of HIV infection often do not appear for many years, people who are unaware that they are infectious may infect many of their serial spouses and casual sex partners. Another highly significant factor identified in Maldives is high rates of marriages among young people accompanied with high divorce rates.

- **Mobility**: Maldivian citizens go abroad for education and work. Therefore, they are away from their families for long periods of time. Less information of migrant population of Maldives is available More information is needed on the risk behaviors if any that these citizens may engage in while they are away from their families. Availability of a large expatriate population of about 50,000 in Maldives is an important vulnerability factor. These persons may engage in high risk practices in relation to acquisition and transmission of HIV/AIDS and other sexually transmitted infections. There were 257 cumulative number of HIV positives among expatriate workers reported to the National AIDS Control Programme in Maldives, as of December 2009.

- **Dispersed Population**: The citizens of Maldives live in about 200 of the 1,200 islands of Maldives. This dispersed population creates barriers to educating people on HIV/AIDS, distributing condoms, and treating people for STIs. A research study conducted in 2000 revealed that in the smaller islands, 55 percent of the population had no radio, and 86 percent had no television in the home. Many small islands had no bookstore, and access to newspapers was irregular.

- **Tourism Employment**: The tourist economy of Maldives employs about 5,000 immigrant workers, mainly from India and Sri Lanka. These workers, far from their social systems, families, and sexual partners are vulnerable to participating in high-risk behaviors.

- **Tourism**: In 2004, approximately 600,000 tourists visited the Maldives, almost double the entire population of the Maldives. The great influx of people from all over the world represents a potential route of introduction of HIV and high-risk behaviors.

- **Stigma and discrimination:** HIV related stigma and discrimination are barriers to address HIV/AIDS issues effectively. Stigma is particularly strong against most at risk populations such as men who have sex with men.

- **Awareness:** A reproductive health survey conducted in Maldives in 2004 with the help of UNFPA, found that 99% of the respondents had heard of HIV/AIDS. Of them 91% knew at least one way of HIV transmission. However, only 50% of the respondents agreed that condoms can prevent the transmission of HIV and 34% did not know that a healthy looking person may have HIV infection.

- **Low level of targeted interventions:** Currently, in Maldives, HIV prevention interventions are directed to drug users, IDUs, migrants and youth. There are no targeted interventions for sex workers and MSMs. However, situation analysis in 2006 and the BBS in 2008 highlighted their existence and high rates of high risk behaviours among these populations.

Important Aspects of National Response:

Maldives established the National AIDS Control Programme in 1987, four years before the first domestic HIV positive patient was reported. The National AIDS Council, a multi-sectoral representative body provides guidance to National AIDS Control Programme for HIV/AIDS prevention and control. It has launched a number of preventive activities with the aim of limiting the spread of HIV in the country. Some of them were public education, peer education, awareness creation workshops, blood and blood product screening etc.

The general population has wide accessibility to condoms particularly in Male, the capital of Maldives. The government imposes a high level of screening for HIV/AIDS including mandatory screening of all returnees from an overseas stay of more than a year.

The National Strategic Plan 2002 – 2006 was developed in 2001. The goals of the strategic plan were to prevent HIV transmission in the country and to build the capacity of the country to respond effectively to the possible spread of HIV/AIDS. The objectives of the strategic plan were as follows;

- To sustain high level political commitment and an integrated response at various levels, including the community
- To provide adequate care and support for people living with HIV/AIDS
- To promote safe practices and behaviour among target groups
- To decrease the prevalence of STIs
- To decrease the social and economic impact of HIV/AIDS

In addition to above, the strategic plan included strategies for better surveillance in order to improve the evidence base for policy making and programming, developing tools for behaviour change interventions and empowering young people in and out of schools with knowledge and life skills.

The Government of Maldives developed National Reproductive Health Strategy 2005 – 2007. This document stated that reproductive health is a crucial component of general health. Of the seven thematic areas, one was on sexually transmitted infections and HIV/AIDS. The goal of this thematic area was to maintain the low prevalence of STIs and HIV/AIDS in Maldives with the help of under mentioned three objectives.

- To strengthen the diagnosis and treatment facilities at the central, regional and atoll levels for STIs including HIV/AIDS
- To increase awareness among men, women and adolescents on STIs including HIV/AIDS
- To increase the use of condoms for dual protection; family planning and prevention of STIs and HIV/AIDS

Furthermore, Ministry of Education has also approved a National Policy on School Health in 2004, which emphasized on HIV awareness activities as well as life skills. The 7th National Development Plan 2006 – 2010 for Maldives was developed. This document provides ample opportunity to improve HIV/AIDS and sexual health related knowledge and skills needed among vulnerable youth. UNICEF suggests that this document can be used as the guiding document in developing next strategic plan on HIV/AIDS.

The Government of Maldives was a signatory to the Millennium Development Goals, agreeing to halt and begin to reverse the spread of HIV/AIDS by the year 2015. The Government commits to the under mentioned aspects in curtailing the HIV/AIDS epidemic in Maldives by its Millennium Development Goals Country Report in 2005.

- Ensuring the sustained low prevalence of HIV/AIDS in the country
- Collecting the evidence on sexual behaviour of high risk groups and plan and implement the targeted interventions for them

- Strengthening the active surveillance system following international standards
- Improving accessibility to condoms
- Promotion of voluntary counseling and testing services in Maldives

National Strategic Plan on HIV/AIDS 2007 – 2011 has been developed and published by July 2007. This strategy aims to limit HIV transmission, provide care for infected people and mitigate the impact of HIV epidemic through seven strategic directions.

- Provide age and gender appropriate prevention and support services to high risk populations
- Reduce and prevent vulnerability to HIV infection among adolescents and young people
- Provide HIV prevention services in the work places
- Provide treatment, care and support services to PLHA
- Ensure safe practices in the health care system
- Build and strengthen capacity and commitment to lead, coordinate and provide a comprehensive response to the epidemic
- Strengthen the strategic information system to respond to the epidemic

Table 26 shows the UNGASS Country Progress Report 2010 which has been published in the UNAIDS website.

Table 26: Maldives Country Report on UNGASS Indicators in the year 2010

Indicator	Numerator/ 2010 2008 2009	Denominator	Remarks
3 Percentage of donated blood units screened for HIV in a quality assured manner	Blood units QA 9181 11709 SOP 0 NA Global blood review report	N units screened 9181 11709	All under QA No SOP for 2009 Data could not be disaggregated by sites (Number of blood units screened by sites.) Thus some sites that have SOP could not be included. SOP data is not available for 2009. The 2008 UA indicator was reported as 100% not taking in to consideration of SOP
4 Percentage of adults and children with advanced HIV infection receiving antiretroviral therapy*	No. on ART by 31st of December 2008 /2009 Total No <15 15+ <15 15+ 0 2 0 1 Male -3 Female -0	Estimated no of adults with advance HIV infection Estimates –spectrum **2008 – 36** **2009 - 35**	2008 data extracted from WHO health sector response report The government provides free ART to all those in need. Only 3 PLWHA Were on ART , no new cases commenced in 2009, no one defaulted or died

8 Percentage of most-at-risk populations that have received an HIV test in the last 12 months and who know the results	SW N had a test all <25 25+ 14 9 5	Number surveyed all <25 25+ 102 42 60 41 61	Extracted from the BSS report No missing data given in the BSS report
	MSM N had a test all <25 25+ 12 5 7	Number surveyed all <25 25+ 126 51 75	As above
	IDU N had a test all M F <25 25+ 47 41 6 16 31	Number surveyed all M F <25 25+ 276 267 9 108 168	As above
21 Percentage of injecting drug users who reported using sterile injecting equipment the last time they injected	Number reporting the use to sterile needle and syringe: all M F <25 25+ 93 91 2 16 18	Number of injecting drug users who report injecting drugs in the last month all M F <25 25+ 130 123 7 62 68	
23 Percentage of most-at-risk populations who are HIV infected	Number infected FSW 0 MSM 0 IDU 0	Number tested 102 126 276	Among 484 Resort workers HIV prevalence o.2%
24 Percentage of adults and children with HIV known to be on treatment 12 months after initiation of antiretroviral therapy	2008 cohort still alive and on ART at 12months >15 alive & on ART - 0 <15 alive and on art- 2 Male 2 Female 0 (0 deaths) 2009 cohort after 12 months >15 - 0 <15 – 1 Male - 1 Female 0 0 death	Number adults children initiated ART 12 months prior to the beginning of the reporting period (including those who have died , stopped ART and lost to follow up 2 1	Interpret with caution as Numbers are low

(Source: UNAIDS, UNGASS Country Progress Report, Maldives, 2010)

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11. Country presentation in SAARC Regional Workshop among TB and HIV/AIDS Control Programme Managers in Kathmandu, Nepal 2009

5.6 Nepal

Nepal is one of the eight Member States of the SAARC Region. It is a land-locked country and shares borders with India and China. It has five development regions (Far-Western, Mid-Western, Western, Central and Eastern) and 14 zones. These fourteen zones are in turn divided into 75 districts. The land area is about 147,181 square kilometers.

The population of Nepal is approximately 23 million in the year 2006.(Source: National HIV/AIDS Strategy Nepal 2006-2011) Approximately 80% of the population depends on agriculture for livelihood. Tourism was one of the main sources of income in the past and has been affected by the civil conflict and violence. During the conflict, a significant proportion of the productive labour force left the country for overseas employments. Table 27 shows some of the important demographic, socio-economic, human and physical resources and health status indicators.

Table 27: Country Profile of Nepal Important socio-demographic and health indicators

Demographic Indicators		
Indicator	**Value**	**Reference Year**
Crude Birth Rate	28.4/1000 population	2003 – 2005
Crude Death Rate	9.9/1000 population	2001
Population Growth Rate per year	2.25%	2001
Total Fertility Rate	3.1/woman	2003 – 2005
Socio-economic Indicators		
Adult Literacy Rate (Total)	49%	2004
Human & Physical Resources Indicators		
Physicians of modern system per 10,000 population	2	2004
Dentists per 10,000 population	0.1	2004
Pharmacists per 10,000 population	0.1	2004
Nurses per 10,000 population	2	2004
Hospital Beds per 10,000 population	50	2006
Primary Health Centres per 10,000 population	0.8	2001 – 2002
Primary Health Care Services Indicators		
Contraceptive Prevalence Rate	48%	2003 – 2005
Antenatal Care Coverage	44%	2006
Births attended by skilled personnel	18.7%	2006
Health Status Indicators		
Total life expectancy at birth	61.0 years	2004
Life expectancy at birth (male)		
Life expectancy at birth (female)		
Neonatal Mortality Rate per 1000 live births	34.0	2001 – 2005
Infant Mortality Rate per 1000 live births	48.0	2006
Under five Mortality Rate per 1000 live births	61.0	2006
Maternal Mortality Rate per 100,000 live births	281	2006

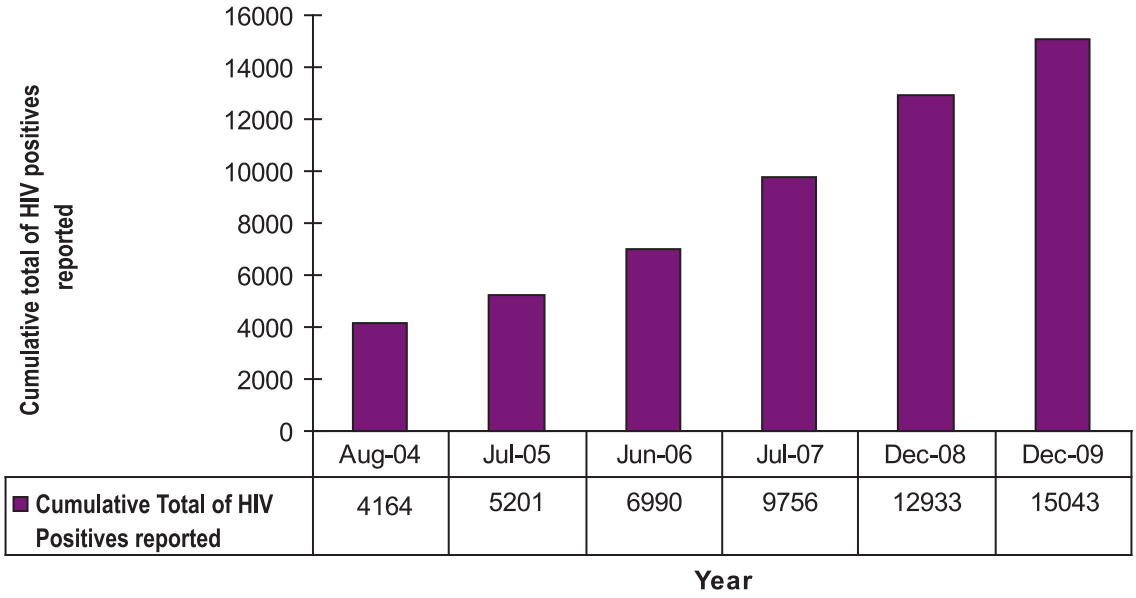
(Data source: WHO website – www.searo.int/LinkFiles/country_Health_System_profile_8-Nepal:pdf)

The country continues to be afflicted with the double burden. There are the persistent problems of infectious diseases along with emerging epidemics and upward trends of lifestyle related non-communicable diseases. However, over the years, Nepal has made progress in raising the health status and living standards of the population in terms of life expectancy, total fertility rate, child immunization, adult literacy and access to health care.

