HIV and Injecting Drug Use in Indonesia: Epidemiology and National Response

Irwan Afriandi¹, Tjandra Yoga Aditama², Dyah Mustikawati², Martiani Oktavia³, Bachti Alisjahbana¹,³, Pandu Riono⁴

¹Faculty of Medicine, Padjadjaran University/Hasan Sadikin Hospital, Bandung, Indonesia
²Directorate General of Communicable Disease Control and Environmental Health, Ministry of Health, Republik Indonesia,
³Health Research Unit, IMPACT Bandung, Faculty of Medicine, Padjadjaran University/Hasan Sadikin Hospital, Bandung, Indonesia.
⁴Faculty of Public Health, Indonesia University, Jakarta, Indonesia.

ABSTRACT
Indonesia is facing one of the most rapidly growing HIV-epidemics in Asia. Risk behaviour associated with injecting drug use, such as sharing contaminated needles, is the main risk factor for HIV infection. Among the general population the prevalence of HIV-infection is still low (0.2%), but up to 50% or more of the estimated 145.000 – 170.000 injecting drug users are already HIV-positive. Overrepresentation of injecting drug users and continued risk behavior inside Indonesian prisons contribute to spread of HIV. Through sexual contacts, HIV is transmitted from current or previous injecting drug users to their non-injecting sexual partners; 10-20% of this group may already be infected.

The national response targeted to limit spread of HIV through injecting drug use has included needle and syringe program (NSP), methadone maintenance treatment (MMT), voluntary counseling and testing (VCT), and outreach program as priority programs. However coverage and utilization of the harm reduction services is still limited, but effective integration with HIV testing and treatment is expanding.

By 2008, there were 110 service points for NSP and 24 operational MMT clinics. Nevertheless, utilization of these services has been less satisfactory and their effectiveness has been questioned. Besides effective prevention, HIV-testing and earlier treatment of HIV-seropositive individuals, including those with a history of injecting drug use, will help control the growing HIV-epidemic in Indonesia.

Key word: injecting drug use, HIV/AIDS, harm reduction, Indonesia
HIV and injecting drug use in Indonesia

The first case of Acquired Immunodeficiency Syndrome (AIDS) in Indonesia was notified in 1987 and it was not until 1995 that the first AIDS case among injecting drug users (IDUs) was reported. Since then, IDUs have been the most important group contributing to the country’s HIV epidemic. The prevalence of HIV-infection in the general population is still low (0.2%), but up to 50% of the estimated 145,000 – 170,000 IDUs (UNGASS, 2008) may already be infected. By March 2009, there were 16,694 AIDS cases nationally of whom 75% male and 42.0% were reported to be related to IDU-related and 48% heterosexual and 3.7% to homosexual transmission.

There has been a dramatic increase of the percentage of IDUs among new AIDS cases in the last ten years in Indonesia. The Directorate General of Disease Control and Environmental Health, Ministry of Health revealed that the percentage of IDUs among new AIDS cases was 48.8% in 2007, compared to 10.64% in 1998. The trend is presented in Figure 1. In West Java, the most populous province with the highest burden of HIV in Indonesia, IDUs accounted for 78% of the registered (cumulative) cases.

![Figure 1. Trend of cumulative AIDS cases and IDU percentage among new AIDS cases](image)

It has been estimated that ten percent of the HIV/AIDS cases worldwide are due to injecting drug use. The 2007 AIDS Epidemic Update by UNAIDS and WHO reports that China, Pakistan, Indonesia, Vietnam, Afghanistan, the Islamic Republic of Iran, the Russian Federation, and the Baltic States, have encountered HIV epidemics driven by unsafe drug-injecting practices with the additional transmission through unprotected commercial sex. A recent systematic review found different HIV-prevalence rates among IDUs in Asian countries, e.g. 10.8% in Pakistan, 12.3% in China, 33.9% in Vietnam, and 32.5% in Thailand. With an estimated 42.5% of IDUs infected, Indonesia had one of the highest reported rates.

