

Injecting drug use and HIV vulnerability in Nepal

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Chapter 1: Background information about Nepal

1.1 Geography and administrative, Population, Education, Political, Economic and socio-cultural

Geographical and administrative

Nepal is a landlocked country of astounding topographical diversity situated in the South Asia region. Its total area is 147,181 square kilometers. Geographically it is divided into 3 regions: mountain, hill and Terai (Nepal Demographic Health Survey-NDHS, 2006). Administratively Nepal is divided into 5 development regions, 14 Zones and 75 Districts (figure 1.1/annex 1). Kathmandu is the capital city of Nepal. The council of ministers holds the executive power. National council and House of Representatives (HOR) are the legislative bodies and Supreme Court and district courts are also the part of judiciary bodies.

Population

The population of Nepal is estimated to be 26,427,399 (male: 13,240,233, Female: 13,187,166) and the sex ratio is 106 males per 100 females. The estimated population growth rate is 2.095%. About 85.8% of population lives in rural area and 14.2% in the urban area (Central Bureau of Statistics-CBS, 2008a). Individuals over 60 years of age are considered elderly in Nepal and in 2001 census, there were about 1.5 million elderly inhabitants (United Nations Fund for Population Activities-UNFPA, 2008). Almost two-thirds of the populations are under 15 years of age. The number of elderly people is also increasing in Nepal.

Education

In 2001, the adult literacy rate was 48.2%, 65.5% men and 42.8 % women are literate (UNESCO, 2006). Net primary school enrolment ratio was 90% for male and 83% for female in 2006 (UNICEF, 2006a)

Political

Nepal has multiparty democracy. It has faced much political instability in between 10 years due to armed conflict started by Maoist political party. Recently the political situation has significantly changed and the country is going through a changeover phase.

Economic situation

The majority of people in Nepal are engaged in agriculture and young boys migrate to India and other gulf countries to search for job opportunities. Nepal has a small economy and it could not take up growing labor force within the country. About 32.3% of employed labor force is underemployed and almost 26% of active labor force is unemployed. Out going young people to foreign terrain increased by 25% in 2004 in comparison to previous years (CBS, 2008b). According to World Bank report (2008), the country GDP per

capita growth 2006 was 0.1%. More than 31% of people are living below the poverty line and 95% of poor people live in the rural areas. There is wide gap between rich and poor. Nepal is in 136th position of human development index (HDI) among 177 countries of the world in 2005.

Socio-cultural situation

Nepal has enormous diversity in religions, ethnic groups and languages. More than 80.6% people observe Hinduism. It has strong patriarchal socio-cultural system. Women empowerment is low in the society. Males are dominate property related issues and are considered as head of the family. Often gender inequalities are common in Nepal. Women and girls suffer from the various forms of sexual and domestic violence; early marriage and trafficking etc (CBS, 2008).

1.2 Health system in Nepal

Health Situation

Nepal has stepped forward to achieve the national goals by strengthening its existing infrastructure and through extension of the integrated health services in an effort to meet the goal "Health for All" by the year 2000 AD as proposed by World Health Organization (WHO, 2007a). The trend in life expectancy at birth increased from 55 years for males and 53.5 years for females in 1991 (WHO, 2006a) to 62.9 years for male and 63.7 years for female in 2007 (CBS, 2007). There is declined an infant mortality rate (IMR) from 103 per 1000 live births in 1986 to 51 per 1000 live birth in 2006 (NDHS, 2006).

Though, there are a lot to be done to improve the health status of country people. Pneumonia, ischemic heart disease, diarrheal disease, cerebrovascular disease, Chronic pulmonary obstructive disease, hypertension, tuberculosis, measles and road traffic accidents are top ten causes of death in Nepal for all age group in 2002. Children under five and women at reproductive age form the most vulnerable groups for mortality and morbidity (WHO, 2006b). Maternal mortality rate was 539 per 100,000 live births in 2001 (DFID, 2007a). The estimated birth rate and death rate in 2008 are 29.92 births/1,000 populations and 8.97 deaths/1,000 population respectively (CIA, 2008). The contraceptive prevalence rate (CPR) is 40.2% (WHO, 2007a) and total fertility rate (TFR) is 3.5 per woman (UNFPA, 2005).

Information on Health Sector

Health services in Nepal basically provided by public and private sectors. Under the Ministry of Health (MOH), the department of health services (DoHS) is the main health services provider. Health care in Nepal is delivered through hospitals, health centers (HC), Health post (HP) and Sub health post (SHP) (NDHS, 2006). SHP is the first contact point to provide basic health care services and there is one SHP in each Village Development Committee

(VDC). Many private hospitals, nursing homes and informal health providers are also providing health care services under the MOH. Few Ayurvedic health centers are serving care under the department of Ayurvedic medicine.

The public health sector is relatively weak. Health care services are easy to access in urban areas. Quality of health services is the biggest problem in Nepal. Shortage of health care providers, lack of essential drugs, difficult transport system and communication and poor coverage of health services make access to health care in rural community extremely difficult (WHO, 2007c). According to CBS report (2004), only 62% of the Nepalese have access to health service facilities within 30 minutes of walking distance. (Further health services for IDUs explained in chapter five)

1.3 HIV/AIDS situation in Nepal

First AIDS case was reported in Nepal in 1988. As of mid May 2008, a total of 11,501 HIV positive cases had been reported to the National Centre for AIDS and STD Control (NCASC) (NCASC, 2008). The male to female ratio of HIV positive cases was 2.9:1. Men were three times more prone to be infected than the women (World Bank, 2008). The estimated number of people living with HIV and AIDS in Nepal was 70,000 in 2007. The most recent figure of adult HIV prevalence is 0.49% (1 in 200 people) between 15-49 years of age. Female sex workers (FSW), injecting drug users (IDU) and seasonal labor migrants who return after working abroad are the most at- risk population groups to HIV infection in Nepal.

HIV epidemic in Nepal is mainly attributed to the low level of literacy and education level, knowledge and perception of HIV and its risk, poverty, gender inequalities, stigma and injection risk behaviors, lack of exposure to HIV/AIDS intervention and weak national responses. In addition, drug injection and unsafe sex practices, internal and external mobility, internal conflict and limited health services make it difficult to address this issue (USAID, 2008).

After the first AIDS case was detected in Nepal, government had launched the first National HIV/AIDS prevention and control program in 1988, coordinated with multi-sectoral National AIDS committee and Ministry of Health and Population (NDHS, 2006). Several national and international organizations and donor agencies were working for the HIV/AIDS program. Recently, HIV/AIDS treatment, support and care services has been expanded in Nepal as for VCT (Voluntary Counseling and Testing), PMTCT (Prevention of Mother-to-Child Transmission), STI (Sexually Transmitted Infection), ART (Antiretroviral treatment) etc in Nepal (It is briefly explained in chapter five). NCASC is supported by WHO, UNAIDS (Joint United Nations Programme on HIV/AIDS), UNDP (United Nations Development Program) and USAID (United States Agency for International Development) are supporting to NCASC. There are about 200 NGOs working on HIV/AIDS in Nepal (UNGASS, 2008).

Chapter 2: Problem, study objectives and methodology

2.1 Problem statement

The problem that this paper addresses is to ascertain the extent to which the injecting drug users in Nepal are susceptible to HIV. Injection of drug use is not only restricted to Nepal; it is a worldwide problem. Furthermore, over the past few years, the global epidemic of HIV/AIDS among the IDUs has shown a continued increase. Epidemic in south East Asia is primarily driven by unsafe sex and IDUs (WHO, 2007a). IDU has major impact on mounting the global HIV/AIDS pandemic (UNODC, 2004).

The transmission of HIV among IDUs occurs primarily through risky behaviors like; sharing/exchange of contaminated needles/syringes and unsafe sexual practice. Those risky behaviors are contribute to IDUs vulnerability to HIV infection. In addition, frequency and magnitude of exposure to infected blood increase the risk of infection. If one member of the group has HIV, that would be great chance for the virus to get transmitted to the other members within the IDUs population (UNAIDS, 2008a).

Nepal is facing an extensive range of drug use problem especially in the capital city, other urban areas (Pokhara, Biratnagar and Dharan) and cross border areas (Terai). HIV infection on IDUs in Nepal is increased from low prevalence to concentrated epidemic. IDUs have very little access to information, legal and social services because of lack of awareness and low social support. Moreover, health services often are not appropriate for the needs of IDUs. The problem of IDUs is neglected as other major health problems in Nepal. Violence, harassment, societal avoidance, arrest by police and exploitation by others are common happenings (FHI, 2004c). Apart from these, people living with HIV in general population, sex workers, migrants or IDUs are discriminated in the community. Most of the IDUs living with HIV in Nepal are between 20-30 years of age. These young people are rejected by their families, society and even discriminated at work. This makes difficult for IDUs and HIV infected people to cope with their normal life (Singh et al, 2005).

HIV infection has shown a sharp increase among IDUs in the border areas and in the main cities. Most of the time interventions programs do not reach to this group. Few IDUs are notified in small town areas compared to other larger cities though sharing of contaminated needle is a common practice in these places as well. The open border drug market, lack of awareness on transmission of HIV through sharing needles, inconsistency safe sex within

the IDUs partners and sex workers led to spread of HIV among IDUs (Singh et al, 2005).

The concern is to address this problem to prevent further rising of HIV prevalence among IDUs and in general population. If there is no effective public health interventions, HIV/AIDS may become one of the leading cause of death among adults (15-49 years age groups) over the next ten years in Nepal (UN, 2005). Currently the government itself does not take serious attention for this issue. Few NGOs and INGOs partners are working on it. This is the problem that this thesis will try to analyze.

2.2 Objectives of the study

General objective:

To analyze the situation of HIV, identify groups at risk behaviors to HIV and the factors that make injecting drug users more vulnerable to get HIV infection in order to provide recommendations for strengthening and improvement of the interventions programs on reducing injecting drug use and HIV vulnerability in Nepal.

Specific objectives:

1. To describe and analyze the situation of HIV/AIDS in Nepal
2. To identify the groups at-risk behaviors to HIV infection in Nepal
3. To identify the factors of vulnerability of injecting drug users for acquiring HIV in Nepal
4. To review international literature for best practices on injecting drug use and HIV/AIDS
5. To examine what already exists in the country strategies and the best practices on injecting drug use in Nepal
6. To formulate recommendations to the Government, NGOs, INGOs and private sectors for strengthening and improvement on policy making, planning and providing services in order to reduce injecting drug use and HIV vulnerability in Nepal

2.3 Study questions

In this thesis, I will try to answer the following questions:

1. Who are at most risk groups to HIV in Nepal?
2. What is the situation of injecting drug use in Nepal?
3. How has the injecting drug use increase the HIV epidemic in Nepal?
4. What are the interventions that can be strengthened and improved on injecting drug use and HIV/AIDS in Nepal?