HIV/AIDS situation:

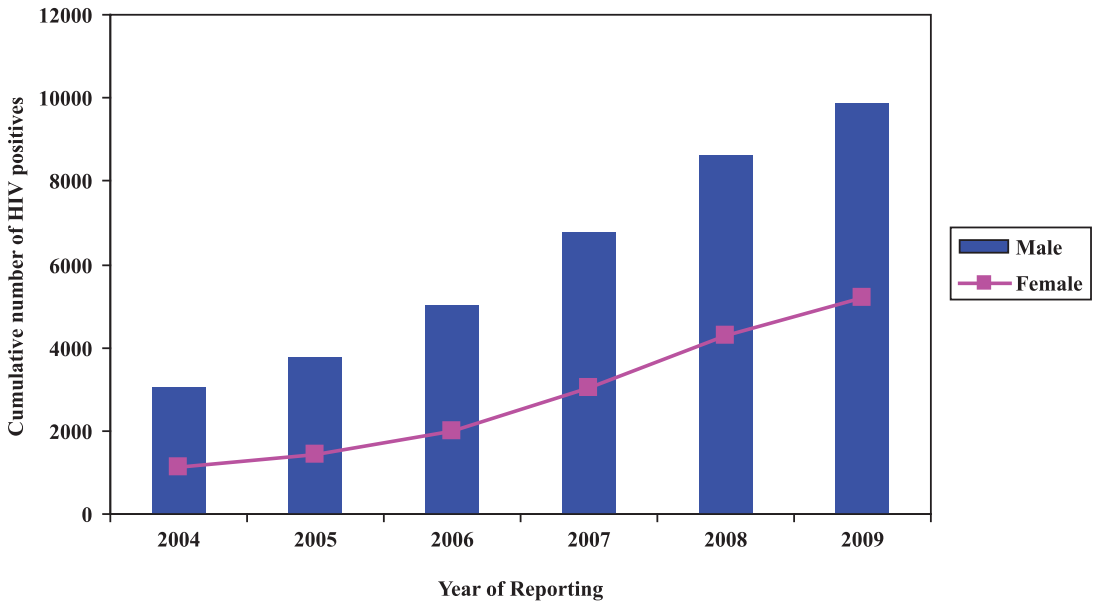
HIV/AIDS epidemic is still primarily confined to vulnerable groups. Therefore, the epidemic is regarded to be in a stage of "concentrated epidemic". However, HIV/AIDS epidemic in Nepal has the potential to develop into a generalized state.

Figure 68 Cumulative Number of Reported HIV Positives in Nepal 2004 – 2009



The first HIV infected person in Nepal was detected in 1988. Since then the HIV epidemic in the country has evolved from low to concentrated epidemic. In 2009, the estimated number of people living with HIV/AIDS was 66,442 and overall adult prevalence rate was 0.49%. As of December 2009, a total of 15,043 HIV positives were reported to the National Centre for AIDS and STD Control, Nepal. At the same time, 2729 AIDS patients were reported at the end of December 2009. Figure 67 depicts the cumulative number of reported HIV positives in Nepal from 2004 to 2009. Figure 68 shows the sex distribution of cumulative total of HIV positives from 2004 to 2009. It clearly illustrates the slow but significant increase of male to female ratio of reported HIV positives from 2004 to 2009. Of the reported cumulative number, 5181 (34%) were among females as of December 2009.

Figure 69: Sex distribution of the cumulative total of reported HIV positives in Nepal 2004 - 2009



During the year 2009, there were 2110 HIV infections reported to the National Centre for AIDS and STD Control, Nepal. Of them 1236 were males and 874 were females. Of them 396 males and 182 females were detected as having AIDS (Total reported AIDS patients = 578). Figure 69 shows the sex distribution of HIV positives reported in Nepal in the year 2009. Majority of reported HIV positives were in 20 – 49 year age group. Figure 70 illustrates the age and sex distribution of the cumulative total of reported HIV positives in Nepal as of December 2009.

Figure 70: Sex distribution of the HIV positives reported in Nepal in 2009

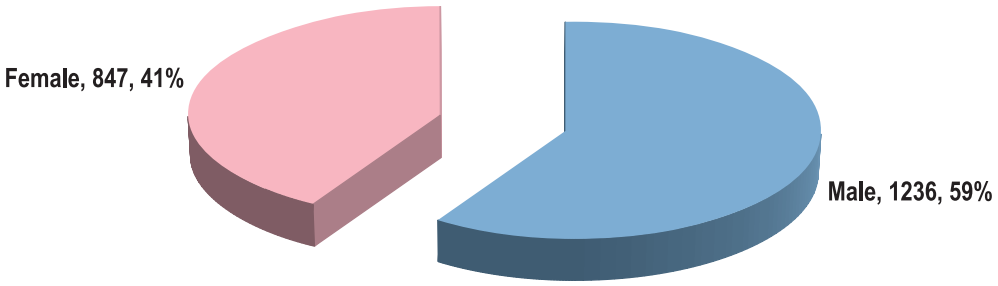
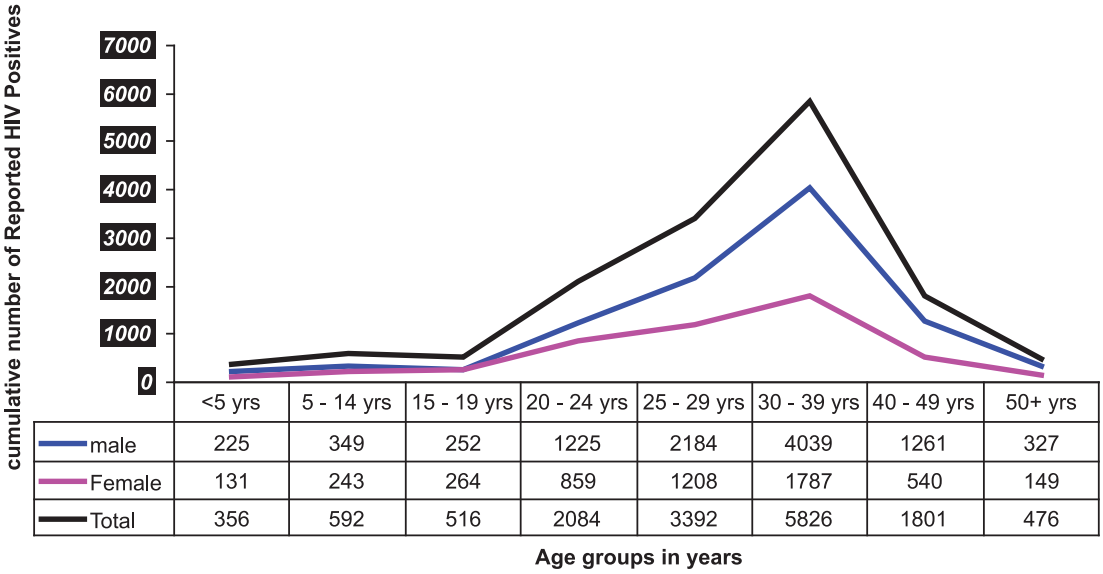


Figure 71: Age and sex distribution of the cumulative total of reported HIV positives in Nepal as of December 2009



	<5 yrs	5 - 14 yrs	15 - 19 yrs	20 - 24 yrs	25 - 29 yrs	30 - 39 yrs	40 - 49 yrs	50+ yrs
male	225	349	252	1225	2184	4039	1261	327
Female	131	243	264	859	1208	1787	540	149
Total	356	592	516	2084	3392	5826	1801	476

Figure 71 depicts the cumulative number of HIV positives in Nepal by their probable mode of transmission. The main modes of transmission were sexual intercourse between men and women (76%) and Intravenous Drug use (17%). Mother to child transmission was responsible for 6% of cumulative number of HIV positives which would have been totally preventable with appropriate medical interventions.

Figure 72: Cumulative number of HIV positives in Nepal by probable mode of transmission as of December 2009

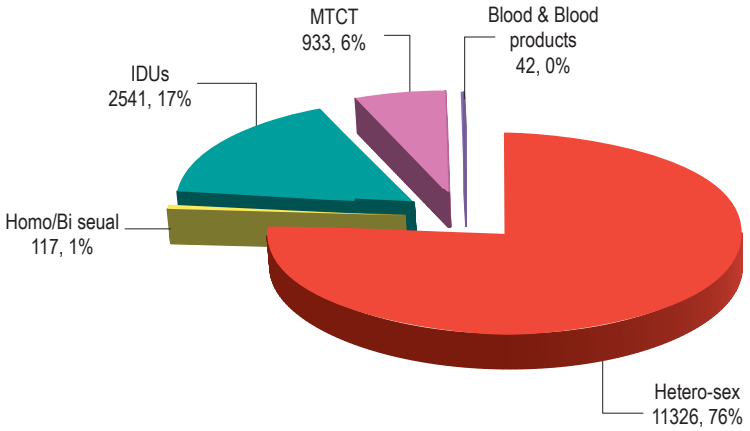
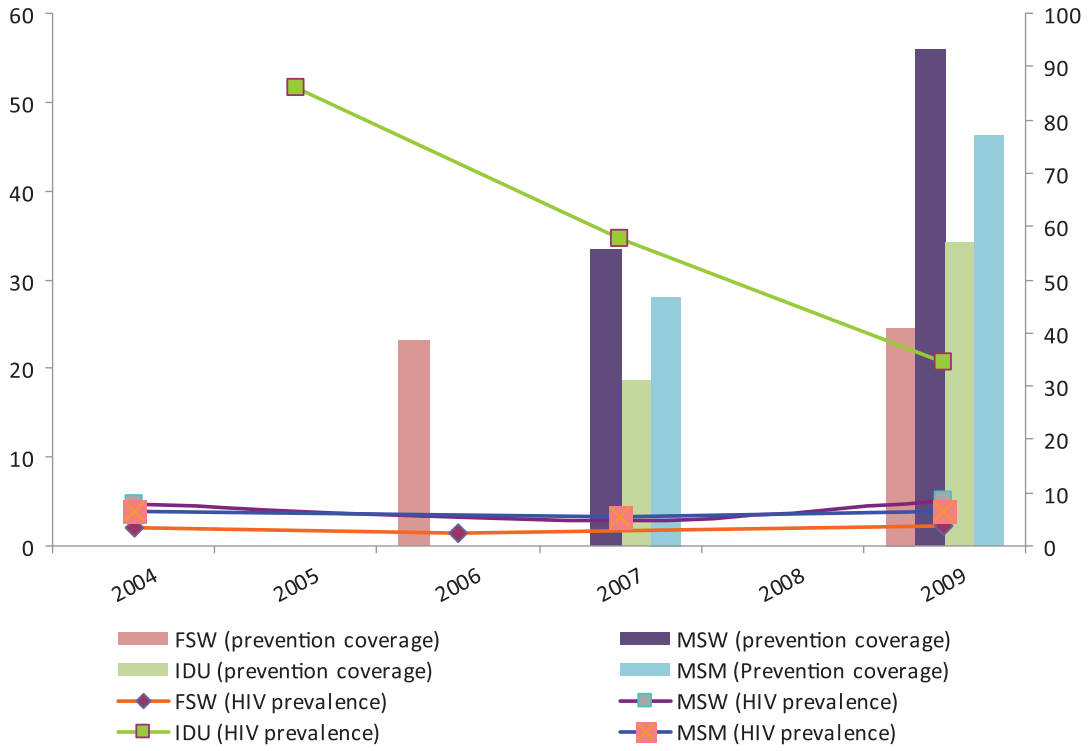


Figure 73: Trend pattern of HIV prevalence among most at risk populations and coverage of targeted interventions in Nepal from 2004 - 2009



(Source: UNAIDS, UNGASS Country Progress Report, Nepal, 2010)

According to the reported findings the recognized most at risk populations in Nepal were female sex workers, MSMs, IDUs and clients of sex workers. The most vulnerable group was house wives. Figure 72 illustrates the trend pattern of HIV prevalence among most at risk populations and coverage of targeted interventions in Nepal from 2004 to 2009. The HIV prevalence among IDUs has steadily declined from 2005 to 2009. Table 28 shows the, HIV prevalence among MARPs in Nepal and their estimated size in the year 2009.

HIV epidemic in Nepal is largely concentrated among high-risk groups, particularly among sex workers, clients of sex workers and IDUs. Injection drug use appears to be extensive in Nepal and it significantly overlaps with the commercial sex. Another important factor is the internal and international migration for work. There are several risk factors prevailing in Nepal that drive the HIV epidemic. Some of them are cultural factors, social factors, economic constraints and low level of condom use, particularly among commercial sex workers and their clients.

Table 28: Most at risk populations in Nepal and their estimated size 2009

Most at Risk Population	Estimated Size	HIV Prevalence
Commercial sex workers	32,137	1.45%
Men who have sex with men	140,691	1.71%
Intravenous Drug Users	28,439	23.02%
Prisoners	-	-
Uniformed services	-	-
Migrant workers and their spouses	-	-
Clients of sex workers including transport workers	727421	1.36%

(Source: NCASC, Nepal Report)

Risks and Vulnerabilities:

National Centre for AIDS and STD Control, Nepal conducted a behavioural surveillance survey in the year 2008. Far Western and Western regions were selected for the survey among migrant workers and their spouses and Pokhara and Kathmandu areas were chosen for the survey among female sex workers and IDUs.

The HIV epidemic in Nepal is driven by IDUs, migrants, MSM, sex workers and their clients. The findings of the Integrated Bio-Behavioural Surveillance conducted in 2008 among IDUs showed that the highest prevalence rates have been found among urban IDUs and 3.4% - 20.7% of them were HIV positive. However, in terms of absolute numbers, labour migrant population (1.5 – 2 million) accounted for the majority of HIV positives in Nepal. According to the findings of the Integrated Bio-Behavioural surveillance conducted among migrant workers in 2006, 2.8% of migrants returning from Mumbai, India were infected with HIV. In 2008, HIV prevalence rates among migrant males in Far Western and western Regions were 0.8% and 1.4% respectively. The spouses of migrant males had HIV prevalence rate of 3.3% in Far Western districts.

In 2007, HIV prevalence among sex workers and their clients was less than 2% and 1% respectively. In 2008, the HIV prevalence rate among female sex workers in Kathmandu was 2.2% and that of Pokhara was 3%. Among urban MSM, the HIV prevalence was 3.3% in 2007 and 3.8% in 2008. The HIV prevalence rate among truckers was 0% in 2008. National Centre for AIDS and STD Control, Nepal reported that HIV infection was more commonly reported in urban areas as well as Far Western Region of the country where the migrant community is more common.

Street children are also one of the most vulnerable groups. According to a report of UNICEF (Increasing Vulnerability of Children in Nepal) more than 13,000 estimated number of children in Nepal were orphaned by HIV/AIDS. The national estimate of children 0 – 14 years of age infected with HIV was 1857 in 2008 (Source: Report of NCASC, Nepal April 2010).

