



Viewpoint

Injecting drug use in India and the need for policy and program change

Samiran Panda^a, Muniratninam Suresh Kumar^{b,*}^a National Institute of Cholera & Enteric Diseases (Indian Council of Medical Research), P-33 CIT Road, Scheme-XM, Beliaghata, Kolkata 700010, West Bengal, India^b Psymed Hospital, 49/2, Harrington Road, Chetpet, Chennai 600031, India

Approximately one third of the global total of 15.9 million people who inject drugs (PWID) and a quarter of 3 million PWID who are living with HIV, reside in Asia (Mathers et al., 2008). Managing the spread of HIV, both among and from PWID to the general population, is crucial. India, with an estimated 177,000 PWID, has long been grappling with this issue (Sarkar et al., 1993). The watershed event of the publication of the 'National Integrated Biological and Behavioural Surveillance (IBBS) 2014–2015' underlines this assertion.

Globally IBBS is the largest bio-behavioural study (NACO, 2015) covering 27,007 female sex workers (FSWs), 23,081 men who have sex with men (MSM) and 19,902 PWID. The survey has generated geographically representative estimates (mostly with the help of service providers) for each of the aforementioned at risk population (MARP) groups. Despite representing the smallest MARP group (estimated size of FSWs and MSM is 868,000 and 313,000 respectively), PWID have the highest HIV prevalence at 9.9% compared with 2.2% in FSWs and 4.3% in MSM. The HIV prevalence rates among IDUs, FSWs and MSM reported in the 2010–2011 sentinel surveillance was 7.14%, 2.67% and 4.43% respectively. So despite early recognition of the HIV epidemic among PWID in India (Naik et al., 1991) prevalence rates remain stubbornly high.

The median age of PWID-respondents in IBBS was 30 years. Importantly the window between median age at onset of drug use (19 years) and age at onset of injecting (22 years) was narrow. In 10 of 29 states covered by the IBBS, about one third of PWID reported that their first drug use was by injection; the proportion varied between 34% and 88% across the states—Uttarakhand, Chhattisgarh, Odisha, Tripura, Gujarat, Karnataka, Haryana, Madhya Pradesh, Bihar and Arunachal Pradesh. HIV among PWID has never been a program priority in these states.

The most commonly reported substances injected were heroin and opioid pharmaceuticals, either injected alone or in combination with injection antihistaminic and/or sedative preparations. While in most of the states in northeast India, heroin was the drug of choice, in north/central India, buprenorphine was mostly injected. HIV prevalence among PWID in the north-eastern states

of Manipur and Mizoram were slightly higher than the national average of 9.9%. Three regional groups also surpassed the national average; (a) northern states of Bihar, Uttar Pradesh & Uttarakhand (27.2%), (b) Delhi & Rajasthan (21.8%) and (c) Chhattisgarh and Madhya Pradesh (13.6%). In a recent study of 14,481 PWID recruited through respondent-driven sampling from 15 Indian cities, HIV incidence tended to be higher in sites in north/central India compared to the north-east (median [range] 2.9 per 100 person-year [0,12.4] versus 1.0 per 100 person-year [0,3.4], respectively). Pharmaceutical injecting was one of the factors associated with HIV incidence and prevalence in this multi-site investigation (Lucas et al., 2015). Similarly, another multi-site, cross-sectional study found that compared with heroin injectors, the pharmaceutical opioid injectors were more likely to consume alcohol and pharmaceutical opioids orally, inject frequently, share needle/syringes and develop injection-site complications (Ambekar, Rao, Mishra, & Agrawal, 2015).

The other challenge to containing HIV in India is to identify an appropriate strategy to address the drug–sex interface. Behavioural surveys from Asian countries (Pisani, Dadun, Suchaya, Kamil, & Jazan, 2003) highlight this issue by documenting unsafe sexual practices among PWID and onward transmission of HIV from PWID to non-injectors. The risk of HIV-transmission assumes even greater significance in the context of regular sexual relationships, where condom use is much less frequent compared with transactional sexual encounters (Panda et al., 2007). The IBBS presents a similar trend among PWID nationally.

A combination of three of the nine elements in a 'comprehensive package of intervention', namely needle-syringe programme (NSP), opioid substitution (OST) and anti-retroviral therapy (ART) have greater benefit than a single intervention in reducing HIV transmission among PWID (Degenhardt et al., 2010). We examined receipt of these core services and found in the IBBS that only 31% of PWID reported receiving at least 30 new needles and syringes in the last month and about a third (32%) attended OST services. There was no information on the number of current or ex-PWID on ART. Information on the proportion of PWID receiving a combination of these core services (NSP & ART, OST & ART or all three) was not available. However in the light of the aforementioned measures of intervention, one could assume low availability of 'combined-core-interventions' among the population of PWID.

* Corresponding author at: 12, Vaidyaram Street, T. Nagar, Chennai 600017, India.
E-mail address: msuresh1955@gmail.com (M.S. Kumar).

