

**Program Implications and Recommendations**

- **Implication:** The high annual turnover among IDUs is contributing to the decrease in prevalence of HIV and may suggest that new injectors have less exposure to HIV infection. Some new IDUs may be more aware of the associated risk for HIV, however, this awareness may not imply safer practices.  
**Recommendation:** Repeated prevention education and strengthened community and peer-based outreach activities are required, with a focus on new IDUs.
- **Implication:** Injecting drug use is most likely to begin among young people under 20 years of age, leaving these youth vulnerable to the associated risks, including HIV transmission.  
**Recommendation:** HIV and STI prevention programs need to reach adolescents and youth who are at higher risk of entering the IDU sub population as new users.
- **Implication:** Although there has been improvement in injecting behavior of IDUs over the years, there are still some IDUs who inject with pre-used needles and/or share injecting equipment.  
**Recommendation:** Strategic behavior change communication to promote safer injecting behavior should continue and be strengthened. Comprehensive prevention interventions should be promoted.

**Program Implications and Recommendations**

- **Implication:** Although ever tested for HIV has increased among IDUs over time, only half of the IDUs in Kathmandu had been tested for HIV and 66% had been tested in Pokhara. Only 20% in Kathmandu and 31% in Pokhara had visited a VCT center in the past year.  
**Recommendation:** Continue to educate IDUs through outreach and counseling about the importance of regular VCT and knowing their HIV status.
- **Implication:** The increasing trend in testing for HIV should be maintained.  
**Recommendation:** Strengthen access to information for IDUs, particularly focusing on risk perception and increasing knowledge on the importance of VCT.
- **Implication:** About one third of the IDUs are married and about one quarter of them are having sex with sex workers. This increases the risk of transmission between FSWs and IDUs and their sex partners.  
**Recommendation:** Programs on safer sex should be strengthened to reach IDUs and their sex partners.
- **Implication:** In Kathmandu, the reach to IDUs by PE or OE and visits to DICs has decreased over time.  
**Recommendation:** New and comprehensive community and peer-based strategies and approaches are required to reach unreached IDUs with education on safer injecting and safer sexual practices.

The IBBS Surveys are part of the National HIV Surveillance Plan, led by NCASC. The survey field work was carried out by New ERA and Intrepid Nepal, with external quality assessments by the National Public Health Laboratory. Technical and financial assistance was provided by the United States Agency for International Development (USAID), Cooperative Agreement 367-A-00-06-00067-00, and Strategic Objectives: 9&11

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**Brief Description of Survey**

The fifth round of Integrated Biological and Behavioral Surveillance (IBBS) surveys among male injecting drug users (IDUs) covered a sample of 685 respondents in Kathmandu valley-Kathmandu, Lalitpur and Bhaktapur districts (n=340) and Pokhara valley (n=345), henceforth referred to as Kathmandu and Pokhara. The previous rounds of IBBS surveys were conducted among the same sub-population in 2002/2003, 2005, 2007 and 2009 in Kathmandu and Pokhara. The surveys were carried out primarily to track the trends in the prevalence of HIV and syphilis infection among male IDUs and to assess their sexual and injecting behaviors. The surveys also explored the respondents' knowledge of HIV and sexually transmitted infections (STI), the presence of STI symptoms, sexual and injecting behaviors, and exposure to HIV programs.

It was conducted under the leadership of the National Center for AIDS and STD Control (NCASC) according to the National HIV Surveillance Plan for generating the strategic information needed for guiding and monitoring the national response to HIV and AIDS. The survey was conducted in accordance with human rights standards and ethical approvals were obtained from Nepal Health Research Council (NHRC) and the Protection of Human Subjects Committee (PHSC), FHI 360's ethical review board.

**Methods**

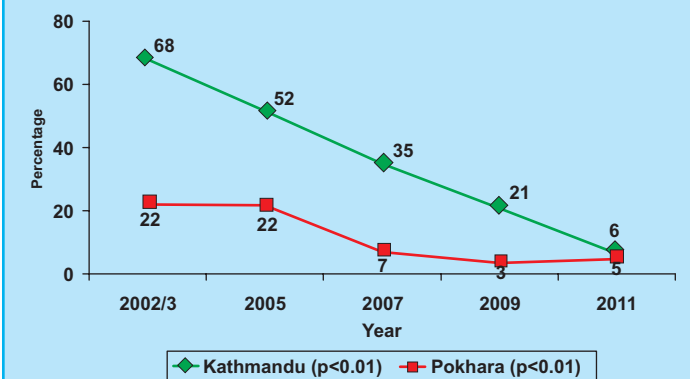
Respondent driven sampling (RDS) method was used to draw a representative sample of 340 IDUs from Kathmandu and 345 IDUs from Pokhara. IDUs were defined as: *Males aged 16 years or above who were injecting drugs for at least three months prior to the date of survey.*