Most recent data demonstrate a stabilizing of the HIV epidemic and a downward trend in sero-prevalence among several of the key most at risk populations. However, a number of issues pose continued challenges in containing HIV epidemic in Nepal. Many sex workers are IDUs or Migrants or both, increasing the spread of HIV among at risk groups. A large proportion of men who buy sex are also married, making them potential conduits for HIV to enter into the general population. Poverty, low levels of education, illiteracy, gender inequalities, marginalization of risk groups and stigmatization and discrimination compound the effects of the epidemic. Unsafe sex and injecting drug use, internal and external mobility and limited health care delivery multiply the difficulties of addressing HIV/AIDS.

The major risks and vulnerabilities recognized in HIV epidemic of Nepal are:

- **Continued Spread among Injecting Drug Users**: Nepal was the first developing country to establish a harm reduction program with needle exchange for IDUs. However, due to the limited coverage of the programme, the impact on HIV transmission among drug users was limited. In 2007, there were 46,309 drug users were in Nepal of them 61% were injecting drug users. National Centre for AIDS and STD Control, Nepal reported that 28,439 estimated IDUs were in Nepal in 2008 as well as in 2009. Of them, 1.45% are estimated to be infected with HIV/AIDS. The transition from inhalational drug use to injecting practice is linked to the cost effectiveness of injecting drug use.

- **Trafficking of Female Sex Workers:** One of the major challenges to contain HIV epidemic in the country is Human Trafficking, particularly the Nepalese girls and women into commercial sex work. More than 100,000 Nepalese women continue to work in Mumbai. According to a study done in 2004, it was estimated that approximately 50% of Nepalese sex workers in Mumbai brothels were HIV positive. Many sex workers in Nepal are either IDUs or Migrants or both, increasing the spread of HIV among most at risk populations. Female sex workers in Nepal have limited access to information and services on reproductive and sexual health and safe sex practices and in obtaining legal protection due to their highly marginalized status in the society. Cultural, social, and economic constraints prevent them from negotiating condom use with their clients.

- **High Rates of Migration and Mobility:** Migration for livelihood is necessary for the economic survival of many households in both rural and urban areas in Nepal. Removal from secured family environment has been shown to promote high risk, unsafe, casual sexual encounters including concurrency and buying sexual services. In terms of absolute numbers, labour migrant population was estimated as1.5 – 2 million. They accounted for the majority of HIV positives in Nepal.

  According to the 2006 Integrated Bio-Behavioural Surveillance, an estimated proportion of 41% - 46% of all HIV infection occurs among migrant workers. Seasonal labour migrants had the highest estimated HIV infection. However, their numbers slightly dropped from 46% in 2005 to 41% in 2007. A study conducted in 2006 among Nepali migrants traveling to India for work found that 27% of men engaged in high risk sexual behaviour while in India and frequently visited sex workers. The findings of the Integrated Bio-Behavioural surveillance conducted among migrant workers in 2006 showed that 2.8% of migrants returning from Mumbai, India were infected with HIV and the figure found in 2008 IBBS was 1.4% for migrants of Western districts.

- **Changing Values among Young People:** Young people are increasingly vulnerable to HIV due to changing values, group norms, and peer pressure. Eventhough, the girls have knowledge on Sexually Transmitted Infections including HIV/AIDS, due to their traditionally lower social status, they do not have the means of protecting themselves. Based on behavioural surveys, comparatively adolescents are apparently highly aware of the HIV risks, but they do not necessarily translate this awareness into safe sex practices. However, vulnerability to HIV is high among youth aged 15 – 24 years as 64% of them have yet to acquire comprehensive HIV knowledge.

- **Low Awareness among Men Who Have Sex with Men (MSM):** The knowledge of safe sex and condom use is low among this community. Due to their marginalized social status, the access to information and services on sexual and reproductive health is low. The estimate of the National Centre for AIDS and STD Control, Nepal for MSM was 134,904 in the year 2008. HIV prevalence among MSM in Kathmandu Valley was estimated to be 3.3% in 2007 and 3.8% in 2008. Furthermore, many men who have sex with men are also married, which puts their spouses at risk of HIV infection. Surveys conducted in Kathmandu at regular intervals showed HIV prevalence in this group is increasing.

Important Aspects of National Response:

The Government of Nepal launched the National Centre for AIDS and STI Control (NCASC) in 1992 after the completion of AIDS Prevention Project which had started in 1988. Therefore, the main governmental agency responsible for HIV/AIDS and STDs is the National Centre for AIDS and STD Control under the

Ministry of Health and Population. NCASC serves as the lead technical agency for the surveillance, policy and technical guidance, capacity building and monitoring and evaluation of the health sector response.

The first effort towards developing a strategic approach to the epidemic was started in 1997 with strategic planning to HIV/AIDS (1997 – 2002). A multi-sector National AIDS Coordinating Committee was established in 1992 in Nepal. A National Policy was formulated in 1995, emphasizing the importance of multi-sectoral involvement, decentralized implementation and partnership between the public and the private sectors including NGOs.

Most of the national initiatives have focused on leadership, partnerships and the involvement of the civil society for prevention, care and support for the most at risk populations. Since 2003, NCASC implemented the HIV/AIDS operational plan based on the National Strategy 2002 – 2006. Currently, the HIV/AIDS activities are based on the National HIV/AIDS Strategy 2007 – 2011. The prioritized aspects of the National HIV/AIDS Strategy 2007 – 2011 are:

- Preventing the spread of STIs and HIV infection among most at risk populations
- Ensuring universal access to quality treatment, diagnostics, care and support services for infected, affected and vulnerable groups
- Ensuring a comprehensive and well implemented legal frame work on HIV/AIDS promoting human rights and establishing HIV/AIDS as a development agenda
- Enhancing leadership and management at national and local levels for an effective response to HIV/AIDS
- Using strategic information to guide planning and implementation for an improved effective response
- Achieving sustainable financing and effective utilization of funds

The vision of the National Strategy is to expand the number of partners involved in the national response and to increase the effectiveness of the national response of Nepal. It emphasizes prevention as key for an effective response to the epidemic, particularly in areas with high levels of external migration. It recognizes the importance of accurately tracking the epidemic to monitor the effectiveness of interventions.

In 2007, HIV/AIDS and STI Control Board was established to enhance and expand the response to HIV/AIDS. The responsibility of this board is to improve the multi-sectoral engagement, decentralization and donor coordination. The pivotal role of this semi-autonomous body may drive a strong civil society engagement in the national response to contain the HIV/AIDS epidemic in Nepal.
In addition to the national strategy and action plan, Poverty Reduction Strategy Paper and United Nations Development Assistant Frameworks continue to include HIV/AIDS as a key component of the plan. The National Health Sector Programme-Implementation Plan (2005) was revised and updated to include HIV and related programmes and others as one of the priority programmes in Phase – II (2010 – 2015) plan.

National AIDS Control Programme in Nepal has well focused its targeted interventions to most at risk populations. The main thrust of the programme is need based and tailored to the specific characteristics of the high risk group. Primary prevention is given a high priority. Government service delivery outlets have increased, especially, VCT, ART and OI sites, in addition to the sites implemented by NGOs and INGOs. At these sites a variety of services including clinical management of STIs, VCT, ART and OI treatment services are provided. However, the difficult geographical terrain compounded by the lack of adequate information about existing services, greatly limits the access and utilization of available services. Table 29 highlights the number of services available for HIV infected and affected individuals in Nepal as of December 2009.

During 2008/2009, The Supreme Court of Nepal has ordered the Government to promulgate laws to ensure confidentiality in the judicial process for cases involving PLHA and recognized lesbian, gay, bisexuals, transgender and intersexes as natural persons. The court issued directives to ensure rights to live according to their own sexual identities, introduce laws providing equal rights to above mentioned categories and amend all the discriminatory laws against them. In addition to that, transgender individuals are legally recognized as the third gender and provisions have been made to include this category on the National Citizenship Cards

Table 29: Services available for HIV infected and affected people in Nepal, as of December 2009

Service	Number of Health Facilities providing services at the end of December 2009
Health care facilities with voluntary counseling and testing	179
Health care facilities with voluntary counseling	-
Health care facilities with laboratory facility for CD4 count	14
Health care facilities with laboratory facility for viral load	01
Health care facilities with ARV treatment – first line regimen	23
Health care facilities with ARV treatment – second line regimen	23
Health care facilities with PMTCT services	17
Health care facilities with post-exposure prophylaxis for health care workers	24
Centres with social welfare facilities	-

Table 30 shows the country report on UNGASS indicators which has been published in the UNAIDS Global HIV Report 2008.

Table 30: Nepal Country Report on UNGASS Indicators in the year 2010

UNGASS Indicator	Value reported in 2010	Value Reported in 2008
Data reported is from main sites as follows: Kathmandu (FSW, MSW, IDU, MSM); Terai Highway (Clients of FSW-Truckers); Mid-Far West (Migrants)		
IMPACT Indicators		
Indicator 22: Young women and men aged 15-24 who are HIV infected	Subject matter not relevant	Subject matter not relevant
Indicator 23: Most- at- risk populations who are HIV infected	**FSW -** 2.2%: <25 0.7; >25 4.7 **MSW** - 5.2%: <25; 1.4 >25 9.1 **IDU -** 20.70%: <25 7; >25 33.4 **MSM** - 3.8%:	**FSW-** 1.4% **MSW**- 2.9% **IDU-** 34.7% **MSM**- 3.2% **Clients of FSW (Truckers)-**1.0% **Migrants**- West – 1.1%
UNGASS Indicator	**Value reported in 2010**	**Value Reported in 2008**
Data reported is from main sites as follows: Kathmandu (FSW, MSW, IDU, MSM); Terai Highway (Clients of FSW-Truckers); Mid-Far West (Migrants)		
	<241.3; >25 6.8 **Clients of FSW (Truckers)-**0%[3] **Migrants**: West: 1.4% Far West: 0.8%)	Far West – 2.8%
Indicator 24: Adults and children with HIV still alive and known to be on treatment 12 months after initiation of ART	90.56%	84.86%

Indicator 25: Infants born to HIV infected mothers who are infected	Relevant but data not available	*(missing data cannot be reported accurately *Loss to follow-up is high
PROGRAMME COVERAGE		
Indicator 3: Donated blood units screened for HIV in a quality assured manner	38.00%[4]	100%
Indicator 4: Adults and children with advanced HIV infection receiving antiretroviral therapy	11.75% (2008) 19.03% (2009)	6.46%
Indicator 5: HIV positive pregnant women who received antiretroviral to reduce the risk of mother-to-child transmission	1.94% (2008) 3.29% (2009)	1.61% (2006) 1.44% (2007)
Indicator 6: Estimated HIV-positive incident TB cases that received treatment for TB and HIV	Relevant but data not available	5.80%
Indicator 7: Women and men aged 15-49 who received an HIV test in the last 12 months and who know the results	Subject matter not relevant	Subject matter not relevant
Indicator 8: Most-at-risk populations that have received an HIV test in the last 12 months and who know their results	**FSW -** 32.4% <25 29.3; >25 37.3 **MSW**- 65.2% <25 62.3; >25 68.2 **IDU -** 21.5% <25 19.3; >25 23.3 **MSM** - 42.0% <25 35.7; >25 50 **Clients of FSW (Truckers) -** 13.80% **Migrants**- Western: 3.34% Far West: 6.70%	**FSW-** 36.8% **MSW**- 51.8% **IDU-** 21.0% **MSM**- 30% **Clients of FSW (Truckers)**- 11.1% **Migrants**- 3.2%

[3] Client of sex worker data is based on sero study among Truckers. Among the clients of sex workers (12 different categories) truckers contributed only approximately 50 %. This suggests that the sampling may not represent all categories of clients of sex workers, as sampling was taken only from truckers' category. Therefore, from the programmatic point of view it is difficult to conclude that there is no prevalence among truckers hence no intervention required. This explanation applies to Indicator 9 also.
[4] Whereas all collected blood are tested for HIV, only blood transfusion centre at capital city participated in External Quality Assurance System with reference laboratory in Australia, hence the figure 38% reported in 2010. In 2008 all tested figure were reported irrespective of participating in EQAS.