5. What actions can (Government, NGO, INGOs, and Private sectors) take to address this problem and to achieve effective responses in Nepal?

2.4 Methodology

Search strategy:

This thesis has had heavily relying on analyzing existing literature review and secondary data. Literatures with various national and international sources: scientific journals, electronic journals, articles, reports, conferences abstracts, books, website literatures, published and unpublished documents and findings etc. were used to do this review. Search was done through various data bases and search engines: Pubmed, WHO, UNAIDS, USAIDS, Google, UNDP, UNODC, UNGASS, FHI, World Bank, UNICEF, DFID, UNESCO, MOH Nepal/NCASC, Nepal Demographic Health Survey, Cochrane central register of controlled trial, Asian Harm Reduction Network, Asian Harm Reduction Network and New Era Nepal website. Literature search were also done at the Royal Tropical Institute (KIT) and Vrije Universiteit (VU) Amsterdam library. Reviewed some reports by email communication with the key informants was also done.

Key words:

HIV/AIDS, HIV prevalence, HIV vulnerability, Injecting drug users, injection, substance use, needle sharing, needle exchange, drug use, reasons for drug use, drug user (s), risky behavior and HIV/AIDS, risk reduction, harm reduction, drug control, drug policy, substance misuse, sex workers, labor migrants, ARV, children, Nepal.

2.5 Limitations of the study methodology

This thesis is not meant to be a representative profile of injecting drug users. It is limited to injecting drug use and HIV vulnerability in Nepal. Almost all of IDUs Nepal literature is not available on internet website, in spite of exhaustive search, there could have been missing some key articles, studies and information. Some information collected from regional and some selected Districts of Nepal e.g. Opioid substitution therapy (Buprenorphine, Methadone) in Kathmandu, rehabilitation and care services to IDUs in some places might not be representative of Nepal as a whole. However, this thesis has tried to access most of the documents related to this issue: at most high-risk and vulnerable groups to HIV/AIDS, found out what may be the factors to the spread of HIV/AIDS among injecting drug users, national and international best practices to prevent HIV/AIDS in IDUs and look at the international literatures which helps to understand the situation of injecting drug use and HIV/AIDS.

Chapter 3: High risk behaviors and vulnerability to HIV in Nepal

The evolution of HIV epidemic normally starts to grow from embryonic epidemic, to a concentrated and later generalized epidemic but the concept is not true for all countries (Brown and Peerapatanapokin, 2004). Asian HIV epidemics all follow the similar patterns. Figure 3.1 shows new infection of HIV strongly focused in a few behaviorally linked at-risk people particularly

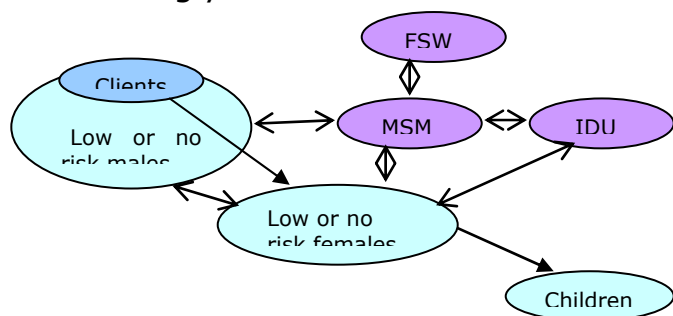


Figure 3.1: A possible way of spreading HIV infection between groups' high-risk behaviours in the general population
Source: Adapted source: Brown T et al, 2004

vulnerable to HIV such as: injecting drug users (IDUs), clients of female sex workers (FSWs), FSWs, and Men who have sex with men (MSM). HIV infection then spread from these groups to their lower-risk partners (males or females) through sexual contact or injection route. From low risk groups HIV could transmit to their children. The number of

new infection and the transmission of HIV from infected to the uninfected clients determine by frequency of sex or injecting acts.

Nepal is currently experiencing concentrated epidemic where the HIV prevalence is more than 5% at most-risk groups and below 1% in general population (NCASC, 2007a). The prevalence remains above 1.5% in female sex workers (FSW) and their clients, IDUs, male sex workers (MSW), male who have sex with male (MSM) and returning migrants (UNGASS, 2008).

3.1 HIV among most at risk populations (MARP) in Nepal

Total population ¹	28.9 million
Estimated of adults and children living with HIV/AIDS ²	70,000 (41,000-180,000)
Adult HIV prevalence ³	0.49%
Injecting drug users (total) ¹	34%
•Kathmandu ³	34%
•Eastern Terai ⁴	17%
•Western to Far-western Terai region ⁴	11%
•Pokhara ³	8.7%
•Female Sex Workers (FSW) ³	1.4%
• Clients of FSWs ³	1%
• male Sex workers (MSW) ³	2.9%
Men who have sex with men (MSM) ¹	3.3% (Urban based)
Labor migrants ³	1.9%

Table 3.1: HIV/AIDS Epidemiological Situation in 2006-07
Source: ¹USAID 2008, ²NCASC 2007, ³UNGASS 2008, ⁴FHI 2007

Most at risk Populations (MARPs) group with identified risky behaviors contributing to high transmission of HIV (NCSAC, 2007b). IDUs, men who have sex with men (MSM), male sex workers (MSW), female sex workers (FSW), migrants and their spouses are known as MARPs group to HIV in Nepal. The epidemic of HIV and AIDS in Nepal is fueled by MARPs.

Table 3.1 shows the HIV prevalence among most at-

risk population in 2006-2007. Kathmandu holds the largest urban conglomeration and a big city where the IDUs are higher in number than in other cities in Nepal. This may be the cause of high HIV prevalence among IDUs in Kathmandu than in other parts of the country.

Injecting Drug Users (IDUs)

IDUs in young people are growing in Nepal. Almost half of the IDUs were between the ages of 16-25 years. HIV infection could be spread as the mounting number of IDUs (FHI, 2008). Many IDUs know about HIV/AIDS and its preventive measures. So far, even with this knowledge, their injection practice and sexual behavior put them highly susceptible to HIV (further in detail explained in chapter four).

Men having sex with men (MSM)

In Nepal, MSM community dynamics and risky behaviors are similar to that of neighboring south Asian countries (FHI, 2008). National estimated number of MSM in Nepal is 135, 000 and 5,000-15,000 MSM clustered in Kathmandu (UNGASS and FHI, 2008). In 2004, 3% of MSM reported IDUs in the past year (Map Report, 2005b). MSMs have sex in hidden places where no condom is available and they are likely to go unprotected sex. Many of them are married. There is higher chance of transmission of HIV from infected MSM to their spouses (Pant SB, 2004). According to IBBS 2006-07 reports, the prevalence of HIV among urban based MSM was 3.3% (USAID, 2008).

Male sex workers (MSW)

Studies in male-male sex and HIV/AIDS in Asian countries revealed that male sex workers reported higher number of partners than MSM and the effect is often higher rates of HIV infection. In Nepal, about 65% of MSW were infected with at least one sexual transmitted infection (STI) including HIV compared to 21% of MSM (Map Report, 2005b). HIV epidemics driven by male-male sex and by drug injection overlap. MSWs, who are IDUs, sell sex to men or women for drugs and money. Although accurate data on MSW in Nepal is not available, a national estimation of MSW including MSM is accounted for 64,000 to 193,000 (The World Bank, 2008b). Prevalence of HIV among MSW in Nepal was 2.9% in 2006-07 (UNGASS, 2008).

Female sex worker (FSW)

Many FSWs in Nepal are regular alcohol drinkers, a few are IDUs and moderately literate (FHI, 2008). Estimated FSWs in Nepal is to be 12,000-16,000. FSWs reported that their clients sometimes refuse to use condoms. Majority of the clients are married and some are IDUs. Five out of six clients

do not use condoms with their wives. The chances of passing HIV virus from FSW to these men and their partners are high. There is no study on how many men are clients of FSWs. The indirect national estimation range is to be 300,000-700,000. The virus also could be transmitted from infected clients to the FSWs or sharing contaminated injecting equipment among the FSWs who are IDUs (USAID, 2008). The recent HIV prevalence among FSWs is 1.4% in 2006-07 (UNGASS, 2008).

Labor Migrants

Actually migration and mobility are not direct risk for HIV but it creates the conditions that can increase people's vulnerability to HIV (UNGASS, 2008). HIV transmission mostly occurs in this group through commercial sex. Some labor migrants are also involved in sex trade especially in India. Also, some migrants could be IDUs but research studies not reveal the data yet. IBBS report shows that about 27% of migrants are engaging in high risk sexual behaviors in India. Condom use by this group found inconsistent with FSWs, with their wives and sex partners. According to MOH/Nepal, the estimated numbers of labor migrants are 600,000-1,000,000 (FHI, 2008). About 8% of male labor migrants returning from Mumbai in Accham District were HIV positive compared to less than 1% for men who had not migrated. A community based study shows that prevalence of HIV is associated with the duration of migration and dates of return (Nepal B, 2007). The HIV infection found higher who returned home after five years (20.7% out of 29 men in Doti District) compared to the returnees migrants within short duration.

3.2 Other at risk population (ARP) to HIV in Nepal

At risk populations (ARPs) group with certain risky behaviors is the most likely group to contribute to the transmission of HIV (NCSAC, 2007b). Trafficked girls, youth and street children are ARP group to HIV in Nepal.

Trafficking¹ and sex works have been major issues in Nepal. Nearly 10,000 Nepalese girls trafficked each year to Indian brothels for commercial sex. Besides, another 6,000 Nepalese girls were trafficked to Hong Kong, Thailand and the other South East Asian Countries (Prasai SB, 2008). Some trafficked girls also involve in using drug injection but the evidence is still unknown. Every year 'Maiti Nepal' (NGO) rescues approximately 60 girls and women from India, among them 30-60% are HIV infected. Young women and girls are at more risk of HIV infection since they are more biologically susceptible

¹Trafficking: Selling young women and girls brothel through promises of job, false marriage, false love for the purpose of commercial sex

(WATCH Nepal, 2008). Moreover, gender-based violence and cultural norms reduce their access to safer sex and receiving HIV/AIDS treatment and counseling services.

