

## Importance of research and services among people who inject drugs in Pakistan

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People who inject drugs (PWID) are driving the HIV epidemic in Pakistan. The national study conducted in 2011 found an overall weighted prevalence of 37.8% (95% CI: 37.3%, 38.3%) in this vulnerable group. Five cities of the country including Karachi, Faisalabad, Sargodha, DG Khan and Gujrat had >40% HIV prevalence. Sharing of needle/syringe for last injection was found in 39.2% and 43.5% reported using injection paraphernalia.<sup>1</sup> With 33.8% married these PWIDs can play a central role in spread of HIV and other infectious diseases in the country through bridging population such as their spouses.<sup>1</sup> The role of research focusing on behavioural and structural interventions such as introduction of opioid substitute therapy cannot be undermined particularly when they can play a pivotal role in slowing the spread of infection.

Why research is important—a systematic review of reports about determinants of HIV infection in injecting drug users from 2000 to 2009, developed models of HIV epidemics. The modeling showed that mitigation of patient transition to injecting drugs from non-injecting forms could avert a 98% increase in HIV infections in Karachi. The modeling also showed substantial heterogeneity in the number of HIV infections that are attributed to injecting drug use and unprotected sex and found that during 2010-15, HIV prevalence could be reduced by 43% in Karachi.<sup>2</sup> A case control study between 2009-2011 was conducted in Karachi to determine the role of knowledge in HIV transmission and HIV sero-conversion among PWID. The study found three factors. First was that HIV does not spread through unprotected sex (adjusted odds ratio [AOR]: 3.1, 95% confidence interval [CI] 1.39-6.90, P value 0.01), second HIV is not transmitted by sharing syringes (AOR: 3.5, 95% CI 1.97-6.40, P value <.00), and third the risk of HIV cannot be minimized by using new syringe every time (AOR: 2.0, 95% CI 1.16-3.60, P value 0.01). These factors were significantly associated with the incident cases of HIV.<sup>3</sup> Another study on determinants of HIV sero conversion found among other things "not obtaining syringes from the harm reduction programme (AOR: 26.45, 95% CI 2.47-

282.8 p = 0.007)" as a key factor.<sup>4</sup> All of these are areas identified through research studies conducted among PWIDs in Pakistan.

There are two other components which need urgent attention with reference to PWIDs in Pakistan. First is the availability of harm reduction programmes. These programmes should provide effective outreach services with special focus on syringe exchange, condom distribution and syndromic management of sexually transmitted infections (STIs) among other services. The high HIV prevalence and other risk factors mentioned earlier clearly show that the outreach services and coverage of programmes is below par at the moment. This requires training of outreach workers and better governance of programmes on ground. Field experience has shown that there is high turnover of field staff due to delays in salaries which is usually due to delayed payments on part of the funder. Without outreach workers no harm reduction programme can provide effective services. These factors must be addressed on urgent basis.

Finally and most importantly is the availability of oral substitution therapy (OST) or buprenorphine for PWIDs in Pakistan. At the moment government, UN partners and researchers are struggling with issues of introduction of opioid substitution therapy for drug users. Twelve published and unpublished studies on effect of OST have been systematically reviewed. In nine studies involving 819 incidents of HIV infections with more than 23,608 person years of follow up, opioid substitution treatment was associated with 54% reduction in risk of HIV infection among PWID.<sup>5,6</sup> This kind of evidence is more than sufficient to immediately initiate OST in Pakistan. It is also suggested to have more data from low and middle income countries<sup>6</sup> especially countries like Pakistan where HIV prevalence is high among PWID. Researchers and public health professionals in Pakistan have to join hand to strongly advocate the introduction of OST including availability of buprenorphine in the required dose format with policy makers as well as law enforcement organizations to introduce this useful intervention in the country. At the same time more research studies should also be planned to generate enough evidence which can make the case stronger.

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