UNGASS Indicator	Value reported in 2010	Value Reported in 2008
Data reported is from main sites as follows: Kathmandu (FSW, MSW, IDU, MSM); Terai Highway (Clients of FSW-Truckers); Mid-Far West (Migrants)		
Indicator 9: Most-at-risk populations reached with HIV prevention programmes	**FSW -** (40.8% <25 37.1; >25 46.6 **MSW -** 93.30% <25 89.9;>25 97 **IDU -** 56.9% <25 53.6; >25 60 **MSM -** 77.25% <25 71.9; >25 84.1 **Clients of FSW (Truckers) -** 14.0% **Migrants** West: 5.60% Far West: 8.30%	**FSW-** 38.6% **MSW**- 55.56% **IDU-** 31 [5]% **MSM**- 46.75% **Clients of FSW (Truckers)-48.5%** **Migrants**- 13.9%
Indicator 10: Orphan and vulnerable children whose households received free basic external support in caring for the child.	Subject matter relevant indicator not relevant	Subject matter relevant indicator not relevant

Indicator 11: Schools that provided life skills-based HIV education in the last academic year	7.56%	5.67%
KNOWLEDGE AND BEHAVIOURS		
Indicator 12: Current school attendance among orphans and among non orphans aged 10-14	Subject matter not relevant	Subject matter not relevant
Indicator 13: Young women and men aged 15-24 who both correctly identify ways of preventing the sexual transmission of HIV and reject major misconception about HIV transmission	**Female:** 27.6%[6] 15-19 yrs: 29.1% 20-24 yrs: 25.8% **Male:** 43.6% 15-19 yrs: 45.3% 20-24 yrs: 41.1%	31.8%
Indicator 14: Most-at-risk populations who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission	**FSW-** 36.4% 25 35.3; >25 38.3 **MSW-** 80.7% 25 75.4; >25 86.4 **IDU-** 67.6% <25 64.4; >25 70.6 **MSM-** 64.3% 25 58.9; >25 71 **Clients of FSW (Truckers)-** 25.8% **Migrants** West: 17.20% Far West: 15.80%	**FSW-** 30.2% **MSW**- 40.7% **IDU-** 66% **MSM**- 44.5% **Clients of FSW(Truckers)-**50.5% **Migrants**- 19.2%
Indicator 15: Young men and women who have had sexual intercourse before the age of 15	Subject matter not relevant	Subject matter not relevant
Indicator 16: Adult aged 15-49	Subject matter not relevant	Subject matter not relevant

[5] This data was revised following a national level consensus reached in consultation with SIT WG, civil society organization and MARPS community to report programme coverage data as basis for calculating coverage as against the IBBS survey findings (78.33%).
[6] DHS (2006)

UNGASS Indicator	Value reported in 2010	Value Reported in 2008
Data reported is from main sites as follows: Kathmandu (FSW, MSW, IDU, MSM); Terai Highway (Clients of FSW-Truckers); Mid-Far West (Migrants)		
who have had sexual intercourse with more than one partner in the last 12 months		
Indicator 17: Adult aged 15-49 who had more than one sexual partner in the past 12 months who report the use of a condom during their last intercourse.	Subject matter not relevant	Subject matter not relevant
Indicator 18: Female and male sex workers reporting the use of a condom with their most recent client	FSW- 75.0% <25 77.5; >25 71.0 MSW 37.8%	FSW- 77.2% MSW- 93%
Indicator 19: Men reporting the use of a condom the last time they had anal sex with a male partner	75.3% <25 74.6;>25 76.1	73.5%
Indicator 20: Injecting drug users reporting the use of a condom the last time they had sexual intercourse	50.8% <25 49.3; >25 45.3	58.0%
Indicator 21: Injecting drug users reporting the use of sterile injecting equipment the last time they injected	99.1% <25 98; >25 100	96.3%

(Source: UNAIDS, UNGASS Country Progress Report, Nepal, 2010)

References:

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2. UNGASS Country Progress Report 2010, UNAIDS
3. SAARC HIV/AIDS Update 2009, STAC, Nepal
4. National Report provided to STAC, Nepal by National Centre for AIDS and STD control, Nepal in April 2008
5. HIV/AIDS in Nepal, World Bank August 2008
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8. HIV/AIDS Health Profile, USAID/Nepal http://www.usaid.gov/ourwork/globalhealth/aids/countries/one/nepal.html

5.7 Pakistan

Islamic Republic of Pakistan is the second largest country in the South Asia. It is surrounded by India, China, Afghanistan, Iran and Arabian Sea. The land area of the country is 796,096 square kilometers. Pakistan has four provinces (Punjab, Sindh, North West Frontier Province and Baluchistan), two autonomous states (Azad Jammu Kashmir and Gilgit-Baltistan) and Federally Administered Tribal Areas. These areas are further divided into 126 districts.

Population of Pakistan was approximately 168.79 million as at the end of 2009. (Source: UNAIDS, UNGASS country programme report 2010) Pakistan is ranked as the 6th most populous nation in the world. Of the total population, approximately 30% is categorized as urban dwellers. The Pakistan Poverty Assessment Survey conducted in 2000 – 2001 found that 32% of the population lives below the poverty line. Poverty is an important factor in health profile of Pakistan. Those living in absolute poverty are five times more likely to die before reaching the age of 5 years. The major problems in health are due to poverty related communicable diseases, childhood illnesses, reproductive health problems and malnutrition. Table 31 illustrates some of the important demographic, socio-economic, human and physical resources and health status indicators in Pakistan.

Table 31: Country Profile of Pakistan
Important socio-demographic and health indicators

Demographic Indicators		
Indicator	**Value**	**Reference Year**
Crude Birth Rate	26.1/1000 population	2007
Crude Death Rate	7.1/1000 population	2007
Population Growth Rate	1.9%	2009
Total Fertility Rate	3.9/woman	2007
Socio-economic Indicators		
Adult Literacy Rate (Total)	54%	2006
Adult Literacy Rate (Male)	65%	2006
Adult Literacy Rate (Female)	42%	2006
Human & Physical Resources Indicators		
Physicians per 10,000 population	12	2007
Dentists per 10,000 population	8	2007
Pharmacists per 10,000 population	1	2007
Nurses & Midwives per 10,000 population	0.9	2004
Hospital Beds per 10,000 population	10	2007
Primary Health Care units & centres per 10,000 population	1.7	2003
Primary Health Care Services Indicators		
Contraceptive Prevalence Rate	30%	2007
Antenatal Care Coverage	70%	2007
Births attended by skilled personnel	39%	2007
Infants attended by trained personnel	20%	2007

Health Status Indicators		
Total life expectancy at birth	66.0 years	2009
Life expectancy at birth (male)	64.0 years	2005
Life expectancy at birth (female)	66.0 years	2005
Neonatal Mortality Rate per 1000 live births	54.0	2007
Infant Mortality Rate per 1000 live births	64.0	2009
Under five Mortality Rate per 1000 live births	94.0	2006
Maternal Mortality Rate per 100,000 live births	275	2007

(Data source: WHO website – www.emro.who.int/pakistan and UNGASS Country Progress Report, 2010, UNAIDS)

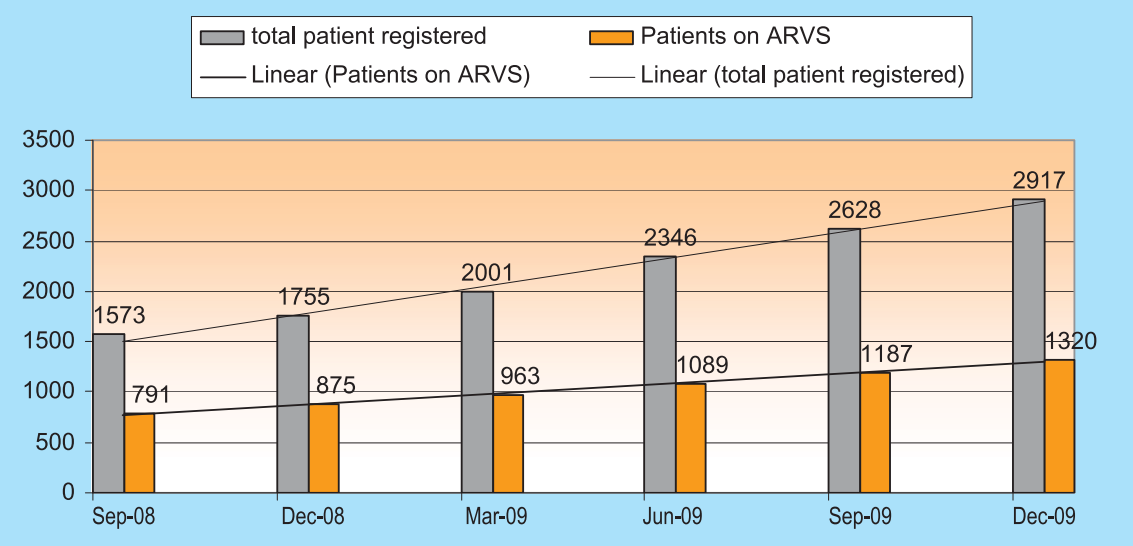
HIV/AIDS Situation

The first HIV positive patient was reported to the Federal Ministry of Health, Pakistan in 1986. The estimated HIV burden is less than 0.1% in Pakistan. In absolute numbers, Pakistan has an estimated number of 97,400 people living with HIV/AIDS in 2009. However, the country is facing an established concentrated epidemic among IDUs in at least eight major cities according to the HIV/AIDS Second Generation Surveillance Round III conducted in 2008.

Figure 73 depicts the trends of registered HIV positives and PLHA on ART in Pakistan from September 2008 to December 2009 as limited data are available for the initial years of the epidemic. Most of the HIV positives reported after 1987 were among migrant workers deported from other countries. The first major reported outbreak among IDUs occurred in Larkana in 2003.

At the end of December 2009, there were 2917 cumulative total of reported HIV positives in Pakistan. These HIV positives were registered by 13 treatment centres and 7 PPTCT centres across the country. Of them, 1320 have been started on ART. Figure 74 shows the HIV positive adults and children who are on ART in Pakistan as of December 2009. Of them, 69% were adult males and 27% were adult females. They also receive treatment for AIDS related opportunistic infections.

Figure 74: Trend pattern of Cumulative number of registered HIV/AIDS patients and PLHA on ART in Pakistan September 2008 – December 2009



(Source: UNAIDS, UNGASS Country Progress Report, Pakistan, 2010)

Figure 75: Adult and children PLHA on Antiretroviral treatment in Pakistan as of December 2009

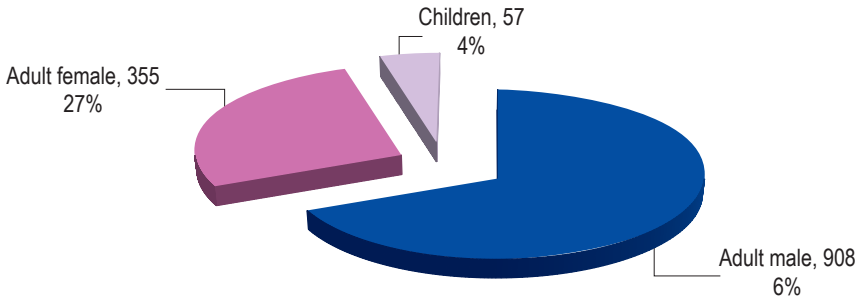
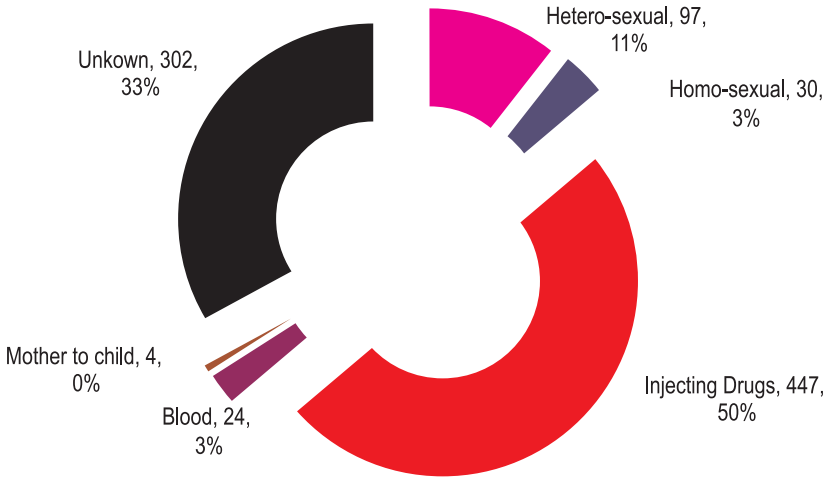


Figure 75 shows the probable mode of transmission of HIV among the reported HIV positives in the year 2008 in Pakistan. The main mode of transmission was injecting drug use followed by hetero-sexual transmission. Of the data, 33% were with unknown mode of transmission which is of significance importance to the National AIDS Control Programme.

Figure 76: Probable mode of transmission among HIV positives reported in Pakistan in 2008



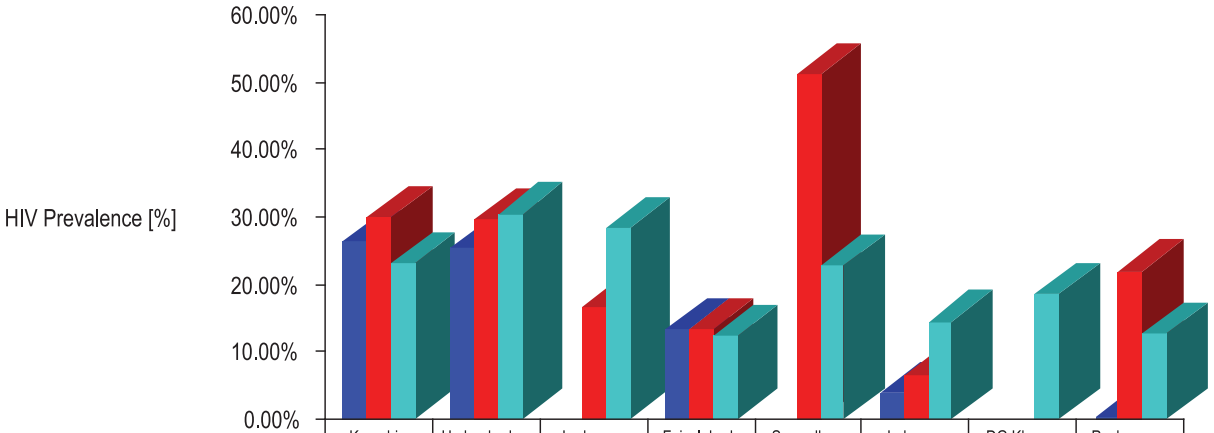
HIV infection has increased significantly in last few years in Pakistan despite of the efforts made to minimize the epidemic particularly among mostat risk populations. Pakistan has identified IDUs, male sex workers (MSWs), hijra sex workers (HSWs) and female sex workers (FSWs) as most at risk populations. The country moved from a low prevalence to an established concentrated epidemic with HIV prevalence of more than 5% among Injecting drugs users (IDUs) and Hijra Sex Workers (HSWs).

The Integrated Bio-Behavioural Surveillance (IBBS) Round III was conducted from March 2008 to June 2008 in Pakistan. The findings of the surveillance provide biological and behavioural information of HIV related most at risk groups (IDUs, Male sex workers and Hijra sex workers). Female sex workers' group is the largest high risk group in Pakistan. They were not included in the third round of surveillance, due to consistently low HIV prevalence observed in successive surveillance rounds (0.2% in Round I and 0.02% in Round II). However, NACP with UNFPA and UNAIDS conducted another round of IBBS among female sex workers in the later half of year 2009. This special round was conducted in six cities of Punjab and Sindh Provinces. The HIV prevalence among female sex workers in 2009 was 0.97%.