Lack of access of treatment and care service, knowledge and misconception of transmission of virus put young people at risk to HIV (Giri R, 2008). Although HIV prevalence among the street children of Nepal is unknown, they are more involved in risky behavior than other children of similar age (Gurung G, 2004). Some street children are also IDUs and having multi sexual partners. Lack of knowledge on transmission of virus and risky behaviors are the major risk factors for getting HIV in this group (UNICEF, 2006b).

Discussion

As it was mentioned above, vulnerable groups' have a skewed risk behaviors lead to increase in HIV infection. However, in terms of number of the range of information and certain regional studies, we can not generalize the findings for the whole country's situation. For instance, HIV prevalence is high among migrants in Nepal (Nepal B, 2007) because; the sample was small and has taken only in selected Districts from far-Western region. Government, national and international agencies who are working for HIV/AIDS related research and interventions in Nepal should these phenomena into consideration.

Chapter 4: Injecting Drug Use in Nepal

4.1 Overview problem of injecting drug use (IDU)

IDU has been a cause of concern in developing and transitional countries² since its contribution to HIV epidemic (McCoy and Rodríguez, 2005). IDU prevalence is rising worldwide. Globally a total estimated number of IDUs was 13.2 million (range 7.8-18.6 million) in 2005. Moreover, nowadays the large number of non-IDUs is more prone to become IDUs (UNODC, 2005). The prevalence of IDUs varies according to the regional, countries and territories. The estimated number of IDUs in South-East Asia is 3.3 million, 2.3 million in East Asia and Pacific and nearly 3.2 million in Eastern Europe and Central Asia until 2004. Caribbean and Sub-Saharan Africa have the lowest prevalence of IDUs compared to other regions (Aceijas et al, 2004). The current scale of injecting drug use creates a potentially enormous group of vulnerable for the further spread of HIV (UNAIDS, 2007a).

Initially, use of drugs in Nepal was limited on domestic productions (cannabis) and later heroin (brown sugar) introduced as other cheaper substitute drugs. Use of these drugs in Nepal is slowly increasing and the spreading from larger cities into the rural and border areas (Pokhrel et al, 2001). Tidigesic (Buprenorphine), Nitrazepam, Phensidyl, Marijuana, Heroin and Hashish drugs are currently being used in Nepal. IDUs first trail use of drugs as smoking (ganja and charas)³ and non-injecting drugs to injection (CREHPA, 2002). At the injecting stage, IDUs took tidigesic, brown sugar or white sugar⁴. Tidigesic has become the most common drug for IDUs in Kathmandu valley because brown sugar is expensive and rarely available.

According to Pokhrel et al 2001, numbers of female drug users turn to commercial sex work and some of them are forced by their spouse to do it. Moreover, the serious aspect of IDUs' in relation to HIV is linked to street children who are working as "go-getter"⁵ between drug dealers and IDUs. As a result, they may turn to use of injecting drugs. From UNICEF report, more than 13,000 children become orphaned by HIV/AIDS (USAID, 2008).

²The term 'transition country' applies to countries moving from planned to market economies, in Europe and in Asia. In education they are broadly characterized by the need to combat the tendency to decline (UNESCO, 2003)

³Ganja is a dried marijuana plants and Charas is concentrated resin

⁴Brown sugar is unrefined heroin from impurities and adulterants. Street heroin is usually brown and injection is the most efficient way to administer low-purity heroin. White heroin is more refined/pure heroin powder. Pure heroin is usually white and expensive.

⁵"Go-getters": People are compensated in the form of drugs as remuneration

4.2 Demographic and social characteristics of IDUs in Nepal

The social and demographic characteristics of IDUs are varies in Nepal. Such information could not be available in other parts than the Terai region, East-West highway and Kathmandu (FHI, 2004a).

Age

The mean age of IDUs varies between locations and time. According to FHI (2007) IBBS report has shown that starting injecting drugs at young age (below 20 years) in Kathmandu was 56%, 33% in Western and Far Western (WFW) region, 61% in Pokhara, and 13% were reported in Eastern Terai. IDUs in Nepal are usually young men in their 20 years old. Nearly half of female IDUs started injecting drugs before age 20 and have been using injecting for just over a year (FHI, 2008).

Gender

Almost 95% of IDUs in Nepal are male (Alban and Manuel, 2007). The key stakeholders of all sites mentioned that female drug users used tablets, cough syrups and other non-injecting drugs rather than injecting.

Education

Most male IDUs are literate in Nepal (FHI, 2008). The percentage of illiterate IDUs in eastern Nepal was 2% in 2007. In Pokhara, 5% of IDUs were illiterate and about 25.7% of IDUs received SLC or higher level of education (Gautam/FHI Nepal, personal communication). Similarly, 74% of IDUs in Kathmandu had SLC or higher level of education in 2007. The report showed that most of IDUs in such places are educated.

Marital Status

Most of IDUs in Nepal are married (FHI, 2008). The marital status among IDUs is varies in places. The recent FHI IBBS-2007 report show that more than half of the IDUs in WFW region, 45% in eastern Terai, 24% in Kathmandu and 29% in Pokhara are ever married. In some places, incidence of HIV found to be higher among the older IDUs and among formally married IDUs than those who never married or currently married (Gautam/FHI Nepal, personal communication).

Occupation

In the present study, occupation means as profession, trade or any other works from which IDUs earn money. Although such information could not be available, various studies show that most of the IDUs were unemployed. Study conducted in Kathmandu valley in 2002, most of IDUs were jobless and some of them were tourist guides, students, office worker, bus conductor, bus ticket sellers and very few of them were in business, hotel owner, gold smith, horse rider, laborer and painter (CREHPA, 2002).

4.3 HIV among injecting drug users

The prevalence of HIV among IDUs is above as 5% in Nepal (FHI, 2008). The national estimated HIV prevalence among IDUs was (only IDUs) 34% in 2007 (UNGASS, 2008). Figure 4.4 shows the prevalence of HIV among IDUs in Nepal (2002 – 2007). In Kathmandu, it was 68% in 2003 but it is reduced from 52% in 2005 to 34% in 2007. In Pokhara, HIV prevalence among IDU remained the same (22%) in 2002 to 2005 and decrease to 8.7% in 2007. Likewise, the prevalence rate reduced from 32% in 2005 to 11% in 2007 in Eastern Terai but in West and Far West Terai remained almost the same.

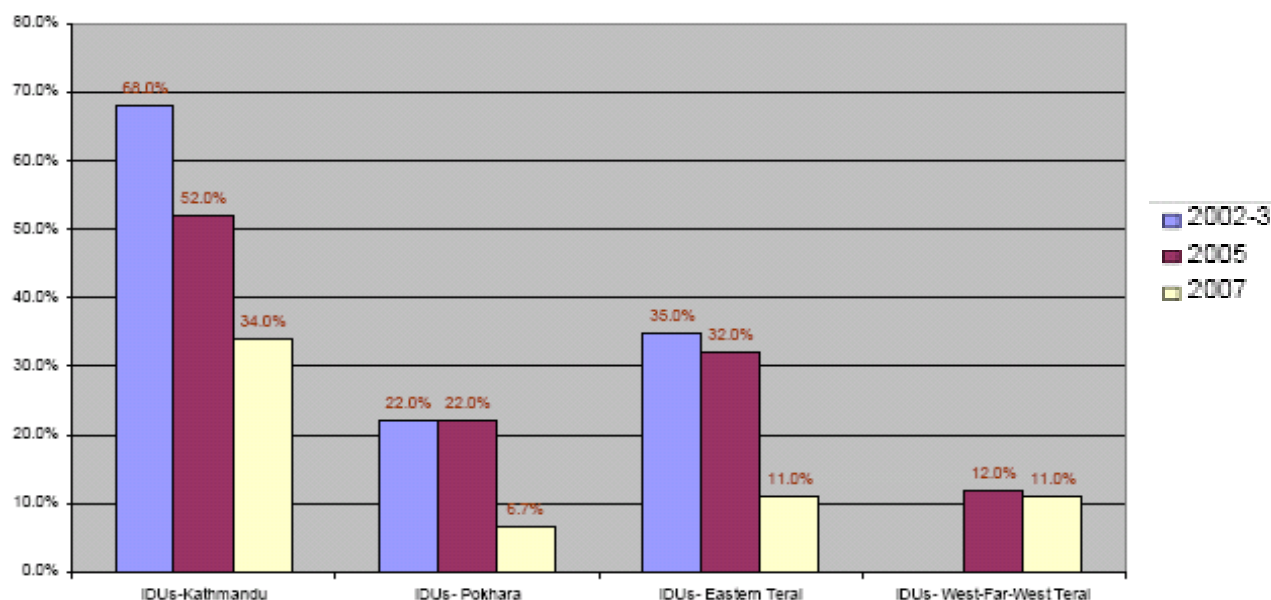


Figure 4.4: HIV prevalence among IDUs in Nepal (2002 – 2007)
Source: UNGASS, 2008

The decline in prevalence in certain places to some extent could be due to improving behavioral indicators measured by successive IBBS and increasing evidence based interventions for IDUs. Other reasons could be effective coverage of form of information, education and awareness services to IDUs through outreach, public drop-in centers or counseling in which will reduced risk behaviors among these groups. Increasing availability and utilization of various prevention and harm reduction services to IDUs in certain places also has positive impact in dropping HIV infection rate. Because of social and cultural constraints females IDUs in Nepal are not come over IDUs network. In the surveillance, not all of female IDUs are covered therefore the result could be an underestimation. However, this is not being the only reason in lessening HIV prevalence. The success in reducing HIV infection will need continued operational interventions.

4.4 Injecting drug use and HIV vulnerability

4.4.1 Reasons for injecting drug use

To explain how and why people take drugs out of medical consultation is not

an easy task. Mental, emotional and psychological conditions of individuals also are the reasons behind the problem of use of drugs. In addition, different age groups of people induced drugs due to availability and increase dependency on pharmaceutical drugs (Lines P, 2008). Especially, for the children who grow up in an environment of illegal drug use and parents using drugs also may put them at risk for developing dependence. Generally people take drugs to make themselves feel good and some people who suffer from anxiety and stress related disorders begin using drugs to feel better (NIDA, 2007). Some individual believe that using drugs improves their athletic or cognitive performance. In this respect adolescents are particularly influenced by peer pressure and curiosity (Kermode M, 2007).