In contrast with other risk populations, HIV prevalence among IDUs in Indonesia has increased significantly over recent years. National estimates in 2002 and 2006 showed that the prevalence in IDUs jumped from 26.76% in 2002 to 41.09% in 2006, compared to the prevalence among female sex workers which was relatively stable at 3.59% in 2002 and 4.01% in 2006; as well as among men who have sex with men, which decreased from 4.02% to 1.2%, in 2002 and 2006 respectively. Furthermore, the two reports also describe the rising number of IDUs living with HIV from 42,749 in 2002 to 90,030 in 2006, an increase of more than 100%.
Such a rapid increase of HIV prevalence among IDUs is explained by the fact that sharing of contaminated needles is a very efficient way to transmit HIV. Drug injection-related risks include the use of contaminated needles, syringes, and paraphernalia, and risky injection practices related to the process of dividing the drug solution, e.g. front-loading and back-loading\textsuperscript{12,13,14,15}. In addition, IDUs engage in unsafe sex practices.

Several national studies confirm that this is also true for the IDUs in Indonesia. The Indonesian Behavioral Surveillance Survey (BSS) in 2004-2005 showed that IDUs tend to gather in groups to ‘shoot up’ with an average size of 7 – 14 people in each group\textsuperscript{16}. In doing so, more than half of the IDUs surveyed had ever ‘berbagi basah’ (literally means ‘wet sharing’) and only 12-15% of the IDUs studied reported that they always use their own needles or syringes\textsuperscript{16}. Several studies have reported that IDUs often do not clean or even do not know how to properly clean their injecting equipment before reuse, and mostly share needles even though they know that HIV is transmissible through shared needles\textsuperscript{17,18,19,20}. Despite receiving needles from needle exchange program (NEP) in the previous week, IDUs in 6 Indonesian cities studied in the recent Integrated Biological-Behavioral Surveillance among Most-at-Risk Groups in 2007 stated that they still shared needles in the prior week, ranging from 9% in Semarang to 63% in Jakarta\textsuperscript{21}. Overrepresentation of IDUs in Indonesian prisons, where clean needles are even more scarcely available, inevitably leads to further HIV-transmission. In a behavioral survey conducted in 2004-2005, 12% of IDUs reported that they had been imprisoned\textsuperscript{22}.

IDUs also potentially spread infections to other populations. Those may include their married spouses, steady sexual partners, commercial sex workers, and children. A study conducted in 2002, concluded that over two-thirds of IDUs were sexually active and almost half of them also reported having multiple sexual partners\textsuperscript{19}. Forty percent of IDUs had bought sex from sex workers in the preceding 12 months but only 10% of the IDUs who were sexually active, consistently used a condom when they are engaged in sexual intercourse with either their spouses or partners\textsuperscript{19}. In addition, the 2004-2005 BSS study reported that the majority of IDUs had spouses or steady sexual partners and many of them (24% to 45%) also had unprotected sex with commercial sex workers. As a result, some of the stable partners of IDUs are HIV-positive\textsuperscript{21}.

The national response to HIV in the context of injecting drug use

In response to the HIV epidemic in the context of IDU, a variety of preventive and therapeutic strategies have been implemented in Indonesia. Complementary to supply and demand reduction approaches already employed earlier, harm reduction strategies have been adopted and put into action. Non-government organizations (NGOs) were active in harm reduction since late 1990s\textsuperscript{2}, but it was not until January 2007 that the official national policy was stipulated. It aims to prevent HIV transmission among IDUs and their partners, prevent HIV transmission from IDUs and their partners to general population; and to integrate harm reduction approach into public health system through HIV/AIDS prevention, care, support and treatment services, as well as drug addiction rehabilitation service\textsuperscript{23}. It is implemented through 12 programs or services by involving multi-sectoral agencies and institutions. By 2010, the target was to provide corresponding services to at least 80% of the IDU population\textsuperscript{24}. The models predict if we reach 80% of vulnerable population including IDUs we could prevent 1 million death due to AIDS in 2020.