Mapping of MARPs conducted during IBBS 2006/2007 from 8,728 spots in 12 major cities of four provinces was estimated as 114,637. Of them, 31,555 (27.5%) were IDUs, 49,037 (42.8%) were female sex workers, 14,725 (12.9%) were hijra sex workers and 19,320 (16.9%) were male sex workers.

IDUs: Approximately 29% of IDUs reported that they used injecting paraphernalia and of them 32% reported sharing the injecting equipments. Nearly 18% of IDUs reported having sex with female sex workers and of them only 31% reporting condom use. Of the respondent IDUs 14% reported that they had sexual encounters with male sex workers and/or with Hijra sex workers. Only 14% of the IDUs who had sexual experience with sex worker, Men reported that they used a condom at least during last anal sex. Overall, 61% of IDUs had heard about HIV prevention interventions in their cities, however, only 51% reported utilizing these services. The overall HIV prevalence among IDUs in Pakistan was 21%. The highest prevalence was reported among IDUs from Hyderabad (30.5%) followed by Larkana (28.5%), Karachi (23.1%) and Sargodha (22.8%).

Figure 77: HIV Prevalence among IDUs in Pakistan by their city IBBS Round I - III

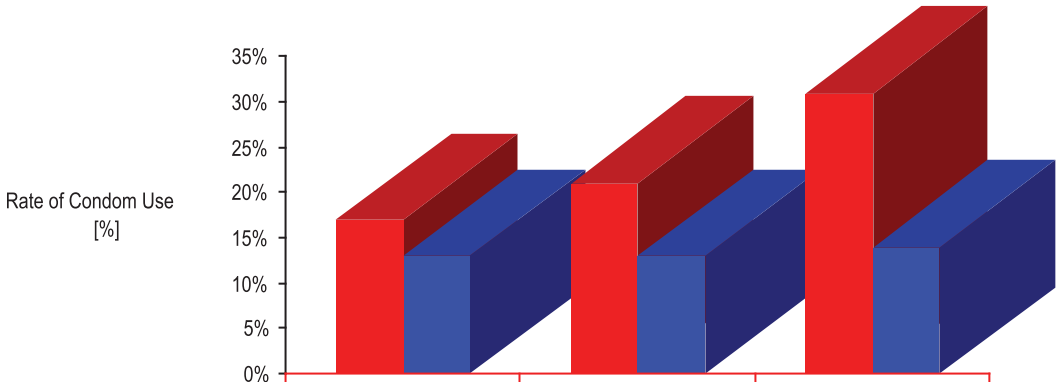


	Karachi	Hyderabad	Larkana	Faisalabad	Sargodha	Lahore	DG Khan	Peshawar
Round I - 2005	26.50%	25.40%		13.30%		3.80%		0.40%
Round II - 2007	30.10%	29.80%	16.50%	13.30%	51.30%	6.50%		22%
Round III - 2008	23.10%	30.50%	28.50%	12.30%	22.80%	14.50%	18.60%	12.80%

Cities selected in Surveillance Round I - III

Figure 76 depicts the HIV prevalence among IDUs residing in different cities of Pakistan, according to the findings of IBBS Round I - III. Figure 84 illustrates the practice of condom use among IDUs based on the findings of IBBS Round I - III. During last sexual encounter with a female sex worker, only 17% of IDUs used a condom in Round-I and the figure for the Round-III was 31%.

Figure 78: Condom use in last sexual encounter among IDUs by the type of the clients IBBS Round I - III

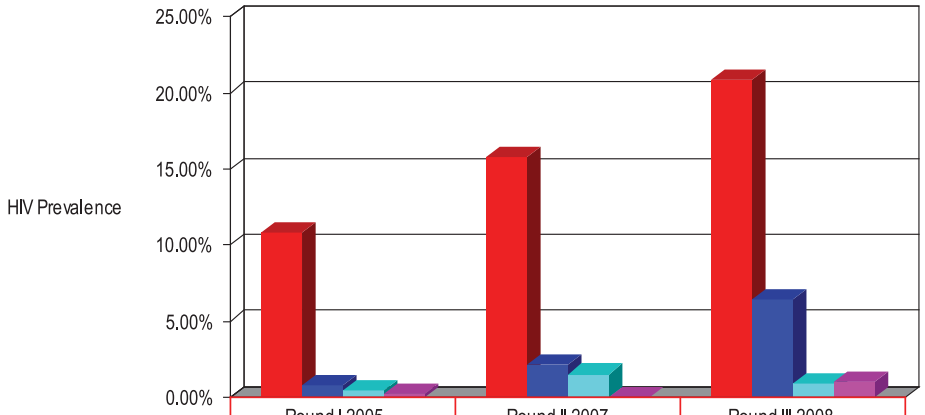


	Round-I 2005	Round-II 2007	Round-III 2008
Female Sex Worker	17%	21%	31%
Male Sex Worker/Hijra Sex Worker	13%	13%	14%

During the last sexual encounter with a male sex worker or with a Hijra sex worker, only 13% of IDUs used a condom in Round-I and there was no significant progress detected in Round-III surveillance. However, the HIV prevalence among female sex workers was very low over the two consecutive surveillance rounds and that of special IBBS Round – III was 0.97%. The HIV prevalence among male sex workers and Hijra sex workers was comparatively high (Figure 77).

Male Sex Workers (MSWs): MSWs started sex work at the mean age of 16.2 years. About 42% of MSWs had no formal schooling and nearly all of them were unmarried. According to the findings there were considerable numbers of students among MSWs. Approximately 24% of them reported consistent use of condoms with paid clients in past one month of the surveillance. About 14% of MSWs were aware of the HIV prevention interventions in their cities and only 8.5% utilized these services. The overall HIV prevalence among MSWs was 0.9%. The highest HIV prevalence among MSWs was reported in Karachi (3.1%) and no MSW tested positive in Hyderabad, Faisalabad and Peshawar.

Figure 79: HIV prevalence among Most at Risk Groups in Pakistan by the Round of Second Generation Surveillance I – III and Special Round conducted for female sex workers in 2009



	Round I 2005	Round II 2007	Round III 2008
IDUs	10.80%	15.80%	20.80%
HSWs	0.80%	2.10%	6.40%
MSWs	0.40%	1.50%	0.90%
FSWs	0.20%	0.02%	0.97%

Hijra Sex Workers (HSWs): On an average HSWs started sex work at a relatively young age (15.5 years). The majority of them were unmarried. About 59.6% of the HSWs had no formal schooling. Approximately 22% of them accessed their clients using mobile phones. Consistent condom use among HSWs was generally low and only 20% reported using a condom consistently with the paid clients in the past month of the surveillance. Overall, 31% of them were aware of HIV prevention interventions in their cities. However, only 18.3% reported utilizing such services. The overall HIV prevalence among HSWs was 6.4% with the highest prevalence reported in Lakrana (27.6%).

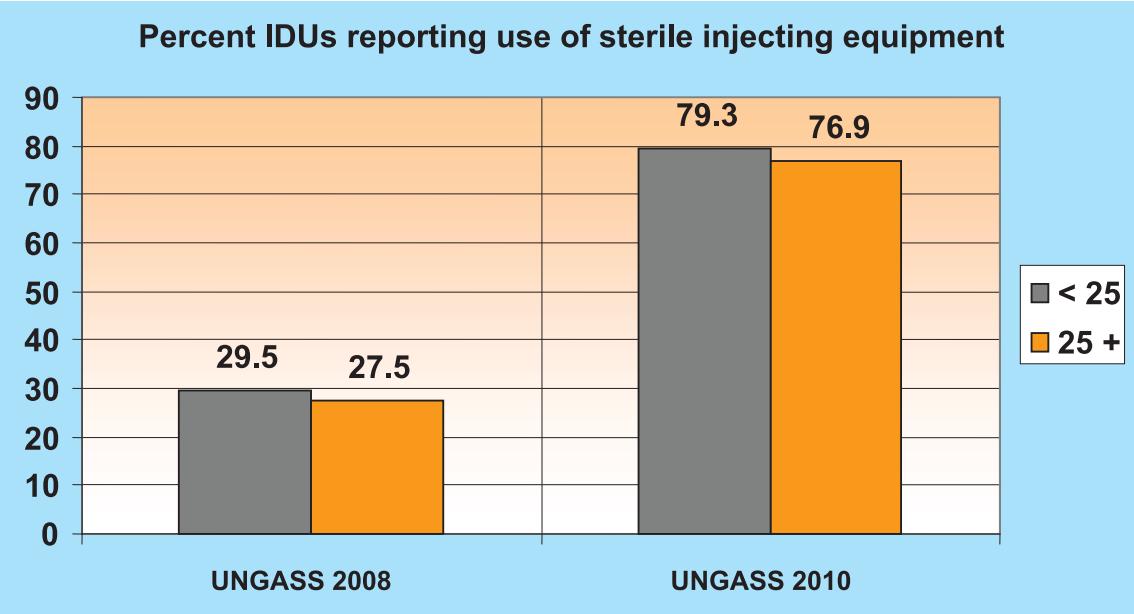
Figure 78 shows the HIV prevalence among different high risk groups in Pakistan from IBBS Round-I in 2005 to IBBS Round-III in 2008. The highest HIV prevalence was consistently reported among IDUs followed by Hijra Sex Workers (HSWs). As HIV prevalence among IDUs is significantly high, low condom use practice may pose a threat of potentially evolving generalized epidemic in Pakistan unless the timely interventions are geared effectively and efficiently.

Risk and Vulnerabilities:

HIV epidemic situation in Pakistan fits the typical "Asian Epidemic Model" where once the epidemic gets settled among the most at risk populations, it spreads rapidly to the general population due to prevailing risk behaviours and vulnerabilities. There are socio-cultural factors that have helped to slow down the initial phase of HIV epidemic in Pakistan. However, the country has an array of risks and vulnerabilities that put it at a substantial risk of evolving the current scenario to a full blown epidemic. The risk factors and vulnerabilities include:

- **Concentrated epidemic among Injecting Drug Users (IDUs):** The number of drug users in Pakistan is estimated to be about 500,000, of whom an estimated 150,000 inject drugs. The findings of the Integrated Bio-Behavioural Surveillance - Round III in 2008 indicated a widespread concentrated epidemic among IDUs with highly prevalent risk behaviours.

Figure 80: Trend of using a condom among IDUs in their last sexual encounter in Pakistan from UNGASS Report 2008 – 2010

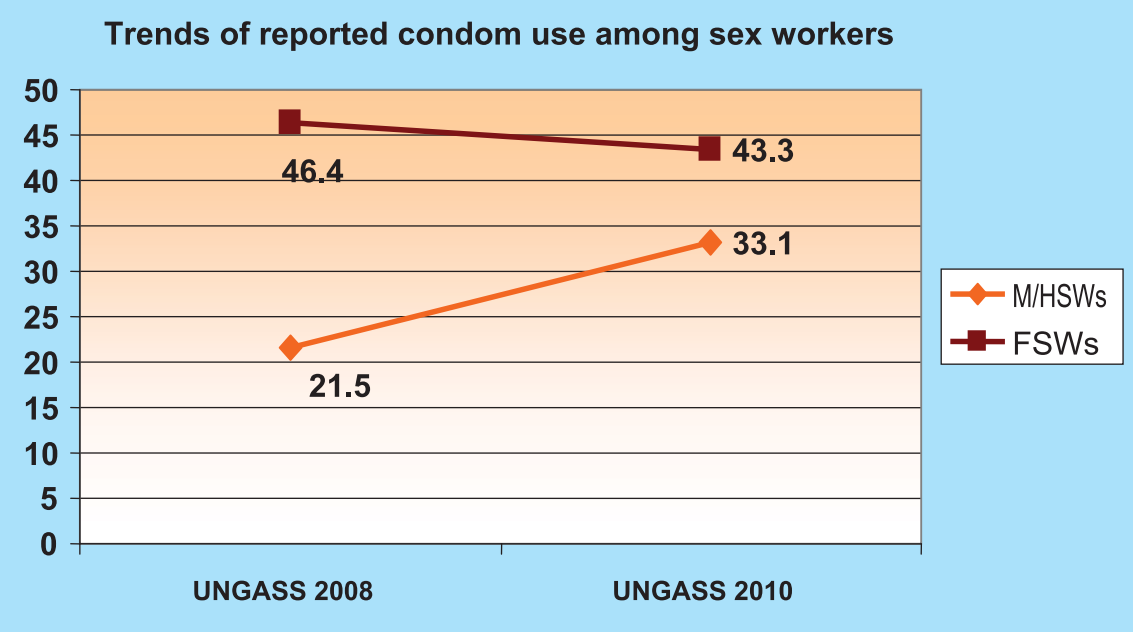


(Source: UNAIDS, UNGASS Country Progress Report, Pakistan, 2010)

The identified risk behaviours among IDUs were shared use of contaminated injecting equipments (23% of IDUs report using a previously used needle/syringe and 18% admit passing their syringe to another IDU), sexual encounters with other most at risk populations like female sex workers, male sex workers and hijra sex workers and low use of condoms. Figure 79 highlights the increasing trend of condom use among IDUs during their last sexual encounters.

- **Emerging epidemic among Hijra Sex workers (HSWs):** The findings of the mapping exercises and that of the Integrated Bio-Behavioural Surveillance (IBBS) conducted in Pakistan from 2005 to 2008 clearly showed that sexual activities between men were highly prevalent in the country. There were estimated 19,320 men who have sex with men residing in twelve major cities in 2007. Data from three rounds of surveillance clearly indicate an emerging epidemic among Hijra sex workers in at least two major cities with highly prevailing risky behaviours. The identified risks among them were low condom use and sexual networking with IDUs and female sex workers. Figure 80 depicts the trends of reported condom use among different types of sex workers in Pakistan from 2008 to 2010 UNGASS reporting rounds.