Importantly, a study randomly recruiting 1155 PWID from targeted intervention sites in the north-western state of Punjab, found an association between 'irregular supply of needles and syringes and hepatitis C virus (HCV) sero-reactive status'. Further, PWID reporting 'any genital disease symptoms within the last year' had similar odds of having HIV infection (Panda et al., 2013). While the former finding highlights HCV and the inadequacy of intervention services, the latter raises the issue of unsafe sex alongside unsafe drug use. The IBBS found that 81% of PWID nationally and three-quarters or more at state level had contact with at least one of the HIV/AIDS services during the 12 months prior to the survey. About 73% of PWID reported that they had received new needles/syringes from peer educators or outreach workers while 58% received information on sexually transmitted infections, including HIV. Such levels of intervention-exposure vis a vis high HIV prevalence among PWID underscore the need to assess the intensity and adequacy of service provision and the satisfaction of PWID with the quality and accessibility of services.

Although, 'harm-minimization' was endorsed by the National AIDS Control Organization (NACO) in its policy document as early as 2002, the evidence cited above, shows a need to examine coverage and implementation in detail. Engaging multiple stakeholders, including the Ministry of Social Justice & Empowerment (MoSJE) and Ministry of Health & Family Welfare (MHFW), will be crucial to harmonize policy on the different intervention approaches taken by these ministries, namely 'demand-reduction' and 'harm-reduction'. Furthermore, NACO should make use of sub-national data generated through state-level and/or multi-city investigations such as those cited above to inform program modification rather than waiting for any nationwide efforts. First, preventing transition to injecting would require provision of OST to non-injecting opioid dependent users. Second, the burden of the problem points to expanding services for PWID; apart from NACO under MHFW, other facilities such as addiction treatment centres under MoSJE need to provide core services, particularly OST. Third, priority efforts are required to ensure receipt of ART by PWID and other opioid dependent users as this is key to reducing HIV transmission among PWID and to their discordant sexual partners. Fourth, it is imperative to include 'HCV-test and treatment facility' within national PWID interventions. Fifth, intensified and adequate combination-services, notably 'NSP/OST/ART' at PWID-population level is critical for effective containment of emerging

epidemics in different geographical pockets. Finally, increased pharmaceutical injecting and its contribution to HIV-epidemic among PWID in India, necessitates an appropriate response. The need of the hour is evidence based policy and a program-response of sufficient scale and quality.

Conflict of interest

None. Both the authors declare their engagement in various task force committees of the National AIDS Control Organization (NACO), India.

References

- Ambekar, A., Rao, R., Mishra, A. K., & Agrawal, A. (2015). Type of opioids injected: Does it matter? A multicentric cross-sectional study of people who inject drugs. *Drug and Alcohol Review*, 34, 97–104.
- Degenhardt, L., Mathers, B., Vickerman, P., Rhodes, T., Latkin, C., & Hickman, M. (2010). Prevention of HIV infection for people who inject drugs: Why individual, structural, and combination approaches are needed. *The Lancet*, 376(July (9737)), 285–301. [http://dx.doi.org/10.1016/S0140-6736\(10\)60742-8](http://dx.doi.org/10.1016/S0140-6736(10)60742-8).
- Lucas, G. M., Solomon, S. S., Srikrishnan, A. K., Agrawal, A., Iqbal, S., Laeyendecker, O., et al. (2015). High HIV burden among people who inject drugs in 15 Indian cities. *AIDS*, 29(March (5)), 619–628. <http://dx.doi.org/10.1097/QAD.0000000000000592>.
- Mathers, B. M., Degenhardt, L., Phillips, B., Wiessing, L., Hickman, M., Strathdee, S. A., et al. (2008). Global epidemiology of injecting drug use and HIV among people who inject drugs: A systematic review. *The Lancet*, 372, 1733–1745.
- Naik, T. N., Sarkar, S., Singh, H. L., Bhunia, S. C., Singh, Y. I., Singh, P. K., et al. (1991). Intravenous drug users—A new high risk group for HIV infection in India. *AIDS*, 5, 117–118.
- National AIDS Control Organisation (2015). *National Integrated Biological and Behavioural Surveillance (IBBS), India 2014–2015*. New Delhi: NACO, Ministry of Health and Family Welfare, Government of India. <http://www.naco.gov.in/NACO/>.
- Panda, S., Kumar, M. S., Saravanamurthy, P. S., Mahalingam, P., Vijaylakshmi, A., Balakrishnan, P., et al. (2007). Sexually transmitted infections and sexual practices in injection drug users and their regular sex partners in Chennai, India. *Sexually Transmitted Diseases*, 34(April (4)), 250–253.
- Panda, S., Roy, T., Pahari, S., Mehra, J., Sharma, N., Singh, G., et al. (2013). Alarming epidemics of human immunodeficiency virus and hepatitis C virus among injection drug users in the northwestern bordering state of Punjab, India: Prevalence and correlates. *International Journal of STD and AIDS*, 25(December (8)), 596–606.
- Pisani, E., Dadun, Suahya, P. K., Kamil, O., & Jazan, S. (2003). Sexual behavior among injection drug users in 3 Indonesian cities carries a high potential for HIV spread to noninjectors. *Journal of Acquired Immune Deficiency Syndromes*, 34, 403–406.
- Sarkar, S., Das, N., Panda, S., Naik, T. N., Sarkar, K., Singh, B. C., et al. (1993). Rapid spread of HIV among injecting drug users in north-eastern states of India. *Bulletin on Narcotics*, XLV, 91–105.