Mostly IDUs in Nepal started non-injecting drugs before initiation of injecting (FHI, 2004a). According to the study in Kathmandu valley, peer group pressure is the main reason for initiating drug use. They feared of avoiding or isolating by their friends if did not take drugs (CREHPA, 2002). Also, some IDUs reported that they started injecting drugs after conflicts with their family and some of them considered that taking drugs as 'heroic'. Some of the IDUs had desire to be same as their friends who injected and some were recommended by their friends to try injecting. Study among IDUs in Dharan showed that enticement by peer pressure, curiosity, together with unemployment, love tragedy are the main causes of using injecting drugs (FHI, 2004a). These reasons not robust to explain why children of rich families also get involved in injecting drugs. For them the reasons could be lack of awareness of family members, love tragedies, peer pressure, lack of parental guidance and negligence.

4.4.2 Factors responsible for IDUs Vulnerability to HIV

According to WHO (2005a), vulnerability to HIV among IDUs is governed by

Box 1: Key determinants of vulnerability to HIV infection among IDUs

1. Micro-environment

- Perceived social and behavioral norms among IDUs
- Nature and structure of social relationships among IDU networks
- Social and physical settings in which drugs are used
- Local neighborhood and context in which IDUs live

3. Structural determinants

- Cultural, social and political constraints on effective responses
- Economic systems that deprive some people of meaningful employment opportunities
- Police harassment and laws establishing the mandatory reporting and incarceration of drug users
- Unintended and adverse effects of drug policy
- Ignorance of the existence or extent of the epidemic
- Prejudice against people engaged in illegal drug use

2. Macro-environment

- Policy and legal contexts of drug use and its risk management
- Economic, gender and ethnic inequalities
- Cultural and religious norm

4. Individual and peer group determinants

- Individual and group attitudes, practices and knowledge
- Vulnerability to participate in unsafe injecting practices that increase the risk of HIV infection
- Lack of concern about risks

Source: WHO, 2005a

not only the individual's behavior but also a complex of factors such as micro and macro environment, individual and peer group determinants and socio-structural determinants which have shown in box 1.

4.4.2.1 Micro-environment

The environments in which the IDUs spend their time influence their vulnerability to HIV (WHO, 2005a). Most of the communities often react negatively about IDUs. The Community fears that IDU will increase crime and their young population may start to use illegal drugs (WHO, 2005b). Transmission of HIV among IDUs occurs mainly through use of HIV-infected blood contaminated injection equipment (Jeffrey HB, 1998). HIV transmission is also determined by behavioral characteristics e.g. storing injection paraphernalia and other licking and re-using it.

From the UNGASS report (2008), HIV prevalence among IDUs in Nepal is high in big cities and towns such as Capital city, Pokhara, Dharan and larger towns in Eastern and Far West Terai regions. Most of the IDUs live in these areas. Mostly female IDUs in Nepal are often hidden in IDUs network (FHI, 2008). Male IDUs somehow interact with each other through visiting and participating in regular groups activities (CREHPA, 2002). Needle sharing found common in these groups in Kathmandu valley. Majority of the IDUs inject themselves in an open ground or go to isolated places (jungle, bushes, field, public toilet, street and room or toilet of their own house) away from people and home due to fear of exploiting from the society and families (Gautam/FHI Nepal, personal communication). There may chance of getting HIV by using contaminated injecting equipment in these types of social and physical settings. Negative perception of society about IDUs and the local context in which IDUs live may force them to get involved in high risk behavior.

4.4.2.2 Macro-environment

The macro environment governs the nature of the day-to-day situation of IDUs (WHO, 2005a). The legal, social context limits efforts to educate IDUs about HIV and its prevention. Legal barriers and lack of supportive policies make IDUs difficult to reach. Because of the issues of human rights and the lack of laws against possession and use of needles and syringes, IDUs confine reusing injection equipment, increasing their risk of infection with HIV (UNAIDS, 2007b).

Policy makers and other law enforcement officers assume an important role in reducing risk behavior and HIV prevention. Economic and social pressures make IDUs more across borders. This makes it difficult to establish communication networks with them which are necessary for service delivery in Nepal. Drug related policy, the Narcotic drugs (control) act, 1976) states

that “a person convicted of transacting more than 100 grams of opium poppy shall be punished with 15 years to life imprisonment and with a fine between US\$ 7,500 to US\$ 37,000”(UNAIDS, 2000). This was a result of amendment in 1993. IDUs are not able to receive continuous support services and non-government organizations always not able to deliver intervention packages due to unclear policy guidelines and limitation of resources (Pokhrel et al, 2001). As WHO (2005a) mentioned gender, ethnic inequalities, culture and religious norm also determine IDUs vulnerability to HIV. These determinants are not yet clearly specified in Nepal. Extensive manifestation of IDU cuts across the barriers of class, community, sex and age (Gautam/FHI Nepal, personal communication).

4.4.2.3 Structural determinants

Social and political constraints predict risky injection practices. Injection risk behavior may be linked to lack of resources to procure drugs, inadequate needles and syringes and community level interventions (WHO, 2005).

Social stigma and discrimination is one of the barriers for scaling up of the services for certain groups including IDUs in Nepal (UNAIDS, 2006b). Many IDUs are at a risk of contracting HIV due to negative perception of society towards IDUs which prevents them from accessing HIV/AIDS services, disclosing their HIV status and receiving treatment and counseling services. Lack of political will also a major problem in addressing HIV/AIDS among IDUs (UNAIDS, 2000). Nepal has limited drug policy and weak legal framework to handle drug related matters. There is no specific course of action and mandatory reporting. Polices treat IDUs as a criminals and they just send to the prison. People in prison are also more likely to have HIV infection as the result of risky behaviors occurring inside jails. Unfortunately the evidence of HIV infection among imprison IDUs in Nepal is not available.

Majority of drugs used and purchased are from India. Often, injecting drugs are not easily available in Nepal but IDUs can have easy access to drugs on Indian border sites. Drug trafficking is happening in those areas due to the open border. Use of illegal drugs and risky behaviors are high among IDUs in those areas (Rana and Rai, 2001).

4.4.2.4 Individual and peer group determinants

Individual and peer group vulnerability to HIV among IDUs depends on individual and group attitude, shared behavior, knowledge and unsafe injecting practices (WHO, 2005a). These determinants result from complex influences and pressures acting on the individual from various social levels and sectors.

Knowledge among IDUs in relation to HIV transmission

Knowledge about HIV requires the skills that motivate individual for adopting safe behavior related to drug use and HIV prevention among IDUs (WHO, 2005a). In Nepal, drug injectors get HIV infection due to misconceptions about transmission and lack of knowledge on how to prevent HIV or negligence and continued unsafe practices. Most of the IDUs did not seem to be thinking of the possibility that they themselves would transmit infections to their partners (CREHPA, 2002). Some of the IDUs had knowledge of ABC (Abstinence, Be faithful and Condom use). According to 2007 IBBS report in Eastern Terai region, WFW region, Kathmandu and Pokhara show that few IDUs believed they could protect themselves against HIV if they switch from injecting to non-injecting drugs (Gautam/FHI Nepal, personal communication). Such knowledge is normally not reducing HIV infection among IDUs.

Injecting behavior

Use of drugs through injection with contaminated needles and syringes is an efficient means of transmission of virus into the blood stream than occurs through sexual intercourse. IDU plays a main role in shaping how and when the HIV epidemic starts to grow up. Internationally 5%-10% of HIV infections are attributed to injecting drug use (UNAIDS, 2007b).

Sharing needles and syringes

HIV can pass directly into the blood stream through needles and syringes. Sharing injecting equipment has highly efficient way of transmitting HIV into body tissue (MAP Report, 2005). Injection sharing behavior is one of the main reasons why HIV spread so quickly among IDUs. Another reason is high amount of virus are present in an individual's blood, called high viraemia. High viraemia develops soon after person infected with virus. The body produces antibodies suppress the multiplication of virus partially. Initially person may not shows signs of infection and HIV test could be negative. When person have high viraemia, there is great chance to transmit new HIV virus to non-infected people. Sharing needle and syringes have strong association to expose to virus. Thus, still a small number of unsafe injecting incidents can spread HIV transmission quickly in IDUs population.

Sharing injecting equipments include borrowing and lending, selling, buying and renting or using discarded syringes by previous users. This type of practices is often a consequence of a lack of accessibility of new needle and syringes due to no money, familial, social or legal concern and low perceived risk for HIV infection. Another reason for transmission of virus is some of the professional injectors who sell the drugs and use the same syringe and needle for many clients. In 2005, almost 67% of the HIV/AIDS prevalence in Eastern Europe and central Asia accounted for the use of non-sterile injecting equipments (WHO, 2007b).

About 22% of IDUs in Nepal said that they shared injecting equipments with others (Map Report, 2005). In IBBS report 2007, many IDUs had their own injecting group with 2-10 members. Indeed, some members of the groups interact with other members of the groups to share drugs, needle/syringe and money (Gautam/FHI Nepal, personal communication). IDUs ignore about risks of sharing injection mainly when they are sick or no money to buy drugs or syringe. Many IDUs reported that they choose the isolate place for injection. Generally injectors not think they are 'sharing' when inject in a hidden public places. Sharing injecting equipment has important implications for HIV prevention efforts.

Frequency/duration of injection

IDUs have a high risk personal network to get HIV infection. It is defined as having sex or using drugs with someone who injects greater than once daily and the manner in which they share injecting equipment, all influence to HIV risk (Jeffrey HB, 1998).

Figure 4.5 shows, likelihood of being infected with HIV in fact rises proportionally to the years of injecting drugs. IDUs who were injecting drugs longer than 5 years more HIV infected than people who had injecting for one year or less in both sexes. Male IDUs have significantly higher risk of getting HIV infection than females IDUs in Nepal. More than 1/3rd male IDUs infected during first year duration of injection, 68% in 2-5 years and 81% after 5 years. In the other hand, for females infection rate was 24% and 50% during 2-5 and more than 5 years of duration respectively. Indeed, this is high HIV infection rate which has significant implication for intervention.

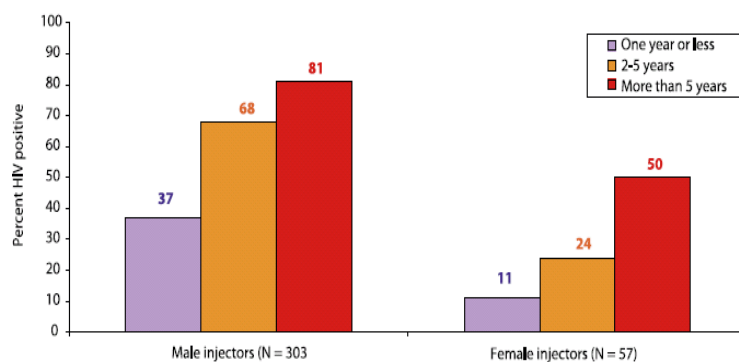


Figure 4.5 Percentage infected with HIV by duration of Injection and by gender, Kathmandu Valley, Nepal, 2003
Source: Map report, 2005

Majority of IDUs in Nepal inject drugs 2-3 times a day (FHI, 2008). The duration of injecting drugs is varies from less than one year to more than five years. HIV prevalence was higher in Eastern region of Nepal (55.1% in 2004 for those who has been injecting for more than 5 years) (Gautam/FHI Nepal, personal communication).