Figure 81: Trend of reported condom use among female, male and hijra sex workers in Pakistan from UNGASS Report 2008 – 2010

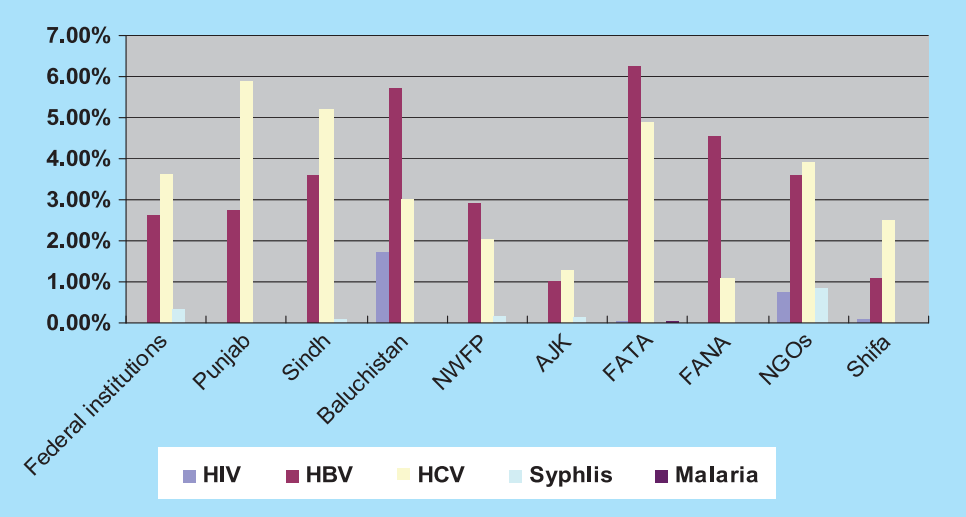


(Source: UNAIDS, UNGASS Country Progress Report, Pakistan, 2010)

- **Well established commercial sex industry:** Commercial sex industry particularly the female sex work is highly prevalent in all major cities of Pakistan. According to the findings of Round II of the Surveillance, there were 50,000 female sex workers operating in twelve major cities. Most of them had very little understanding of safe sexual practices. Low condom use and sexual networking with other most at risk populations like IDUs and MSMs were identified during IBBS Round I and II. Special IBBS Round for female sex workers conducted in 2009 found that the HIV prevalence among them was increased to 0.97%.

- **Inadequate blood transfusion screening, high number of professional donors and unsafe injection practices: Pakistan has a fragmented blood transfusion service and is poorly regulated.** It is estimated that only 50% of the 1.5 million annual blood transfusions in Pakistan are screened for HIV, HBV and HCV. In addition to that, the country has a very poor voluntary blood donor base and a high proportion of blood available for transfusion is collected either from family replacement donors or from professional donors. According to the screening reports collected from public sector blood banks in 2008 found that approximately 963496 donations were made and more than 95% of them were screened for HIV, HBV and HCV in line with the National Guidelines. Both formal and informal health sectors have high rates of unsafe injection practices. Figure 81 shows the prevalence of transfusion transmissible infections in the donated blood in different provinces and institutions in Pakistan in the year 2008.

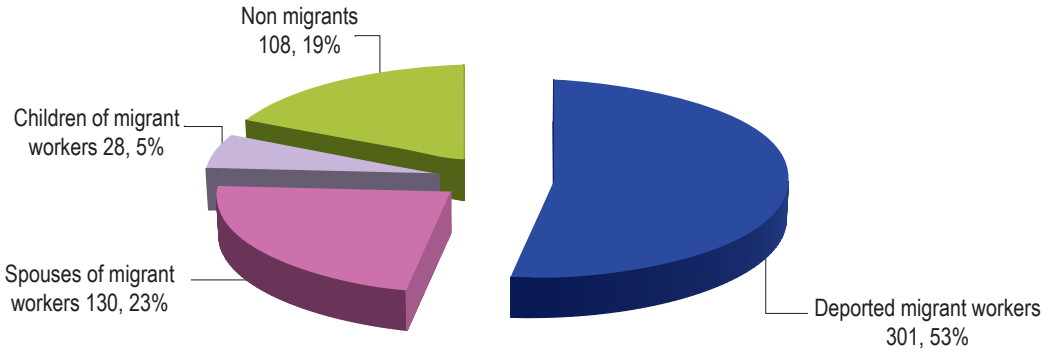
Figure 82: Prevalence of Transfusion Transmissible Infections in donated blood in Pakistan in 2008



(Source: UNAIDS, UNGASS Country Progress Report, Pakistan, 2010)

- **Large number of migrants and refugees:** Pakistan has a very large number of internal migrants, international migrants (both in and out) and refugees who are highly vulnerable to acquire HIV infection. A substantial number of HIV/AIDS patients reported to the health services were among returning migrants from abroad as well as among their spouses and children. In the North West Frontier Province, of the registered HIV positives (567 as of February 2010) more than 80% are migration related (53%-deportees, 23%- their spouse and 4.9% their children). Figure 82 highlights the significance of migration in relation to HIV positive status.

Figure 83: HIV positives among non-migrants and migration related groups in North-West Frontier Province of Pakistan as of February 2010



Approximately 4 million Pakistan citizens are employed overseas particularly in Gulf countries. In addition, Pakistan is hosting about 2.5 million Afghan refugees for the past two decades. In 2009, over 2 million internally displaced people from Swat Valley were relocated due to military operations.

- **Low income levels and income inequalities:** Research studies conducted in all over the world have shown that there is a strong association between low income levels and vulnerability to acquire HIV infection. Nearly one third of the population in Pakistan lives below the official poverty line. Pakistan is an economically progressing country, however, the income disparities are very prevalent and have the potential to fuel HIV epidemic as there is also a strong association between inequality of income and the spread of HIV infection.

- **Low levels of literacy and education:** Literacy and education have a strong link with safe behaviours and sexual practices. Despite the efforts of the Government of Pakistan to raise the literacy levels, still a major proportion of the population remains illiterate particularly among women (adult female literacy rate = 42% in 2006).

- **Large number of unemployed youth, out-of-school youth and street children:** The mentioned categories of young people are more vulnerable to risky behaviours that are associated with HIV spread. Pakistan has an estimated number of 53.6 million youth and many of whom are unemployed and out-of-school. The combination of demographic and economic factors makes this large youth population highly vulnerable to HIV infection.

- **Silence, denial, stigma and discrimination:** Silence, denial, stigma and discrimination are highly prevalent in Pakistan and they can easily fuel the epidemic by limiting the scope of awareness programmes and efforts to mobilize communities and resources to contain the epidemic. At the same time, stigma and discrimination faced by the people living with HIV/AIDS and by marginalized most at risk populations can act as most serious obstacles to an effective national response.

- **Gender issues:** Gender inequalities play a facilitating role in the spread of HIV infection. Low socio-economic status of women, domestic violence and sexual harassment are widespread in male-dominated society in Pakistan (National HIV/AIDS Strategic Framework 2007 – 2012). Despite some improvement in the status of women over the last few years, significant gaps remain, particularly in educational status and health status which possibly could act as factors to evolve the concentrated epidemic into a generalized epidemic in Pakistan.

Important Aspects in National Response:

Phase-I of the Government Response (1987 – 2003):

Ministry of Health, Pakistan established National AIDS Control Programe (NACP) in 1987. The Programme focused on laboratory diagnosis of suspected HIV infected persons at its inception and later began to focus towards HIV prevention and control interventions. In 1994, NACP was revitalized by bringing it under the Social Action Programme Project. This new initiative was focused on prevention and control interventions and the activities were implemented within the health care infrastructure.

Phase-II of the Government Response (2003 – 2007):

In 2001, NACP developed National Strategic Framework-I which provided the strategic vision to the national response and launched an enhanced response in the form of Enhanced HIV and AIDS Control Programme.

The principal components of the Enhanced HIV and AIDS Control Programme were;

1. Interventions for most at risk populations
2. Establishment of HIV/AIDS Second Generation Surveillance System to track HIV epidemic in Pakistan.
3. HIV prevention among general public through blood and blood products
4. Provision of treatment, care and support services
5. Capacity building and programme management.

Phase-III of the Government Response (2007 – 2012):

The National HIV and AIDS Strategic Framework-II for 2007 – 2012 articulates a vision for Pakistan in line with the recently formulated national policy on HIV/AIDS and elaborates through guiding principles, goal, strategic objectives and the priority areas. It does not include operational or implementation plans. It provides strategic direction and guides the programme development and activities by all HIV/AIDS stakeholders in the country over 2007 – 2012. The goal, purpose and guiding principles of the National HIV and AIDS Strategic Framework-II of Pakistan are as follows:

Goal of National HIV and AIDS Strategic Framework-II:

To prevent a generalized epidemic in Pakistan by containing the spread of HIV/AIDS and elimination of stigma and discrimination against those infected and affected

Purpose of National HIV and AIDS Strategic Framework-II:

To expand and scale up effective national response to the threat of HIV/AIDS

Under this broad title of purpose of NSF-II, there are 4 major strategies;

i. Creation of an enabling environment
ii. Strengthening of the institutional framework
iii. Building up the right capacity
iv. Scaling up of programme delivery

These four strategic themes are captured by following 12 priority areas in the NSF-II;

a) Expanded response
b) Vulnerable, target and bridging populations
c) Women, children and youth
d) Surveillance and research
e) Sexually Transmitted Infections
f) General awareness
g) Blood and blood product safety
h) Infection control
i) Care and support

j) Institutional arrangements
k) Commodities and procurement
l) Management information system

Guiding Principles of National HIV and AIDS Strategic Framework-II:

- Universal access
- Rights-based approach
- Multisectoral engagement
- Gender mainstreaming
- Broad and sustained political commitment
- Evidence and result-based strategies
- Voluntary counseling and confidential testing
- Meaningful involvement of people living with HIV/AIDS
- Prevention to care continuum
- Adherence to universal safety precautions
- Respecting religious and cultural sensitivities
- Prioritized and efficient resource allocation

Table 32 shows the country report on UNGASS indicators sent by Pakistan in the year 2010 and has been published in the UNAIDS website

Table 32: Pakistan Country Report on UNGASS Indicators 2010

National Commitment and Action			
Indicator		**Previous data**	**Current status**
1	**Domestic and International AIDS spending by categories and financing sources**		
2	**National Composite Policy Index**	--	Annex II
National Program Indicators			
3	**Percentage of donated blood units screened for HIV in a quality assured manner**	87% (SOPs followed but no EQAS)	*Indicator relevant; data not available.* Limited data on current blood transfusion screening.
4	**Percentage of adult and children with advanced HIV infection receiving ARV therapy**	7.4% (550 adults and children currently on ART out of estimated 75000)	9.83% (1320 adults and children out of 13,422 estimated at an advanced stage of HIV)
5	**Percentage of HIV-infected pregnant women who received antiretroviral to reduce the risk of mother-to-child transmission**	PPTCT started in 2007 and 100% of pregnant HIV positive women identified received ART (too early to make estimates)	0.44% (25 of an estimated 5,663 HIV positive pregnant mothers)

6	**Percentage of estimated HIV-positive incident TB cases that received treatment for TB and HIV**	*Data not available*	*Indicator relevant; data not available.* Limited information
7	**Percentage of women and men aged 15-49 who received an HIV test in the last 12 months and who know their results**	*Data not available*	*Indicator relevant; data not available due to socio-cultural barriers*
8	**Percentage of most-at-risk populations who received an HIV test in the last 12 months and who know their results**	• FSW (<25 – 5.2%; 25+ – 25.4%) • MSW (<25 – 3.5%; 25+ – 5.5%) • HSW (<25 – 8.6%; 25+ – 25.9%)	• FSW (<25 - 15.5%; 25+ – 14.1%) • M/HSW(<25 –1.5% 25+ – 14.3%) • IDU (<25 –12.4%; 25+ – 11.7%)
		• IDU (<25 – 4.6%; 25+ – 25.4%)	
9	**Percentage of most-at-risk populations reached with HIV prevention programs**	• FSW (<25 – 1.1% 25+ – 2.2%) • MSW (<25 – 2.2% 25+ – 4.3%) • HSW (<25 – 6.9% 25+ – 8.0%) • IDU (<25 – 15.1% 25+ – 15.8%)	• FSW (<25 – 5.6%; 25+ – 6.1%) • M/HSW(<25 - 11.7% 25+ – 15.3%) • IDU (<25 – 58.4%; 25+ – 49.2%)
10	**Percentage of orphaned and vulnerable children aged 0-17 whose households received free basic external support in caring for the child**	*Data not available*	*Subject matter not relevant*
11	**Percentage of schools that provided life-skills based HIV education in the last academic year**	*Data not available*	*Subject matter not relevant*
	Knowledge and Behavior Indicators		
12	**Current school attendance among orphans and non-orphans aged 10-14**	*Data not available*	*Subject matter not relevant*
13	**Percentage of young people aged 15-24 who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission**	*Data not available*	*Indicator relevant;* Limited data available from DHS report 2007
14	**Percentage of MARPs who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission**	• FSW (<25 – 28.2%; 25+ – 23.4%) • MSW(<25 – 24.8%; 25+ – 28.4%) • HSW(<25 – 13.1%; 25+ – 18.3%) • IDU (<25 – 16.7%; 25+ – 20.5%)	• FSW (<25 – 1.8% 25+ – 1.6%) • M/HSW (<25 – 28.6% 25+ – 34.1%) • IDU (<25 – 22.3% 25+ – 26.2%)