Survey participants were interviewed after obtaining witnessed oral consent followed by pre-test counseling and blood sample collection for HIV and syphilis. A structured questionnaire was used to collect background data along with information on knowledge, behavior and access to services. Rapid test kits: Determine HIV 1/2 test, Uni-Gold test and SD Bioline HIV 1/2 test kits were used for testing for the presence of antibodies against HIV in the serum. Syphilis was tested using Rapid Plasma Reagin (RPR) and was confirmed by Treponema Pallidum Particle Agglutination (TPPA) tests. Survey participants received HIV test results, with post-test counseling, syndromic treatment for STIs and treatment for syphilis based on the spot RPR screening. Data were analyzed using Respondent Driven Sampling Analysis Tool (RDSAT).

**Key Findings**

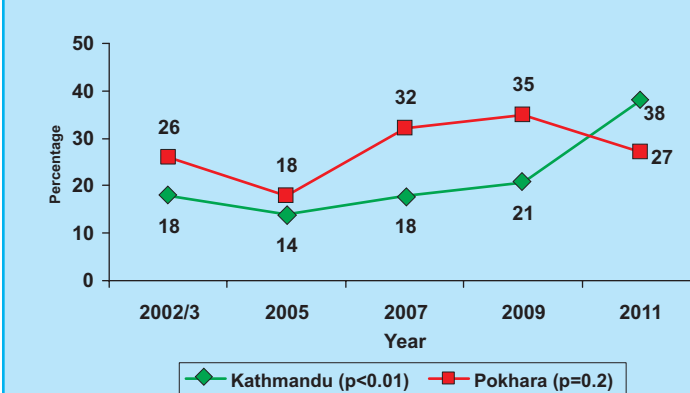
**HIV prevalence among IDUs has continued to decrease over the years:** HIV prevalence has gradually decreased in both Kathmandu and Pokhara since 2002 and 2003 respectively. The declining trend in HIV prevalence is significant in both sites. The prevalence of HIV among IDUs in Kathmandu is 6.3% in 2011, decreased from 68% in 2002 and in Pokhara it is 4.6% in 2011, decreased from 22% in 2003 (Figure 1).

**Figure 1: Trend of HIV prevalence among IDUs in Kathmandu and Pokhara, 2002/3-2011**



**The IDU turnover rate is high and in Kathmandu turnover is increasing over time:** The percentage of IDUs who have started to inject drugs in less than a year can be considered as the annual turnover rate. Around 22% in Kathmandu and 16% in Pokhara reportedly started injecting within the past year. Figure 2, shows the trend in the turn over of IDUs who started injecting less than two years ago. The trend is significantly increasing for Kathmandu. Higher turnover rates result in less exposure to HIV infection and this can be considered one of the major causes of the rapid decline in HIV prevalence among IDUs, along with positive changes in other risk behaviors.

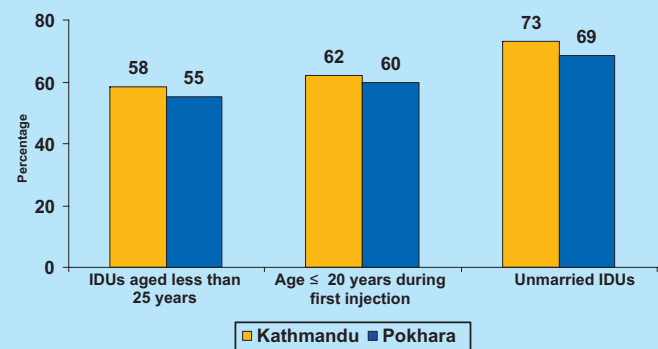
**Figure 2: Trend in IDU turnover (less than two years) in Kathmandu and Pokhara, 2002/2003 - 2011**



**Key Findings**

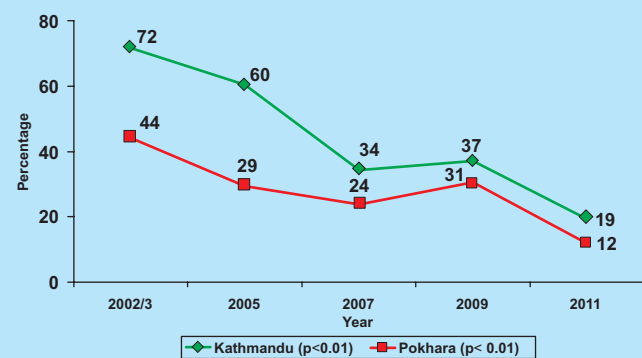
**Many IDUs are young, start injecting at a young age and are unmarried:** Around 58% of IDUs in Kathmandu and 55% in Pokhara are less than 25 years of age. In both sites, more than 60% of the IDUs had started injecting before the age of 20 years. The proportion of unmarried IDUs was similar at both sites (73% in Kathmandu and 69% in Pokhara). (Figure 3)