Also, duration of injecting drugs among IDUs is high in WFW Terai (5.5 years) and in Kathmandu (6 years) in 2007.

Needle and syringe cleaning practices

Another pattern of behavior among IDUs putting them at a greater risk of contracting HIV is improper method of cleaning of shared or re-used

needles/syringes (FHI, 2004b). IDUs use several techniques for cleaning the needle/syringe.

The needle/syringes cleaning practices among IDUs in Nepal observed improper to avoid the risks of transmission of HIV. Some of the IDUs clean syringes with water collected in plastic bags, drinking glasses, bottle lids and/or cover and to spit collected on palm, hand or tongue (FHI, 2002). Few IDUs use urine in the palm or plastic bags to clean syringe, and some use distilled water; bleach powder, burning needle with matchstick and boiling syringe in water. Moreover, it was found that spit, water, napkin paper, tissue paper, bleach, distilled water, dew (cold drink) and drugs itself used for cleaning the injecting equipments (FHI, 2004c). Such practices do not protect injectors from infecting with virus.

Sexual behavior

It was believed that drugs injectors are unlikely to be very sexually active but data collected in many Asian countries showed that some IDUs are more sexually active than other population groups (Map Report, 2005a). And some IDUs involve in commercial sex in buy and sex. HIV can spread out more widely through sexual networks among the IDUs.

IDUs buying and selling Sex

Most of sex among IDUs is commercial. IDUs have more at risk for acquisition of HIV in case of having unprotected sex. Some IDUs who are also sex workers (Map Report, 2005a). IDUs can acquire the virus as sex buyers from infected sex workers or female IDUs can get HIV infection who sells sex to infected male clients and/or having unprotected sex within IDUs partners, who are infected (UNAIDS, 2008a). The Map report (2005) revealed that almost all over, the population of FSWs is much bigger than female IDUs. The proportion of injecting drugs in FSWs is low but selling sex among female IDUs is usually very high.

In 1999, there was higher proportion (3/4th) of HIV infection among women in Nepal when they were both a sex worker and an IDU (Jenkins C, 2001). FSWs who are not IDUs but their partners do inject, are also at highest risk to HIV through having unprotected sexual relation. Males IDUs are also exchanged sex for money or drugs with females. Some of them think that they have little risk for HIV because they are not 'gay' or 'MSM'. In fact, risk for HIV does not consider itself for FSWs, MSWs or homosexuals. IDUs in Nepal have high prevalence of sex before marriage compared to non-IDUs (Gautam/FHI Nepal, personal communication). In 2007, 28% of IDUs in Eastern region reported that they had sex with sex workers and non-regular sex partners in the last 12 months. Moreover, some of the female IDUs were sex workers. Some female IDUs in Pokhara and Kathmandu reported they had unprotected sex with male IDUs and also with others.

Number of sexual partners

One's probability of contacting an HIV-infected injection/sexual partner or the risk behaviors of injection and sexual partners is an important predictor of HIV infection (Jeffrey HB, 1998). In Nepal, 2/3rd of unmarried male IDUs have multiple sex partners such as FSWs, girl friend, female IDUs, wife of migrant worker and foreign tourists (FHI, 2008). The majority of IDUs in Pokhara reported that they had indulged in group sex with FSWs and they rarely use condoms (FHI, 2004c). If one of the IDUs or FSW or sexual partners is infected with HIV then HIV will spread to the general population by following the similar pattern as Brown et al (2004) Asian epidemic model.

Condom use

Condom use prevents the transmission of HIV through sexual intercourse (Jeffrey HB, 1998). According to FHI (2004b) report, most of the IDUs in Nepal knew about places where they could find condoms and condom use prevents HIV. The consistent condom use has decreased with regular sex partners (9%), non-regular partners (33%) and with sex workers (57%) in Eastern region in 2007 compared to previous years (Gautam/FHI Nepal, personal communication). The reasons for not using condoms by IDUs and other population groups are: not feel enjoy, lack of money, have sex without planning, no condom available, lack of opportunity to buy or being on a drug trip, their girl friends or partners did not have sex with others or they use other contraceptive methods are the main reasons for not using condoms. These behaviors of IDUs put them at risk to get and spread HIV infection through sexual network.

In the context of Nepal's HIV prevalence among IDUs, all these factors are interrelated. Those factors are powerful enough to spread HIV infection in the IDUs population. It is important to be considered while planning interventions and making policy concerning it for successful prevention of HIV/AIDS. Therefore, it needs to be realizing the fact of growing IDUs and increasing HIV infection in this group.

Chapter 5: Review on international best practice in HIV prevention and care of injecting drug users

This chapter tries to explain a literature review on the international best practices on policy to prevent and control HIV/AIDS among IDUs and harm reduction interventions on drugs injecting.

5.1 Policy to prevent and control HIV infection among IDUs

The option of reducing HIV/AIDS among IDUs is not consistently available in every country such as Nepal, Pakistan, Bangladesh etc. (UNAIDS, 2008b). For example, there is no harm reduction service with drug substitution and needle/syringe exchange programs in Pakistan but the prevalence of HIV infection is consistently high among IDUs (Asian Harm Reduction Network-AHRN, 2008). Bangladesh also has not policy for harm reduction. Vietnam operated AHRN officially since April 2007. Some of the countries have used comprehensive and multi-sectoral HIV prevention efforts.

Changes in laws and in the practices of public security

Some of the laws in countries that have been made to stop or reduce use of illegal drugs and to prevent HIV/AIDS are not really supportive for IDUs. IDUs share syringes among the injecting group because they can't purchase new ones due to fear of arrest. Some of the countries' law works against the harm reduction strategy. Developing good policy requires preventing illegal drug use, reducing the spread of HIV/AIDS and negotiation between public health and law enforcement (WHO, 2005a).

Australia – review of legal and regulatory frameworks is a good example. The Australian national HIV/AIDS strategy made recommendations covering multiple aspects of legal and regulatory response to HIV/AIDS including legislative reform according to the need (WHO, 2005a). The strategy recommendations are mainly based on the report of a panel on discrimination and other legal issues of public considerations.

National and political support

The HIV prevention policies need to be protected from alongside changes of government. All political parties are to be ensured to support for HIV policies. It needs to be declared that the HIV emergency should be free from politics and by setting up a parliamentary group with membership from all political parties (WHO, 2005a). The national and provincial governments have to establish and implement the HIV policies response.

For instance: *Australia – a multisectoral, nonpartisan approach.* After detection of the first AIDS cases in 1983 in Australia, the federal Health Minister led the development of a national response. The response was

guided by an AIDS task force providing medical advice and a national advisory council broadly representative of community interests and all major political parties (WHO, 2005a). The first national AIDS strategy was released in 1989. The strategy had tripartite involvement of government and bureaucracy, the medical and scientific professions and the most affected community groups (MSM, sex workers and IDUs). The early Australian response to AIDS was nonpartisan, revolutionary and comprehensive.

5.2 International best practices on harm reduction Interventions

Harm reduction (HR) is an implementing evidence based public health interventions to reduce the negative consequences associated with the sharing of contaminated needles and syringes and to prevent risk of acquiring HIV/AIDS (WHO, 2005b). HR strategy does not work only with abstinence for reducing drug related harm but also gives priority to the more urgent and practical purpose of HR for drug users. People with injecting drugs related problems are ill; they need treatment rather than physical harassment and punishments (Kongsakon and Pocham, 2006). Box 4 shows the World health organization (WHO), along with United Nations office on Drugs and crime (UNODC) and Joint United Nations Program on HIV/AIDS (UNAIDS) on HR has recommended nine comprehensive packages of services in outreach to IDUs and their injecting or sex partners. Policy and programming on HR also includes prevention and care initiatives, work and supportive policies (Political, social), detoxification and rehabilitation, education etc (WHO, 2005b).

Box 2: Harm reduction comprehensive packages for effective prevention, treatment and care of HIV in IDUs

- Needle and syringe exchange programs (NSP)
- Opioid substitution therapy (OST)
- Voluntary HIV counseling and testing (VCT)
- Anti-retroviral therapy (ART)
- Prevention and treatment of STI prevention
- Condom programming for IDUs and partners
- Targeted information, education and communication (IEC) for IDUs and their sexual partners
- Hepatitis (A, B, C) diagnosis, treatment and vaccination
- TB prevention, diagnosis and treatment

Source: WHO, 2008

Mainline Foundation is initiating Asian Harm Reduction Network (AHRN) with support of the Dutch Ministry of Foreign Affairs (AHRN, 2008). AHRN implemented in Pakistan (Islamabad) as Nai Zindagi. In India (New Delhi) SHARAN is working for residential detoxification component and pioneering home-based detoxification and in Indonesia (East Kalimantan), LARAS is pioneering outreach services.

Needle and syringe exchange Programs (NEP)

Needle and syringe exchange programs (NEP) were established with the purpose of preventing the spread of HIV infection with the use of non-sterile, damaged and shared needle and syringes and reducing the other blood born

diseases (Drug Alliance Policy, 2006). Several countries with injection-driven HIV/AIDS epidemics continue to emphasize criminal enforcement of drug laws over public health approaches, thus, millions of IDUs do not have access to effective responses to HIV/AIDS due to legal and social barriers (Canadian HIV/AIDS legal Network, 2006). Globally 65 countries have implemented at least one needle/syringe exchange program, 10 countries have no such program and others are unknown (figure 5.2a/annex2) (UNAIDS, 2007b).

China and Vietnam started needle and syringe program to IDUs in Guangxi province, China and Vietnam's border areas in 2002 both countries' co-ordinated the program. The program showed a positive result that needles sharing reduced from 61% to 30% among all IDUs in Guangxi, China (Map Report, 2005). The easy accessibility of this program and other prevention services resulted into ready availability of needles and syringes, which drastically reduced the sharing of injecting equipment among IDUs in China. In the year 2002-2003, injection equipment sharing dropped from 30% to 17% in males IDUs and 24% to 15% in females IDUs.