Among the twelve HR programs, methadone maintenance treatment (MMT) has been stated as a priority program by the Ministry of Health\textsuperscript{25}. Opioid substitution with methadone reduces drug injecting, as was also proven in Indonesia\textsuperscript{26}, and is therefore key to HIV-prevention among IDUs. The MMT program in Indonesia was commenced in 2003 through two pilot clinics and it has been scaled up since 2006\textsuperscript{2}. Underutilization of services and high drop-out rates constitute important problems, with only 1,791 MMT active clients reported on treatment by September 2008\textsuperscript{27}. It is
planned to scale-up the program to 36 other service points throughout the country in the coming years. However, this still seems far from what is needed for effective HIV control among IDUs. In addition, one recent report questioned the effectiveness of MMT Program.

Needle and syringe programs (NSPs) where IDUs can access sterile needles to avoid transmission of blood-borne viruses were introduced in Indonesia at one Community Health Centre (Puskesmas) in Jakarta in 2005. Since then, NSPs have been expanded from only distributing sterile syringes to a more comprehensive prevention package covering distribution of condoms, alcohol swabs and materials of information, education, communication (IEC). By 2008, one hundred and ten service points of needle syringe were operational in Indonesia. Similar to MMT, limited coverage and underutilization hamper the effect of NSPs on HIV transmission. For example, in West Java, out of 24,710 IDUs only 884 (9.66%) IDUs accessed NSP services in 2006. The implementation of NSP in Indonesia is still controversial and the effectiveness of NSP implementation in the country has not been systematically evaluated far.

Injecting drug use is illegal according to Indonesian law and socially stigmatized. Therefore, IDUs may face difficulties accessing health services. As a consequence, outreach programs targeting IDUs play an important role. However, its coverage remains under-target and its effectiveness needs to be improved in Indonesian settings.

HIV testing is a key component of the national response. Traditionally, counselling and testing are conducted in a client-initiated approach, with individuals seeking HIV testing because they wish to learn their status. Many VCT service points have been established and professionals have been trained in VCT. Unfortunately, the utilization of VCT among people at risk of infection is low; an estimated 70% of those who are high risk for HIV infection have not been tested (UNAIDS Report, 2008). To increase the uptake of HIV testing, provider-initiated testing and counselling (PITC), with the primary goal of providing medical services which depend on the patient’s status, has been introduced in some health institutes recently (Hinduan, 2009 in this supplement). However it is advisable to study the effect of PITC on the risk behavior of HIV negative clients before scaling-up this approach.

Since December 2004, national program provides first-line antiretroviral treatment (ART) through 125 designated hospitals. As of March 2009, a cumulative number of 16,964 AIDS patients (42% IDU-related) had been detected and started on ART, of which 19% have passed away.

A recent modeling study has estimated that current preventive efforts are not sufficient to control the global HIV-epidemic, indicating that universal testing among high risks groups and earlier treatment may have an enormous impact on the global epidemic. According to this model, massive scale-up of HIV testing with immediate initiation of antiretroviral treatment could nearly stop transmission. Such a policy will have enormous financial implications (with huge numbers of people put on ART), and is not yet feasible for Indonesia. However, the concept of testing and HIV-treatment as a preventive intervention underlines the need to integrate such services with primary prevention of drug use and harm reduction strategies.

Integration of harm reduction and HIV care remains a challenge. Although links between NSP and MMT services and HIV-care have often been established, many IDUs in HR programmes do not yet utilize HIV-testing and treatment. Despite the increase of medical services and VCT testing sites in Indonesia it is estimated that as many as 70% of the most at risk populations have, (due to economic/psycho/social barriers like costs, stigmatization, lack of perceived confidentiality and benefits of testing and fear for a negative test result; Sumintardja in this supplement) not yet found their way to a VCT site.

In conclusion, Indonesia is facing an HIV-epidemic which, except for Papua, is still largely confined to IDUs and their sexual partners, and to a lesser extent to other risk groups. Besides strengthening of primary prevention, effective control of HIV in this context needs, an increased volume and quality of testing sites, harm reduction and earlier HIV-treatment including strategies
to overcome psycho/social and economical barriers.


27 Direktur Bina Pelayanan Medik Spesialistik Depkes RI. Kemajuan pengembangan manajemen dan teknis medis berbasis rumah saki dalam PTRM. Pertemuan Konsultasi Nasional PTRM (National Consultation Meeting of Methadone Maintenance Treatment); 2008 24 - 26 March; Bandung. 2008.