**Figure 3: Selected Characteristics of IDUs in Kathmandu and Pokhara, 2011**



**The frequency of injecting drugs in the past week has decreased over time:** The overall trend of IDUs injecting drugs more than once a day has decreased significantly in both Kathmandu and Pokhara (Figure 4). In Kathmandu, the proportion decreased from 72% in the 2002 to 19% in 2011, while in Pokhara, this proportion decreased from 44% in 2002 to 12% in 2011. However, average frequency of injecting drugs in the past week has declined slowly both in Kathmandu (4.6 in 2002 to 3.9 in 2011) and Pokhara (4.0 in 2003 to 3.6 in 2011).

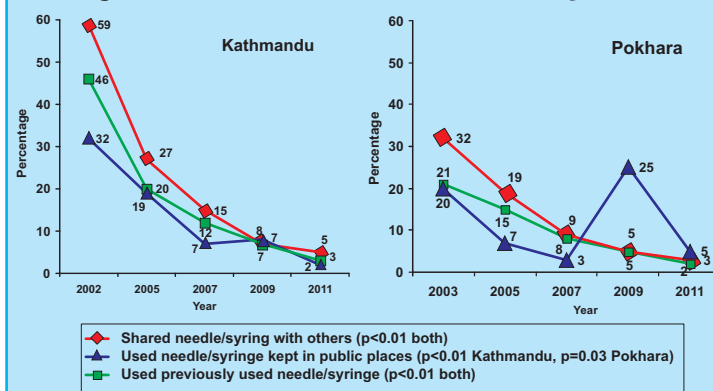
**Figure 4: Trend of IDUs injecting drugs more than once in a day in Kathmandu and Pokhara, 2002/3 - 2011**



**Unsafe injecting behavior has decreased over time:** A considerable proportion of IDUs had avoided unsafe injecting behavior in the week preceding the survey in Kathmandu and Pokhara. High-risk behavior such as using or sharing used needles/syringes and using syringes left in public places has significantly decreased in both survey sites (Figure 5).

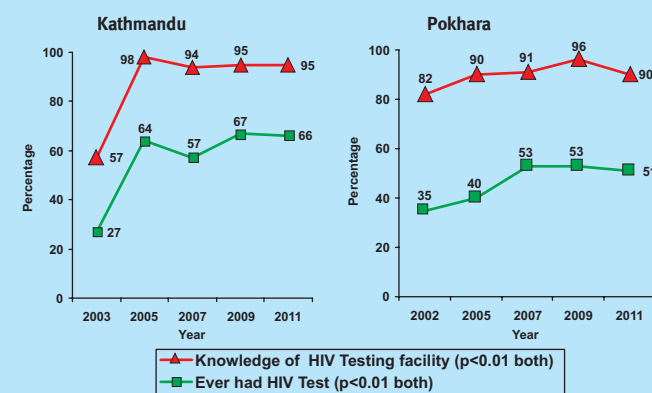
**Key Findings**

**Figure 5: Trends in selected needle/syringe sharing behaviors among IDUs in Kathmandu and Pokhara, 2002/2003 – 2011**



**Knowledge about HIV testing facilities and HIV testing practice has further increased:** The knowledge amongst the IDUs in Kathmandu and Pokhara on the availability of a confidential HIV testing facility in their community has been increasing over the past five IBBS rounds. Although the awareness on the availability of confidential HIV testing facilities is high, the practice of testing for HIV is relatively lower at both the study sites. However, HIV testing among IDUs has increased significantly from 35% in 2002 to 51% in 2011 in Kathmandu and from 27% in 2003 to 66% in 2011 in Pokhara (Figure 6).

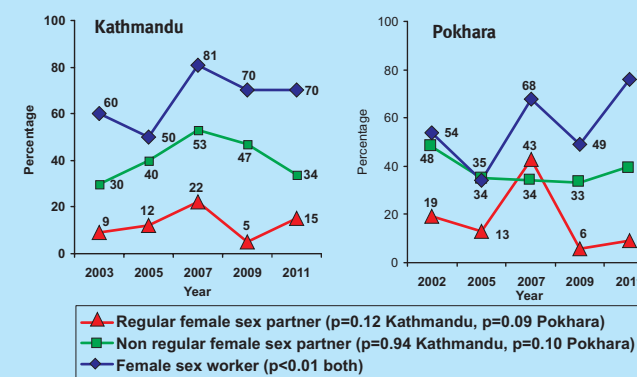
**Figure 6: Knowledge of VCT and HIV testing practices among IDUs in Kathmandu and Pokhara, 2002/2003 – 2011**



**Consistent condom use with FSWs has increased significantly:** Consistent condom use with female sex workers (FSWs) has increased significantly in 2011 compared to the 2002/2003 in both Kathmandu and Pokhara. In Kathmandu, consistent condom use increased from 54% in 2002 to 76% in 2011, while in Pokhara, it increased from 60% in 2003 to 70% in 2011 (Figure 7). However, consistent condom use with non-regular female sex partners is lower than with regular female sex partners and shows no clear trends over time.