In India, the provision of NEP was as a part of suboptimal public initiatives. NEP was operated in Kolkata. Pharmacies and friends were the major source of syringes acquisition. This study suggested that the cost of syringe was significantly higher in the region therefore all IDUs are not able to purchase needles and syringes. So, the coverage of the program was low at all populations and individuals' level. The effective NEP intervention is hindered by resource constraints, ambivalent policy positions, little attention to quality and environmental factors and is not adequately documented and evaluated (Panda and Sharma, 2006).

Opioid Substitution Therapy (OST)

Substitution maintenance therapy is one of the most effective treatment options for reducing high cost of opioid dependence to individuals, their families and the society at large by reducing heroin use, associated deaths, HIV risk behaviors and criminal activity (UNAIDS, 2008b). The program helps to reduce drug related harm. There are many countries in the world operating OST interventions (Methadone and Buprenorphine) which has shown in figure 5.2b/ annex 3.

For opioid maintenance treatment, sublingual Buprenorphine has been used in five cities in India; New Delhi, Chennai, Mumbai, Calcutta and Imphal. The program had demonstrated that sublingual Buprenorphine had a positive effect in reducing injection-related HIV risk behaviors among IDUs. In addition, the maintenance treatment was effective in decreasing criminal behavior and had improved psychological functioning of IDUs (Kumar S, 2001).

Voluntary HIV counseling and testing (VCT) services

HIV voluntary counseling and testing (VCT) services play a role in both HIV prevention and an entry point of care for people who are infected with HIV (UNAIDS, 2000b). Many countries have limited access to VCT services and have barriers to testing due to stigma. VCT is an effective intervention even in countries that do not have ART readily available (Strathdee SA, 2001).

In Jakarta, Indonesia, Kios Informasi Kesehatan Atma Jaya (KIOS) has been giving VCT services to IDUs in 28 sub Districts. The service designed that IDUs under 18 years of age need consent from their parents or relatives for the HIV test. Most of IDUs were aged between 16-28 years old. Since 2001 to until 2003 KIOS provided VCT to 195 clients (74% of HIV-positive). The VCT had limited services and young IDUs experienced difficulties with their families during the test (Haryanti and Pasaribu, 2004).

Anti-retroviral therapy (ART)

Health services including HIV treatment and care need to be integrated to support optimum care for HIV-positive IDUs with drug interactions and the benefit of harm reduction interventions. The policy brief reviews the evidence on ARV therapy to HIV- positive IDUs (UNAIDS, 2008b). The significant challenges, including low level of knowledge, misconception on treatment for IDUs, social, legal barriers and high public cost, make these services difficult for IDUs to access.

In Pakistan, free drug treatment, HAART (Highly Active Antiretroviral Therapy) or micro-credit intervention program called Nai Zindagi has operated at the micro level for HIV-positive drug users. Nai Zindagi is a network of drug treatment programs. This program also reduces the socio-economic vulnerabilities to HIV infection by creating job (making leather goods, furniture, rebuild vintage jeeps etc.) for active drug users. Many drug users either stopped or reduced their injection as a result of this program. It is a fabulous example of how to reduce the risk environment through interventions (Strathdee SA 2001 & AHRN 2008).

Prevention and treatment of Sexual transmitted infection (STI)

In many places it is considering as prevention of sexual transmission is not aimed at IDUs and IDUs do not have sex. Sex workers are one of the highest at risk groups of HIV transmission through sexual networks (WHO, 2005a). IDUs are vulnerable to HIV both through sharing needle and syringe as well as through unprotected sex.

In Imphal, India, Social Awareness Service Organization (SASO) has been working for the prevention of sexual transmission, early diagnosis and treatment of STIs for sexual partners of IDUs. SASO has also provided

counseling and HIV testing services to IDUs and their sexual partners (Map Report, 2005).

Condom programming

Condom promotion plays an important role for HIV prevention and it is an integral component of HIV reduction strategy, responsible for safer sexual behavior (UNAIDS, 2004).

China has provided condoms, sterile injecting equipments and STI diagnosis and treatment services together to IDUs in order to prevent transmission of HIV through sexual contact and injection in Southern China. The program was targeted for FSWs who are IDUs. The report demonstrated that using condoms among IDUs has increased (Map Report, 2005).

Targeted information, education and communication (IEC)

First of all, IDUs require information and the opportunity to learn how to prevent HIV transmission. Ensuring individuals are capable of acting to protect themselves and others are a key task (WHO, 2005b). In many countries, IDUs or ex-IDUs have formed their own peer education and support organization thereby IDUs can know the reality, context of drug use and its risk, and build trust based on the trustworthiness of personal experience.

Peer education program, in Dhaka Bangladesh, for example trained 40 peer outreach workers in different places where they promote injection safety among IDUs, offer health services, and give out needles/syringes and condoms. Additional (200) trained educators serve the information to the IDUs. Most of the IDUs participated actively in this program (WHO, 2005a).

The range and mix of other comprehensive packages to reach IDUs and their injecting or sex partners vary by country depending on epidemiology and socio-cultural context (UNAIDS, 2004).

Various international best practices and several countries' experience reports indicate that HIV transmission among IDUs can be prevented, reduced and even stopped. To successfully reach the target, there should be a positive response to policy agenda that give priority to the IDUs and HIV, and continuity of programs in the country. Those research findings have generated guidelines and policies for designing, reforming and implementing feasible, sustainable and effective interventions. Further spread of HIV infection among IDUs and transmission into other population can be prevented by intervening as early as possible and even after the HIV prevalence has increased.

Chapter 6: National responses to HIV/AIDS and Injecting Drug Use in Nepal

When the first AIDS case was diagnosed, the MOH and different stakeholders came forward to address HIV and AIDS issues in Nepal (NDHS, 2006). Representatives of nine formal and informal networks of PLHIV, sex workers, IDUs, MSM and NGOs in Nepal also participated actively in the development of strategies and reform policies such as National Strategic Plan, operational manual and guidelines (UNGASS, 2008). These networks are actively working as pressure groups to improve access to HIV prevention, care and treatment services and to advocate for the issue related to HIV/AIDS, human rights, gender and HIV related stigma.

Nepal government estimated that about US\$88 million is required for the national operational plan for 2003-2007. The recent annual budget plan indicates about US\$20 million, of which US\$5.5 million financing gap has been identified (The World Bank, 2008). The targeted intervention for most at risk populations is allocated 44% of the national HIV/AIDS budget (Guiding Principles for National HIV/AIDS Strategy 2006 – 2011 has shown in annex 4).

6.1 Interventions to HIV/AIDS and injecting drug use in Nepal

6.1.1 Government response

- Nepal government launched the first National AIDS Prevention and Control Program in 1988 and established a multi-sectoral National AIDS Coordination Committee (NACC) chaired by the MOH in 1992 which is responsible for reviewing and approving work plans and budgets. A national policy which was formulated in 1995 is mainly focused on preventive aspects and emphasizes the importance of multi-sector involvement and political commitment (NDHS 2006 & World Bank 2008).
- NCASC is the main government agency responsible for HIV/AIDS and STI (Sexually Transmitted Infection) control under the MOH. It is guiding a coordinated response to HIV/AIDS in Nepal with support and participation of various stakeholders including civil society, NGOs/INGOs, CBOs, UN agencies and international/external developmental partners (UNAIDS, 2006). NCASC has been working as the secretariat to the NACC and it has authority for technical review and advocating on policy and funds.
- Government National Strategic Plans (NSP) for HIV/AIDS was launched in 1997 and that plan supposed to be reviewed every 5 years till 2011 in Nepal. The recent five years plans (2007-2011) focus on universal access to HIV prevention, treatment and care and support services for infected and affected people (NCASC, 2006).

- National program is well targeted to MARP group (IDUs, MSM, FSW and MSW, clients of sex workers and seasonal labor migrants). National program not specify the intervention services to IDUs and others at risk group. VCT/STI services provide by public health sectors for HIV/AIDS to the clients in general (UNGASS, 2008).
- With the purpose of HIV/AIDS/STI prevention, national HIV/AIDS and STI control policy was developed along with free condom distribution programs in general clients (not specify for IDUs but IDU also can access).
- The Government has no policies and funded for peer education, and out reach services for IDUs in Nepal (UNAIDS, 2000a).
- While Methadone maintenance treatment (MMT) service discontinued in 2002, that influenced of the development of the National policy guidelines for Opioid Substitution Treatment. In 2007, government and the part of civil society roll out MMT in Nepal (UNODC, 2007). Ministry of Health and MoHP agreed to approve and process the program and also to remove bureaucratic constraints for this program.

6.1.2 Non-governmental Organizations response

The lifesaving and life-giving society (LALS) was the first NGO established for harm reduction program in 1991 (Singh, 1998). Since then it has been working with IDUs to reduce harm caused by drugs in order to prevent HIV/AIDS. LALS provides an outreach service in Pokhara and Dharan (UNAIDS, 2006). FHI was one of the executive partners of the US\$2.6 million for harm and risk reduction program including Behavior change communication (BCC), clean needles and syringes, STI treatment, OST, drug counseling, HIV care and support, and VCT. The project has ended and currently, various other donor agencies are involved the implementation of separate programs as condom marketing etc (The World Bank, 2008).

NANGAN (National NGOs Network Group Against AIDS, Nepal), a group of NGOs in Nepal is working to coordinate and share information, education, and communication (IEC) materials, experiences, and lessons learned in a general (The World Bank and UNGASS, 2008). Youth Vision is providing an outreach program for current injecting drug users in the Kathmandu, Nepal. The program is supported by Mainline Foundation, the Dutch Ministry of Foreign Affairs. Recovering Nepal is a network of IDUs and IDUs of Nepal, has established in nationwide (AHRN, 2008). It is involved in raising their (IDUs) voices to address the stigma discrimination, policy change and affordable treatment and care for the Drug user and people living with HIV/AIDS.

The issue of IDU in relation to HIV transmission is addressed in Nepal and activities implemented with comprehensive packages for IDUs as shown in Box 4. Condom promotion, BCC, and outreach services including needles and

syringes exchange are provided for HIV prevention and care of IDUs from 18 Drop In Centers (DIC) in 18 districts of Nepal (UNGASS, 2008). The harm reduction (HR) program's aim is to establish and expand OST, design and implement social support services to support harm reduction activities association with rehabilitation and ART services (UNDP, 2006). Different I/NGOs are providing comprehensive care and HR services for IDUs in different locations in Nepal that has shown annex 5/table 6.1a.