15	**Percentage of young women and men aged 15-24 who have had sexual intercourse before the age of 15**	0.67% (data collected from only 13-19 yr adolescents) Male – 0.92% Female – 0.42%	*Indicator relevant; data not available due to socio-cultural barriers*
16	**Percentage of women and men aged 15-49 who have had sexual intercourse with more than one partner in the last 12 months**	*Data not available*	*Indicator relevant; data not available due to socio-cultural barriers*
17	**Percentage of women and men aged 15-49 who have had more than one partner in the past 12 months who used a condom during their last sexual intercourse**	*Data not available*	*Indicator relevant; data not available due to socio-cultural barriers*
18	**Percentage of female and male sex workers reporting the use of a condom with their most recent client**	• FSW (<25 – 50.5% 25+ – 42.3%) • MSW (<25 – 20.0% 25+ – 23.3%) • HSW (<25 – 21.4% 25+ – 21.2%)	• FSW (<25 – 49.5% 25+ – 39.6%) • M/HSW (<25 – 32.4% 25+ – 34.0%)
19	**Percentage of men reporting the use of a condom the last time they had anal sex with a male partner**	Data on MSW and HSW is repeated • MSW (<25 – 20.0% 25+ – 23.3%) • HSW (<25 – 21.4% 25+ – 21.2%)	*Indicator relevant but data not available*
20	**Percentage of injecting drug users reporting the use of a condom the last time they had sexual intercourse**	• IDU (<25 – 13.0% 25+ – 22.7%) Male only IDU pop	• IDU (<25 – 29.2% 25+ – 31.2%) Male only IDU pop
21	**Percentage of injecting drug users reporting the use of sterile injecting equipment the last time they injected**	• IDU (<25 – 29.5% 25+ – 27.5%) Male only IDU pop	• IDU (<25 – 79.3% 25+ – 76.9%) Male only IDU pop
	Impact Indicators		
22	**Percentage of young people aged 15-24 who are HIV infected**	*Data not available*	*Subject matter not relevant*
23	**Percentage of most-at-risk populations who are HIV infected**	• FSW (<25 – 0.0% 25+ – 0.0%) • MSW (<25 – 1.1% 25+ – 2.8% • HSW (<25 – 1.9% 25+ – 2.2%) • IDU (<25 – 18.3% 25+ – 15.4%)	• FSW (<25 – 25+ - • M/HSW (<25 – 3.1% 25+ – 4.0%) • IDU (<25 – 22.5% 25+ – 20.4%)
24	**Percentage of adults and children with HIV known to be on treatment 12 months after initiation of antiretroviral therapy**	87% data collected from one treatment center 13% have died or lost to follow up	*Indicator relevant; data not available*
25	**Percentage of infants born to HIV-infected mothers who are infected**	*Data not available*	28.94% (numerator of 1693 and denominator of 5663, both obtained by EPP and Spectrum modeling

(Source: UNAIDS, UNGASS Country Progress Report, Pakistan, 2010)

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5.8 Sri-Lanka

Sri-Lanka is an island in the Indian Ocean with an area of 65,610 square kilometers. It has nine provinces and 25 administrative districts. Each province is governed by a Governor. Population in Sri-Lanka was 20.45 millions in 2009.(Source: National Report NACP Sri Lanka-2010) Of that approximately 5.33 million was less than 15 years of age, according to the national report submitted by National STD and AIDS Control Programme, Sri-Lanka. Table 33 shows some of the important demographic, socio-economic, human and physical resources indicators and health status indicators.

Table 33: Country Profile of Sri-Lanka
Important socio-demographic and health indicators

Demographic Indicators		
Indicator	**Value**	**Reference Year**
Crude Birth Rate	19/1000 population	2003
Crude Death Rate	5.8/1000 population	2003
Population Growth Rate	1.1%	2007
Total Fertility Rate	1.9/woman	2000
Socio-economic Indicators		
Adult Literacy Rate (Total)	90%	2004
Human & Physical Resources Indicators		
Physicians of modern system per 10,000 population	6	2006
Dentists per 10,000 population	0.6	2004
Pharmacists per 10,000 population	0.6	2004
Nurses per 10,000 population	14	2006
Hospital Beds per 10,000 population	31	2004
Primary Health Care Services Indicators		
Contraceptive Prevalence Rate	70%	2000
Antenatal Care Coverage	97%	2000
Births attended by skilled personnel	97%	2001
Children immunized with BCG, DPT-3, Polio-3 and Measles	99%	2005
Health Status Indicators		
Total life expectancy at birth	73.0 years	1996 - 2001
Life expectancy at birth (male)	70.7 years	2001
Life expectancy at birth (female)	75.4 years	2001
Infant Mortality Rate per 1000 live births	11.2	2003
Under five Mortality Rate per 1000 live births	(male) 4.83 (females)	2002
Maternal Mortality Rate per 100,000 live births	16.3	2002

(Data source: WHO website – www.emro.who.int/sri-lanka and National report submitted by NSACP, Sri-Lanka in March, 2010)

Sri-Lanka is classified as a middle income country. However, it has achieved remarkable social and health indicators, some of which are on par with those of developed nations. The economy of the country is market-oriented, with manufacturing capacity taking over from former dependence on agriculture. Almost three decades of war in the country destroyed infrastructure in North and East Provinces and impeded the socio-economic development of the country.

In Sri-Lanka most people live within five kilometers of a health facility. Health care is provided free of charge. Excessive utilization of the tertiary and secondary level hospitals with under-utilization of the primary care facilities is prevailing through out the country. Most of the health related Millennium Development Goals had already been reached on a nationwide basis several years prior to the targeted year. Sri-Lanka is a low prevalence country for HIV/AIDS. However, the findings of the Behavioural Surveillance Survey in 2006 – 2007 indicate relatively high levels of risk behaviour among most at risk populations.

HIV/AIDS Situation:

There were 3827 estimated number of people with HIV living in Sri-Lanka at the end of the year 2008. Among them 2346 were males, 1481 were females and an estimated number of 55 children. Hence the prevalence of HIV in Sri-Lanka was less than 0.1%.

The first HIV infected person was reported in 1987. At the end of December 2009, 1196 HIV positives were reported in the country. Of them 707 were males and 489 were females. Table 34 shows the reported HIV/AIDS figures for the year 2009. Figure 83 shows the annual number of reported HIV positives in Sri-Lanka from 2000 – 2009. The upward trend line indicates the growing phase of the epidemic. Figure 84 depicts the male to female ratio in the cumulative total of reported HIV positives in Sri-Lanka. Reported number of persons with AIDS was 309 and reported number of AIDS related deaths was 202.

Table 34: Reported HIV & AIDS Statistics in Sri-Lanka during the year 2009

	Male	Female	Total
HIV positives	92	45	137
Reported AIDS patients	10	10	20
Reported AIDS related deaths	-	-	16
Reported number of Mother to Child Transmission	04	06	10

Figure 84: Reported HIV positives in Sri-Lanka 2000 - 2009

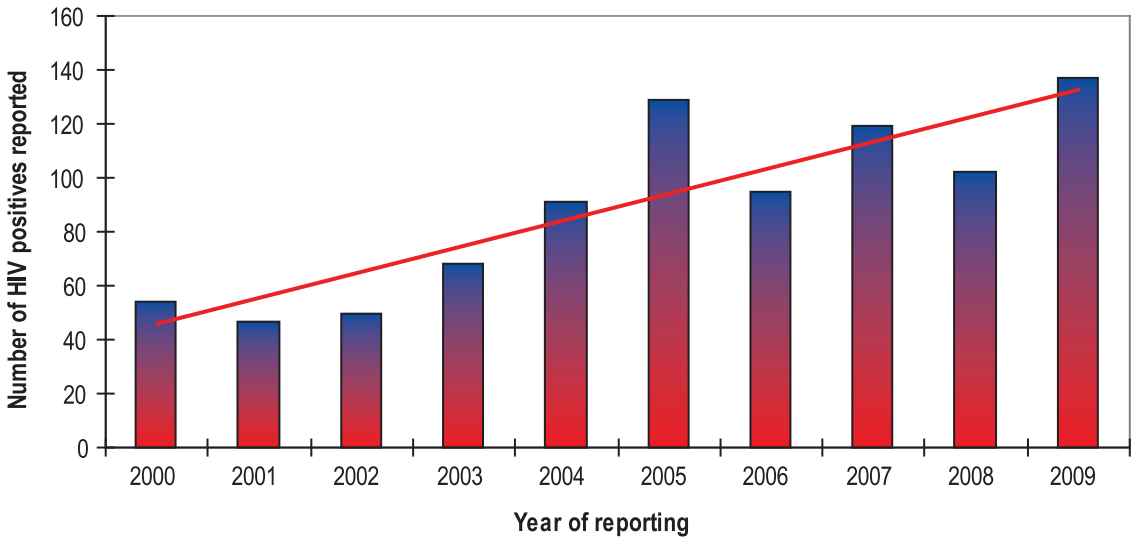
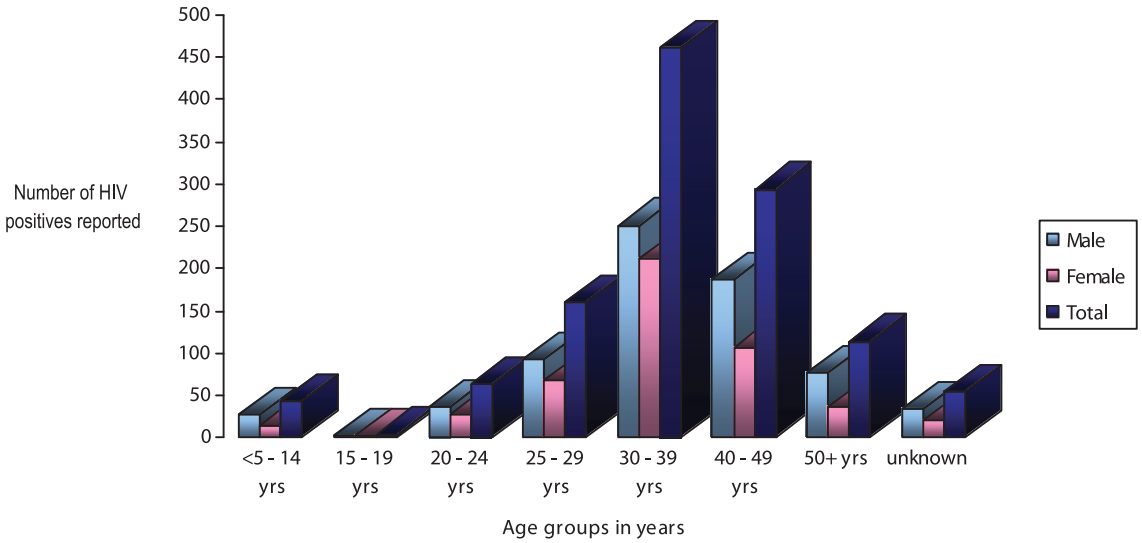


Figure 85: Reported HIV positives in Sri-Lanka 2000 - 2009

The cumulative number of HIV positive children who acquired the infection through mother to child transmission was 43. Of them, 28 were male and only 15 were females. Majority of the adult HIV positives were in 25 to 49 year age range. This clearly shows the adult males and females in their prime productive age are at a higher risk of getting HIV infection. Figure 85 illustrates the age and sex distribution of cumulative total of HIV positives in Sri-Lanka.

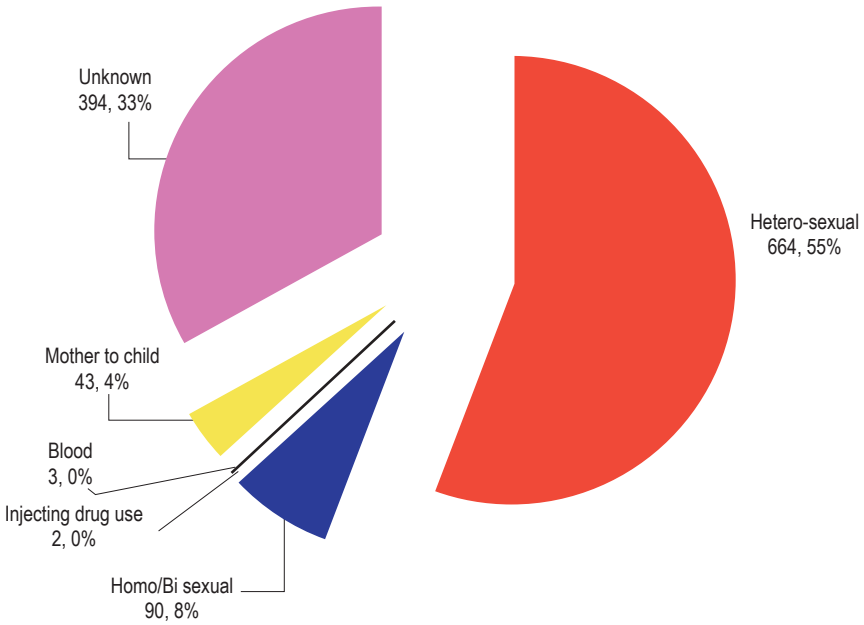
Figure 86: Age and sex distribution of reported HIV positives in Sri-Lanka 1987 - 2009



As in any other Asian country, the most common probable mode of transmission is hetero-sexual intercourse. Figure 86 depicts the probable modes of transmission of HIV infection among the reported positives since 1987 till the end of December 2009. Significant number of reported HIV positives (33%) have not reported the probable mode of transmission. This is of significant importance to the National STD and AIDS Control Programme in Sri-Lanka.

HIV transmission through blood and blood products was very low in Sri-Lanka. To date, only 3 cases of transfusion related HIV infection have been reported and no such case was reported after the year 2000. The blood safety policy adopted in Sri-Lanka since 1988 has significant importance in order to maintain safe blood transfusion service in Sri-Lanka. During January 2008 to December 2009, a total of 588,146 samples of donated blood in the government sector were screened for HIV infection and 23 were positive (0.03% HIV seropositivity rate).

Figure 87: Probable mode of transmission of the reported HIV positives in Sri-Lanka 1987 - 2009



Of the reported number of HIV positives, 216 were on Antiretroviral therapy as of December 2009. Of them 196 were adults and 20 were children less than 15 years of age. Of the adults, 110 were males and 86 were females. Of them, 71 have been enrolled in the year 2009. In order to prevent mother to child transmission of HIV, cumulative number of 16 pregnant mothers and 14 infants have received antiretroviral drugs. In Sri-Lanka, anaemia, lipoatrophy, nausea, vomiting, diarrhea, skin pigmentation, nail discolouration and depression were being noted as adverse reactions to antiretroviral drugs.

The most common opportunistic infection reported among HIV positives in Sri-Lanka was TB (both pulmonary TB and extra-pulmonary TB). Penumocystis jirovecii pneumonia, Oesophageal Candidiasis, Toxoplasmosis, Cytomegaloviral Retinitis, Cryptococcal Meningitis, Lymphoma and Kaposi Sarcoma were also among the reported opportunistic infections and malignancies.