**Key Findings**

**Figure 7: Consistent condom use in the past year by IDUs with different sex partners in Kathmandu and Pokhara, 2002/2003 – 2011**

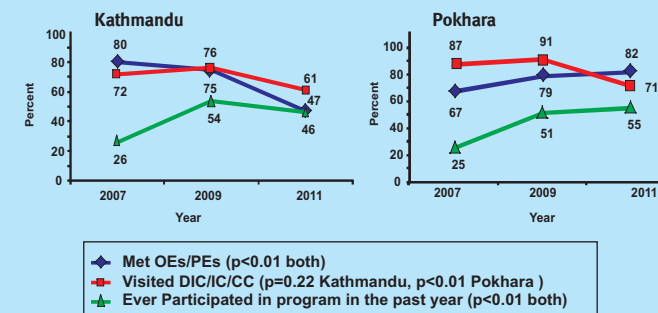


**Comprehensive Knowledge on HIV has not increased over time:** The proportion of respondents who had comprehensive knowledge\* on HIV and AIDS is more or less unchanged both in Kathmandu (66% in 2007 to 64% in 2011) and Pokhara (73% in 2007 to 71% in 2011). However, except for the misconception on HIV transmission from a mosquito bite (around 70% in Kathmandu and 82% in Pokhara) the other indicators are above 90%.

*\*being faithful, condom use and with no misconceptions on HIV in healthy looking person, HIV transmission by mosquito bite and sharing food utensils*

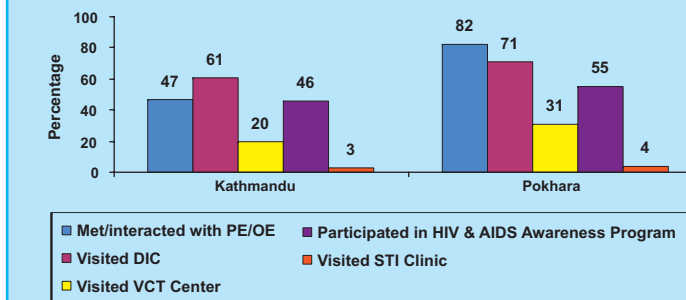
**Participation in HIV related programs declined:** In Kathmandu, the proportion of survey participants who interacted with an outreach educator (OE) or peer educator (PE) has significantly decreased from 80% in 2007 to 47% in 2011. The proportion reached by an OE or PE in Pokhara increased significantly from 67% in 2007 to 82% in 2011. IDUs visiting drop-in-centers (DICs) has decreased over time in both study sites from 72% in 2007 to 61% in 2011 in Kathmandu and from 87% in 2007 to 71% in 2011 in Pokhara (Figure 8). However, the percentage of respondents participating in HIV and AIDS awareness raising programs and community events has increased significantly in both the study sites.

**Figure 8: Participation in HIV related programs in the past year among IDUs in Kathmandu and Pokhara, 2007-2011**



**Key Findings**

**Figure 9: Exposure to HIV programs in the past year by IDUs in Kathmandu and Pokhara, 2011**



**Key Indicators**

Key Indicators	Kathmandu valley	Pokhara valley
<b>Prevalence</b>	%	%
HIV	6.3	4.6
Syphilis history	2.2	0.9
Active syphilis	0.0	0.3
HIV among those injecting for less than a year	0.0 (n=51)	0.0 (n=41)
<b>Duration of injection and injecting behavior</b>		
Turnover: median duration of injecting drugs	3 years	4 years
Aged <25 years	58	55
People injecting more than once every day (in the past week)	19	12
People injecting every day (in the past week)	46	39
Shared needle in the past week	2	2
Shared injecting equipment in the past week	33	80
<b>Sexual behavior</b>		
Currently married	21	27
STI symptoms experienced in the past year	10	7
Unprotected sex with FSWs in the past year	24	30
Unprotected sex with casual partners in the past year	60	66
Unprotected sex with regular partner in the past year	91	85
<b>Knowledge of HIV and STI</b>		
Ever heard of HIV	100	100
Comprehensive knowledge	64	71
Know that HIV is transmitted through stained needles	99	100
Know people living with HIV/AIDS or died	61	67
<b>Uptake of HIV and STI services</b>		
Needles obtained from needle exchange program in the last injection	26	47
Received HIV test in the past 12 months and received results	21	31
Reached with targeted HIV prevention service program	79	87