Box 3: Comprehensive Package for Injecting Drug Users in Nepal

- Primary health care system; IEC/BCC, community sensitization
- Availability of clean needle and syringes
- Outreach and peer education
- Condom distribution
- STI/VCT service and referral links
- Counseling and psychosocial support
- Detoxification and rehabilitation services
- Drug substitution treatment

Source: UNDP. 2008

Primary health care system

The primary health care system includes providing IEC/BCC and community sensitization on HIV and drug use to IDUs (UNDP, 2008). All the HIV related prevention and treatment, care and support services for IDUs are not easily accessible in primary health care centers, health posts and sub-health posts (SHP) in Nepal (UNAIDS, 2000a). Naulo Ghumti Nepal (NGN) is providing basic medical health check up to non-injecting drug users and IDUs in Butwal (Rupendehi District and in Pokhara (Naulo Ghumti Annual report, 2006). Youth Vision, a NGO provides primary health care services for IDUs in Kathmandu valley through outreach service (AHRN, 2008).

Availability of clean needle and syringes

Provision of clean needles and syringes by NGOs has been confirmed effective in reducing the sharing of needles/syringes among IDUs and in preventing HIV transmission (WHO, 2005b). The first needle exchange program (NEP) was established in Nepal in 1991 (Singh, 1998). This is non-governmental organizations interventions in some cities such as Kathmandu, Pokhara and Dharan etc. LALS in Kathmandu and by NGN in Pokhara are working for needle and syringe exchange program (UNDP, 2006).

Outreach and peer education

Outreach-based interventions were aimed at hidden IDUs populations and provided them with various services needed to adopt safer behavior and it is more cost-effective than treating an HIV infection or AIDS (UNAIDS, 2005). Some NGOs are supporting this e.g. the outreach work that was carried out in Dharan was supported by LALS (UNAIDS, 2000a). Six peer educators mobilized to carry out the outreach, peer education program for VCT promotion especially for IDUs in Pokhara and Butwal. NGN also distributed 1007 IEC/BCC materials from the VCT site in Pokhara and Butwal and 1125 pieces during the outreach activities in the field in Western Nepal (Naulo Ghumti Annual report, 2006).

Condom distribution

Several NGOs and INGOs are funding this program. A multimedia campaign on HIV and AIDS and condom use used of broader sexual health concept approach is involving due of logo and slogan such as "Condom Bata Surakcha – Youn swastha ko Raksha (Use a condom – Protects sexual health)". The programs run only for two years (2000-2002) (USAID, 2007). Mass and non-traditional media are also promoting safer sexual norms and healthy behavior among young people e.g. consistent condom use, abstinence and delayed sexual activity (NDHS, 2006). NGN distributed 2159 pieces of condoms from the VCT site in Pokhara and Butwal and 4699 pieces during the outreach activities in the field of Western Nepal in 2006 (Naulo Ghumti Annual report, 2006). Other several NGOs are also operating this program for IDUs in different part of cities.

STI/VCT service and referral links

VCT (Voluntary counseling and Testing) service is an entry point to HIV prevention, care and support services for people who are infected and affected by HIV (UNAIDS, 2005). A comprehensive approach has a close linkage between STI and VCT services that enables referral care services for prevention, treatment and testing HIV to IDUs.

STI and HIV testing services are not available in health centers and health posts in Nepal. Recently, there has been a significant expansion in terms of number of VCT services in Nepal. NGOs focus the services to IDUs, other risk groups and clients in general. NGN is providing VCT service to IDUs in Pokhara and Butwal (Naulo Ghumti Annual report, 2006). There are 119 VCT centers operated by NGOs and public health sectors in 2005 and 155 STI services (80 NGOs based and 75 public health sectors) until 2007 in Nepal (UNGASS, 2008).

Counseling and psychosocial support

Counseling and psychological support includes community sensitization; peer education, emergency care, home based care and strengthening of PLWHA network for PLHIV and IDUs (UNDP, 2006) It also involve palliative care, follow up and outreach ART services. Some organizations in Nepal are providing community and home based care and psychological support services by home based care workers to reduce the fear of community by providing compassionate and open care (NCASC, 2008). NGN is providing counseling services and home based care and support to IDUs in Pokhara and surrounding Districts (referrals accepted from all parts of Nepal (Naulo Ghumti Annual report –NGN report, 2006). Several other NGOs and the public health sectors are providing counseling and psychological support through VCT centers (UNGASS, 2008).

Detoxification and rehabilitation services

Detoxification is a doorway into treatment for drug users. It provides IDUs a chance to manage the physical and psychological effects that occurs through prolonged use of opioids and other drugs of dependency (Avert HIV and AIDS, 2008). There is no specified drug treatment center in Nepal and rehabilitation services undertaken by NGOs in Nepal (annex6 /table 6.1b) (UNAIDS, 2000a). Naulo Ghumti Nepal run regular clinic to treat IDUs' general problems and detoxification. NGN provides 17 clinics and 211 patients in weekly basis in Pokhara and Butwal (NGN Annual report, 2006).

Drug substitution treatment

Legal situation pertaining to the use of drug substitution (methadone or other opioids) treatment was unclear earlier because the government was silent on this matter (UNAIDS, 2000a). Opioid substitution treatment (OST) as a main harm reduction package of services for HIV prevention intervention among IDUs remains low in Nepal (UNODC, 2007). The Methadone Maintenance Treatment (MMT) was effective between 1994 -2002 at Patan hospital in Kathmandu valley but the program was discontinued. It was estimated that 8.6% of the IDUs were covered by various harm reduction interventions (UNODC, 2007). The major progress has been made in reintroduction of OST first with buprenorphine in two community settings in 2006. MMT was restarted in 2007 at the Teaching Hospital in Kathmandu (UNGASS, 2008). Youth vision is running a pilot program on pharmacotherapy using Buprenorphine in Kathmandu (AHRN, 2008)

The national ARV (Antiretroviral) treatment program was started late in 2004 was free offering treatment for PLHIV cases in the public sector in Kathmandu (UNGASS, 2008). Global fund is paying for ART drugs to fight for AIDS. Many of the District hospitals started ART program in 2006 and 2007 (NCASC, 2008). There is no separate ART center for IDUs in Nepal. Several I/NGOs run ARV treatment through public or private hospitals.

Other NGOs involving various intervention programs for IDUs in different locations of Nepal

KYC-PJK (Kirat Yakthung Chumlung-Punar Jeeval Kendra), Dharan Youth Center (DYC) and BP Koirala Institute of Health science de-addiction unit (BPKIHS-DAU) are actively serving the drug treatment and care services to drug users and IDUs in Dharan - Sunsari District (Niraula et al, 2006). These centers provide free needles and syringes exchange, BCC, primary health care and referral services to IDUs. KYC-PJK also provides rehabilitation services to IDUs in Dharan. Harm reduction program available in BPKIHS. Almost 1100 IDUs received HR service through drop-in-centers (DIC) and outreach clinics in Dharan Municipality and Itahary (Sunsari District) and Damak (Jhapa district). International Nepal Fellowship (INF) in Nepalgunj-Banke District, provides harm reduction service to IDUs through a DIC and

regular community outreach. INF also carried out needle syringe program, first aid for drug over dose and counseling services to IDUs and other drug users (INF, 2007).

6.1.3 Donor response

Many private and voluntary organizational donors are funded for the HIV/AIDS interventions in Nepal.

- Numerous multilateral and bilateral donors such as UNAIDS, UNDP, USAID, DFID and AusAid have collaborated to address the issue of reducing HIV at most risk groups' such as IDUs.
- There are three major organizations; USAID, DFID and GFATM currently supporting the HIV/AIDS prevention programs with national NGOs and other numbers of Community Based Organizations (CBOs).
- GFATM (Global Fund to Fight AIDS, Tuberculosis and Malaria) has provided 4 years grants to implement the National strategy, mainly focused on young people, providing support to the people living with HIV/AIDS (PLHA) (including HIV-positive IDUs) and migrants.
- DFID has approved a 5 years grant to support to the HIV/AIDS programs in Nepal. The grant is implemented through Management Support Agency (MSA) which support the GFATM financed program.
- USAID provides largest fund for HIV/AIDS surveillance activities, condom social marketing (for IDUs and general), as well as communication and advocacy programs.
- UNODC (United Nation Office on Drug and Crime), as one of the co-sponsor for UNAIDS, provides on going technical guidance and policy advice to the government of Nepal on HIV/AIDS prevention, care, drug treatment and support to IDUs.

- From UNODC 2007, UNGASS 2008, The World Bank 2008, USAID 2008

6.2 Access and utilization of HIV/AIDS and HR services by IDUs

Discriminatory national laws hold back marginalized populations from accessing HIV/AIDS interventions services (WHO, 2007b). HIV/AIDS prevention and treatments services are hindered by weak health infrastructure, limited human resources, lack of access to diagnostic equipment and drugs. It is also affected by the limited capacity both at public and private sectors and inadequate funds (Giri R, 2008). It is observed in Kathmandu and in Pokhara that IDUs can not access and utilize HIV services are because of lack of money, harassment or arrest by police and social discrimination; with various health problems (FHI, 2004c).

In 2007, 80% of IDUs in Kathmandu had at least once met an outreach or peer educator from various HIV related programs, 72% IDUs had visited a drop-in-center, 15% of them visited VCT and only 2% of IDUs had visited STI clinic (Gautam/FHI Nepal, personal communication). The service outlets

and coverage of VCT, ART (Antiretroviral Therapy), PMTCT (Prevention of Mother-to-Child Transmission) and STI have increased to cater various for needy people (UNGASS, 2008). The VCT program coverage for IDUs is 21%. A total 988,000 needles and syringes were provided to IDUs in 2006 and 245,649 in 2007 but the national estimated requirement of needles and syringes in 2007 was 21,000,000, which was equivalent to less than 5% of the total need in 2006. The DIC provided services to 9,097 IDUs in 2006. According to UNGASS report (2008), in 2007, 60, 096 clients (including IDUs) were treated for STI, among them 40,456 and 19,640 treated in the NGOs and public sectors respectively. In November 2007, more than 61 IDUs were on methadone and 31 were on Buprenorphine treatment at the Teaching hospital in Kathmandu.

All these services mostly easily accessed and utilized by IDUs in the Kathmandu valley. This is because most of services are centralized in the capital city. That may be the cause in reducing prevalence of HIV in IDUs from 2003 (68%) to 52% in 2005 and 34% in 2007. Also, similar consequence is observed in other main cities, in Pokhara and Eastern Terai. However, distribution of interventions services to IDUs is not equitable in other places e.g. Far Western Terai regions and other rural areas.