Risks and Vulnerabilities:

Sri-Lanka continues to have very low HIV prevalence. However, findings of the first Behavioural surveillance Survey in 2006 – 2007 indicate relatively high levels of risk behaviour among most at risk populations. Sri-Lanka has a narrowing window of opportunity to contain the HIV epidemic among high risk groups. The recognized risk factors and vulnerabilities in Sri-Lanka are as follows:

- **Low condom use:** The first Behavioural surveillance Survey indicated the low condom use among high risk populations such as commercial sex workers (except some sub-groups of them), men who have sex with men and also the drug users. A very few drug users in Sri-Lanka inject drugs.

- **Commercial sex work:** According to the National report submitted by National STD and AIDS Control Programme, Sri-Lanka, there were 4800 - 7200 commercial sex workers engaging in sex trade in Sri-

Lanka in the year 2009. Women engaged in sex work are considered most vulnerable to HIV infection as they often lack the ability or power to negotiate condom use with clients. The HIV prevalence among female sex workers in Sri-Lanka was 0.28% - 0.85%. Consistent condom use among female sex workers with a paying partner is in the range of 80% – 95%. However, consistent condom use with all partners is low. The proportion of men who visit female sex workers is estimated as 3.5% of the total male population. However, the daily turn over of clients in the sex trade is low. The Behavioural Surveillance Survey in 2006 revealed that the number of clients per female sex worker was 1.6 – 3.3 during the last working day.

- **MSMs:** There are networks of men who have sex with men and they have multiple partners including paying clients and women. There were 12,000 – 36,000 estimated MSMs reported in Sri-Lanka with HIV prevalence rate of 0.1%. The consistent condom use among MSMs with another male partner is 64%. However, consistent condom use in each and every sexual encounter is low and exposing them to very high risk of acquiring HIV infection. A study done among MSMs in the year 2008 revealed that the number of sex partners for a year was 6.8.

- **Sexually Transmitted Infections (STIs):** The annual estimate of the STI patients in Sri-Lanka is about 200,000. Of that only 10 – 15% positives are detected by the government clinics in the island. STIs facilitate the spread of HIV and serve as a proxy indicator for low condom use and other high risk sexual behaviours. The HIV prevalence rate among patients attending to Sexually Transmitted Disease clinics in Sri-Lanka was 0.31% - 0.93%. Low STI rates have been observed among high risk groups as well as in general population in Sri-Lanka. STI surveillance data shows bacterial STIs are declining. However, viral STIs, such as Herpes simplex viral and Human papilloma viral infections are increasing. Geital herpes is the leading STI in the country.

- **External Migration:** International migration for work is one of the main livelihoods for the economic survival of many households in the country. An estimated 1.8 million Sri-Lankans work as external migrant workers. Of them, 79% are unskilled migrant women. Living away from the traditional social structure is believed to foster unsafe sexual practices. The same conditions may increase the vulnerability of women to sexual abuse too. A significant number of HIV infections reported were diagnosed among external migrant workers.

  Since the detection of first HIV infection in Sri-Lanka, it was observed that a significant number of HIV infections are being diagnosed among external migrant workers. Approximately, 40% of HIV infected females have acquired the infection probably outside the country. The analysis of HIV data revealed that almost 22% of the infections in each year were associated with overseas migration. A survey carried out in 2008 among Middle East returnees revealed that 15 – 20% of respondents were sexually active during the course of their overseas employment, 17% were subjected to sexual harassment and 5% were raped while they were overseas.

  However, the high mobility of the military during the war situation over three decades does not appear to be a vulnerable factor in Sri-Lanka. So far, HIV Sentinel Surveillance among military personnel did not report even a single HIV infection giving zero HIV prevalence among military personnel.

- **Drug Users:** The estimated opiate users were about 250,000 – 300,000 in 2009. Of the heroin users, only 2% were injecting drugs. The HIV prevalence among IDUs in Sri-Lanka was 0.1%. The Behavioural Surveillance Survey found that both knowledge on HIV transmission and condom use were reasonable among drug users. However, they engage in unsafe and commercial sex. Hence, an increase in injecting drug use could generate a rapidly spreading HIV epidemic among drug users.

- **Knowledge on HIV transmission:** Knowledge on HIV transmission was reasonably high among high risk groups participated in Behavioural Surveillance Survey conducted in 2006 – 2007 in Sri-Lanka. However, the level of misconceptions among high risk groups was also high. This may favour the potentials for HIV to spread among this most at risk populations and among the members of their sexual networks.

- **Stigma and discrimination:** The behavioural Surveillance Survey found high levels of stigma towards people with HIV among all the groups surveyed. Stigma and discrimination discourage the needy people from seeking care and testing

Table 35: HIV Ser-Prevalence among identified high risk and vulnerable groups in Sri-Lanka 2005 – 2009

Population group	Year of sentinel surveillance survey				
	2005	2006	2007	2008	2009
Female sex workers	(0%) 0/1136	(0.2%) 2/1,216	(0%) 0/1218	Not included	(0%) 0/1032
MSM	Not included	Not included	Not included	(0%) 0/242	(0.48%) 2/411
Drug users	Not included	Not included	Not included	(0.19%) 1/539	(0%) 0/1004
STD attendees	(0.04%) 1/2272	0.4% 8/2,215	(0.08%) 5/2456	Not included	(0.15%) 4/2746
TB patients	(0.1%) 2/1528	(0.1%) 1/1,332	(0.08%) 1/1233	Not included	(0%) 0/1547
Military	(0%) 0/3200	(0%) 0/1200	(0%) 0/1241	Not included	(0%) 0/1380

(Source: UNAIDS, UNGASS Country Progress Report, Sri-Lanka, 2010)

Table 35 highlights the HIV sero-prevalence rate among identified high risk and vulnerable groups in Sri-Lanka from 2005 to 2009. In order to track the transmission of HIV infection in identified high risk and vulnerable population groups in the country, NSACP, Sri-Lanka has been conducting annual HIV Sentinel Surveillance Surveys since 1993. Low HIV prevalence rate (<1%) was observed over the years even among high risk groups. The last survey was conducted in 2009. According to the findings of that survey, HIV prevalence among MSMs was 0.2%, 0.15% among STD clinic attendees and was zero among other sentinel groups.

Important Aspects of National response:

The Government of Sri-Lanka (GOSL) is fully committed to the prevention and control of HIV/AIDS in the country. GOSL has recognized HIV/AIDS as a developmental issue with social and health implications.

GOSL established the anti-venereal diseases campaign in 1952 and initiated the HIV prevention and control activities since 1985. Therefore, the name of the programme was changed as National STD and AIDS Control Programme (NSACP) in 1985, two years before detecting the first HIV positive Sri-Lankan. In addition to NSACP, the National Blood Transfusion Services and the National Programme for TB and Chest Diseases strengthened their responses to reduce the transmission and prevent further spread of HIV. NSACP is spearheading the national response with all stakeholders using decentralized approach. The "Three ones" approach guides the national response with one multi-sectoral strategy, one national comprehensive strategy and one monitoring and evaluation framework.

The first Medium Term Plan was launched in 1988 followed by the second in 1994 and National HIV Prevention Project from 2003 – 2008. They helped to maintain a remarkably low level of HIV transmission among high risk groups as well as among members of the general population.

The National strategic plan 2002 – 2006 articulated the following prioritized areas:

- **Prevention**
  a) Mass media awareness campaigns and condom social marketing
  b) Focused behaviour change interventions among most at risk populations
  c) Prevention among other vulnerable populations and general population
  d) STD diagnosis and treatment
  e) Blood safety
  f) Prevention of HIV transmission in health care settings
  g) Prevention of mother to child transmission

- **Treatment, care and support and impact mitigation**
  a) Voluntary counselling and testing
  b) Clinical care
  c) TB/HIV co-infection management
  d) Home, community and palliative care

- **Multi-sectoral involvement and decentralization**
  a) Involvement of various public sectors
  b) Involvement of NGOs, community and people living with HIV infection
  c) Involvement of the private sector

- **Policy development**
- **Strategic Information**
- **Programme management**
- **Resource and support mobilization**

The Government of Sri-Lanka developed the National HIV/AIDS Strategic plan 2007 – 2011 with broad stakeholder participation, as a coordinated response to HIV/AIDS. The guiding principles for the national response include:

- Recognition of the need for evidence to formulate responses

- Recognition of the respect for human rights
- Recognition of gender inequalities in HIV control
- Recognition of the need for community participation and involvement of people with HIV

The overall goal of the National HIV/AIDS Strategic Plan is to reduce the impact of HIV/AIDS on the social development of the country. There are two national goals. They are:

1. To maintain the low HIV prevalence among most at risk populations and the general population
2. To increase the quality of life of those already infected

To achieve these national goals, there are six strategies. Two of them are assigned as core strategies and the remaining four assigned as additional strategies.

Two core strategies are as follows:

i. Increased coverage and quality of prevention interventions
ii. Increased coverage and quality of care, support and treatment intervention

Four additional strategies are:

i. Improved generation and use of information for planning and policy development
ii. Increased involvement of relevant sectors and levels of government in the response
iii. More supportive public policy and legal environment for HIV/AIDS control
iv. Improved management and coordination of the response

The implementation of the National HIV/AIDS Strategic Plan depends on the efforts of various governmental departments, NGOs, private sector and Sri-Lanka's Development Partners. The National STD and AIDS Control Programme coordinates the response, through development of technical strategies and guidelines, development of annual operational plans and budgets, resource mobilization and capacity building of all the implementing partners.

Table 36: Services available for HIV infected and affected people in Sri-Lanka, as of December 2009

Service	Number of Health Facilities providing services at the end of December 2009
Health care facilities with voluntary counseling and testing	30
Health care facilities with voluntary counseling	47
Centres with voluntary counseling and referral	10
Health care facilities with laboratory facility for CD4 count	02
Health care facilities with laboratory facility for viral load	01
Health care facilities with ARV treatment – first line regimen	05
Health care facilities with ARV treatment – second line regimen	05
Health care facilities with PMTCT services	05
Health care facilities with post-exposure prophylaxis for health care workers	30
Centres with social welfare facilities	12

Table 36 highlights the Services available for HIV infected and affected people in Sri-Lanka, as of December 2009. Table 37 shows the country report on UNGASS indicators which has been published in the UNAIDS Global HIV Report 2010.

Table 37: Sri-Lanka Country Report on UNGASS Indicators in the year 2010

National commitment and action	
Indicator 1: Domestic and international AIDS spending by category and financing sources	Indicator relevant; Limited data available.
National programme indicators	
Indicator 3: Blood Safety – Donated	100%
Indicator 4: HIV Treatment: Antiretroviral Therapy (2009)	40.6%
Indicator 4: HIV Treatment: Antiretroviral Therapy (2008)	32.1%
Indicator 5: Prevention of Mother-to-Child Transmission (2009)	11.1%
Indicator 5: Prevention of Mother-to-Child Transmission (2008)	16.1%
Indicator 6: Co-Management of Tuberculosis and HIV Treatment	10.0%
Indicator 7: HIV Testing in the General Population	*Subject matter relevant: Indicator not relevant
Indicator 8: HIV Testing in Sex Workers (2006/07)	42.6%
Indicator 8: HIV Testing in Men who Have Sex with Men (2006/07)	13.6%
Indicator 8: HIV Testing in Injecting Drug Users	** Indicator relevant; but no data available
Indicator 9: Prevention Programmes: Sex Workers	** Indicator relevant; but no data available
Indicator 9: Prevention Programmes: Men Who have Sex with Men	***Indicator relevant; but no data available
Indicator 9: Prevention Programmes: Injecting Drug Users	***Indicator relevant; but no data available
Indicator 10: Support for Children Affected by HIV and AIDS	Subject matter relevant: indicator not relevant
Indicator 11: life Skills-based HIV Education in Schools	Subject matter relevant: indicator not relevant
Knowledge and behavior indicators	
Indicator 12: Orphans: School Attendance	Subject matter not relevant
Indicator 13: Young People: Knowledge about HIV Prevention (2006/07)	17.3 (limited data available)
Indicator 14: Knowledge about HIV Prevention: Sex Workers	Indicator relevant to our
	country; no data available
Indicator 14: Knowledge about HIV Prevention: Men Who have Sex with Men	Indicator relevant to our country; no data available
Indicator 14: Knowledge about HIV Prevention: Injecting Drug Users	Indicator relevant to our country; no data available
Indicator 15: Sex Before the Age of 15 (2006/07)	1.4% (limited data available)
Indicator 16: Higher-risk Sex	Indicator relevant to our country; no data available
Indicator 17: *Condom Use During Higher-risk Sex	Indicator relevant to our country; no data available
Indicator 18: Sex Workers: Condom Use (2006/07)	89.3%
Indicator 19: Men Who Have Sex with Men: Condom Use (2006/07)	60.9%
Indicator 20: Injecting Drug Users: Condom Use	indicator relevant to country; no data available
Indicator 21: Injecting Drug Users: Safe Injecting Practices	Indicator relevant to our country; no data available

[1] * Indicator reported in UNGASS 2007 was among factory workers as the sexual behavior is thought to be proxy to general population. However the comments by the UNGASS team on SL report 2007 were that FW should not be reported for this indicator. Hence we are not reporting the indicator as no data available from a general population survey .
**Very limited data available from BSS , as the number of ever IV drug users were low and the current IVDU were low even more. The indicator is not computed due to very small numbers.
*** of the two the specific questions for UNGASS indicator, only one question where MARP can get a HIV test done was asked , but whether MARP received condoms was not asked In the BSS 2006 THUS the indicator cannot be computed.
**** First question out of 5 questions to compute this indicator was asked in a slightly different manner in 2006 BSS questionnaire. For the 2007 UNGASS report, while explaining this indicator was computed, and reported. However the UNGASS experts commented that it's not correct to report the indicator as such. Thus the indicator is not reported.
*****for the UNGASS 2007 HIV prevalence of sex workers in western province has been reported (0.16%) as data was not available at other sites at the time of reporting

(Source: UNAIDS, UNGASS Country Progress Report, Sri-Lanka, 2010)

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