6.3 Identified gaps and challenges in Nepal

Policy and laws enforcement

Policy and legal barriers on harm reduction, IDUs' human rights and care of IDUs are still lacks in Nepal. IDUs are often abused, neglected and harassed by police. There is lack of workplace policies to non-governmental organizations working in HIV/AIDS and harm reduction interventions.

Health system

Limited health services capacity in public as well as in private sectors, operational issues like lack of trained staffs, health infrastructure, poor management of logistic and supplies have been major challenges to scale up health services to IDUs in Nepal.

Program coverage

HIV/AIDS and harm reduction related services have been expanded in recent years in Nepal. However, the program coverage is still not adequate. Most of HIV/AIDS and IDUs treatment and care services focus in urban and main cities or towns areas where as there is no such services in rural areas. The current program effort is not enough to access the services among all IDUs. While implementing harm reduction for IDUs, use of condom promotion in casual and only few NGOs are working on it.

Research

Research lacks on how has the IDUs increase HIV epidemics in Nepal. Research does not cover the determinants of vulnerability to HIV infection among IDUs.

Multi-sector collaboration

Prevention and control of HIV/AIDS among IDUs can not be tackled by only medical/clinical and public or NGOs interventions alone. It requires involving multi-sector approach other than health as well. Involvements of other sectors such as education, information, law, business, transport etc in IDUs interventions programs are limited in Nepal.

Political commitment

For the successful implementation program to HIV/AIDS and IDUs require high level commitment and leadership. Frequent change in the leadership and political unwillingness often create barriers for harmonization and co-ordination, monitoring and evaluation to support intervention program for IDUs. There is lack of political support for the implementation and reform HIV/AIDS policies to IDUs in Nepal.

Sustainability

Most of prevention, treatment, cares and support services to IDUs provide by NGOs and funded by donor agencies. All resources (human, money, material) are donor dependent. There is a challenge in financial sustainability of the program for the future intervention.

The challenges come over during intervention program for IDUs is Maoist insurgency. Maoist arrested drug users and IDUs, and forced them hard labor work during conflict situation. After peace process, Maoist started to provide treatment for IDUs in the camp with abstinence of drugs. This is not favor of human rights to IDUs. In fact that was harassment for IDUs (Personal observation). Because of fear of arrest by police and Maoist, IDUs could not access treatment or care services and that force them continue to engage on risk behaviors.

Injecting drug use is not acceptable and do not take it a serious public health issue by government/MOH. Government responses to HIV/AIDS are quite general and not purposely focused to IDUs. The resources, organizations and policies of the health system have a great bearing on access and utilization of the services which seems not enough for providing VCT, ART and other health related services to all IDUs in Nepal. Many harm reduction programs were closed due to indecisive of political support and policy. However, the current governmental as well as non-governmental organizations interventions need to be maintained expand and improve the current changing trends of HIV among IDUs.

Chapter 7: Conclusion and recommendations

7.1 Conclusion

Injection drug use is an international problem which affects both developed and developing countries. HIV/AIDS in IDUs is also an emergency and a long-term public health concern. HIV Prevalence is much higher in many Asian countries including Nepal. HIV/AIDS considered as a death sentence because when one gets infection there is no definitive treatment.

Because of several reasons, the number of IDUs is increasing in Nepal. There is substantial reduction in HIV prevalence rate in various places (Kathmandu, Eastern Terai and Pokhara) but the rates are stable in other places (Far Western Terai). Many IDUs have misconceptions about mode of transmission of HIV. Therefore they continue to engage in high risk behaviors like sharing injection equipment and having unprotected. Unprotected sex is the main route of transmission of HIV from the IDUs to non-IDUs sex partners. Other important contributing factors are poor policies and lack of law enforcements on drug use. HIV infection directly associated with individual and social behavioral of IDUs. Lack of Cultural values, stigma and confinement have also responsible for IDUs vulnerability to HIV.

In a more wider perspective, implementation of law enforcement and political commitment were found to be lacking in supporting HIV/AIDS comprehensive policies necessary to reduce HIV among IDUs. Illegal drug use is legally prohibited in Nepal, like in many other countries, but people still continue using drugs. The policies and other factors influence the risk behavior of IDUs. Strict legal policies related to drugs use force IDUs to share drugs, needle and syringes. Fear of arrest, harassments, lack of opportunity to take part in decision making process and compulsion to use drugs prevents IDUs from utilizing services such as VCT, IEC/BCC, drug treatment and promoting safer behaviors.

Often IDUs are not getting effective treatment and care intervention services in Nepal. Nepal has limited HIV prevention coverage, treatment and care interventions, scientifically proven policies and international guidelines for IDUs. Harm reduction programs for IDUs did not work consistently because of government constraints and laws that are against IDUs. The national responses to prevent and care for HIV/AIDS has not been beneficial to the IDU populations. Moreover, weak health infrastructure, inadequate resources, both public and private sectors limited capacity to deliver services; stigma and financial problems make it difficult for the IDUs to access and utilize services.

A review of literature on international interventions and country experiences highlight the various factors that contribute to increase HIV infection among

IDUs in Nepal. At the same time, on the spot light are various intervention programs in Nepal. Several countries have shown good examples of interventions that could be useful in informing policy makers to design policies, strategies and interventions necessary to control the spread of HIV amongst IDUs.

7.2 Recommendations

With regard to halting the spread of HIV/AIDS epidemic among IDUs in Nepal is not enough equally encouraging. The existing and future interventions program requires immediate action and long-term continuity and sustainability in reducing HIV among IDUs in Nepal. The following recommendations are not only derived from the literatures review but also it will be based on the issues, international best practices and experience of Nepal mentioned in chapter 4, 5 and 6.

Review existing HIV/AIDS strategy, policy and intervention program

Responsible: Government (MOH, NCSAC, NAP)

- Develop a strategic vision, target IDUs on national HIV/AIDS prevention and control strategy.
- Reviewed the program to solve the existing problems (barriers to serve services, financial, social support, work on supportive policies etc) and continue monitor and evaluate to ensure the success or failure of the policy response, to bring out the change and reform the program strategies.
- There is need for good mapping of HIV vulnerability to identify the gaps in to a policy and intervention.
- While designing interventions policies for groups' risk behaviors should be 'center of attention' and provision of acceptable human rights perspectives for all IDUs.
- The government should be establish and balance law enforcement approach to the management of drug users with the public health intervention to minimize the risk behaviors (sharing injecting equipment due to fear of arrest) among IDUs.
- A strong commitment and leadership at political level need to be ensured availability and mobilization of enough funds for IDUs and HIV/AIDS intervention of policies into practice.

Ensure the provision of health services

Responsible: Government (MOH), Private health sectors, NGOs

- Develop and plan ways to expand the availability of VCT and ART services in all health care settings such as the primary health care center, Health

Post and basic counseling services at sub-centers that will enhance access for HIV-positive or HIV-negative IDUs in the rural areas.

- Ensure trained health staffs for providing VCT services in health centers.
- Ensure regular supply of and availability of treatment drugs e.g. ARV, condoms to all IDUs.
- Still the rehabilitation program gap has to be identified. Establish and expand rehabilitation services for IDUs to restore their normal life.

Strengthen Harm reduction program

Responsible: Government, I/NGOs, Donor agencies

- Harm reduction program for IDUs should be specify, designed and focused for reducing the risk of HIV infection among IDUs. The availability of syringes does not mean that it is accessible for all IDUs. Advocacy to government, different health sectors like medical shops, for providing needle and syringes in reasonable cost and safe environment for IDUs to minimize the risk.
- Increase coverage and enhanced ease of access to harm reduction services. Ensure the equity of access to harm reduction services to rural and remote areas
- IDUs who do not come forward for counseling and treatment or they do not comply with needle and syringe exchange programs. The outreach services and enough trained outreach staffs should be mobilized to cover all hidden IDUs for the effective HIV/AIDS and harm reduction intervention programs. Treatment services to IDUs should be made economically and physically accessible.

Focus on awareness program on HIV/AIDS to IDUs

Responsible: Government (Ministry of Education, MOH), private sectors, CBOs, NGOs

- Strengthening IEC/BCC programs to provide comprehensive information and knowledge on how to prevent HIV/AIDS and how to develop safer injecting and sexual behavior by conducting workshops, seminar or organizing training or radio, television programs and drama to all IDUs. Education programs and knowledge about proper needle/syringes cleaning practices to IDUs should be strengthen in order to minimize the spread of HIV infection.
- Promote condom use program and educate sex workers and their clients and IDUs to consistent condom use with different sexual partners to prevent HIV transmission.
- Establish a cross border awareness program to reduce the over flow of IDUs in border area for injecting drugs.

Foster a holistic, integrated and multi-sector collaboration

Responsible: Government (NCSAC, Ministry of general administration for laws and policies, ministry of labor, transport management), I/NGOs (e.g. FHI, Maiti Nepal), private sectors

- There should be a strong inter-sectoral collaboration between health and law enforcement, and the surrounding IDUs populations need to be protected because the program would not be work through medical/clinical interventions alone
- Scale up advocacy and health promotion activities for other risk groups (FSW, mobile population, women, trafficked girls, street children, young people) who are indirectly linked to injecting drug use and HIV
- Establish two-way referral links networks between government/private and NGOs at appropriate levels for HIV test and care/support and STI services to IDUs.
- Effective mobilization of the local institutions (village development committee and District Development committee), local village leader, social volunteers and local NGOs to aware the people against the drug use and HIV/AIDS because these agencies are working for the development and social arena of the grass-root level (UNAIDS, 2000).
- Advocacy and self-help organizations are very efficient channels for dispersion of safer behaviors among IDUs that should be promoted.

Ensure the sustainability of the intervention program

Responsible: Government, NGOs

- Provision of enough human resources, health infrastructures, financial, technical and managerial capacity to sustain the interventions programs. Ensure immediate action and long term continuity and sustainability of HIV/AIDS and care/support to IDUs programs because donor funding is not sustainable.

Further research

Responsible: Government (major role: NCSAC), I/NGOs and other research institutions (e.g. Nepal health research council)

- Access baseline information and collect and provide more significant data regarding prevalence of HIV in IDUs, evidence of implementation, success or failure of the programs etc. because the data providing by different research institutions, government or NGOs in the same year about same places are not in consistence.
- Allocate more research resources for research program about IDUs and operational plan and implementation.
- Strengthen biological and behavioral surveillance /research to understand the problem, factors responsible in increasing HIV infection among IDUs and how can we do diminish those factors.

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