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## Evidence for action on HIV/AIDS and injecting drug use

# POLICY BRIEF: PROVISION OF STERILE INJECTING EQUIPMENT TO REDUCE HIV TRANSMISSION

## BACKGROUND

The provision of access to sterile injection equipment for injecting drug users and the encouragement of its use are essential components of HIV/AIDS prevention programmes, and should be seen as a part of overall comprehensive strategies to reduce the demand for illicit drugs. The equipment is provided through a great variety of approaches categorized as needle and syringe programmes, the goals of which are that drug users have their own sterile injecting equipment and do not share it with others, that the circulation time of used needles and syringes is reduced and that used equipment is disposed of safely.

## SHARING OF INJECTING EQUIPMENT

The shared use of syringes and needles was recognized as being associated with HIV transmission among injecting drug users at the onset of the HIV/AIDS pandemic. Commonly referred to as syringe sharing or needle sharing, it involves two or more drug users sequentially using the same needle and/or syringe in order to inject a dose of liquefied drugs, such as heroin, cocaine, amphetamines or buprenorphine. Behaviours that can lead to needle and syringe sharing include borrowing and lending, selling, buying and renting, or even picking up a syringe discarded by a previous user. A lack of a perceived risk of HIV infection can lead to the sharing of needles and syringes. Moreover, the practice of sharing can be strongly influenced by the context in which it occurs, group norms and rituals, inaccessibility of injecting equipment, and an inability to carry injecting equipment because of familial, social or legal environments. Such factors explain why needles and syringes are shared with others even when sterile equipment is available. There are various additional avenues for HIV transmission, generally in social situations where injecting drug users prepare and use drugs together. For example, injecting drug users often share other items while preparing drugs for consumption, e.g. cookers, water cups, filters, spoons, swabs, ampoules and other containers used for drug preparation, storage and transport.

## NEEDLE AND SYRINGE PROGRAMMES

There are various needle and syringe programme modalities, different ones predominating in different countries. Some programmes require one-for-one exchange of needles and syringes, while others attempt to achieve high levels of exchange but accept less than a 100% return rate. Some programmes encourage secondary exchange, where injecting drug users collect a relatively large number of clean syringes and needles and then distribute them to other injecting drug users with whom they are in contact, aiming to reach users who may not be in touch with services.

Some programmes sell needles and syringes. Others distribute them free with or without attempting to remove used injection equipment from circulation. Most programmes make the equipment available at designated outreach points, trust points, vans or drop-in centres. Pharmacy-based programmes often complement community schemes, as they provide access to a somewhat different population of injecting drug users. Vending machines increase coverage geographically and over time but, of course, have the disadvantage of not providing information, counselling or referral through face-to-face contact.

Programmes for increasing the availability of sterile injecting equipment are usually accompanied by informational activities aimed at reducing the utilization of



non-sterile injection equipment and increasing the rate at which used equipment is safely discarded. Information on opportunities for reducing drug use in the longer term may also be provided. The establishment of effective disposal systems for used equipment is important for reducing the quantity of contaminated equipment in the community and limiting negative community attitudes toward such programmes. This kind of risk-reduction education is provided most effectively by peer outreach workers, drug users or ex-drug users. Other accompanying measures include:

- ▮ increasing the capacity, range and quality of drug-dependence treatment, especially substitution treatment;
- ▮ improving referral to treatment programmes;
- ▮ improving the promotion of condom use;
- ▮ improving access to HIV counselling and testing;
- ▮ improving the care, treatment and support of people with HIV/AIDS;
- ▮ improving prevention and control of sexually transmitted infections.

## EVIDENCE

WHO commissioned a review of more than 200 studies. The conclusions are outlined below.

▮ There is compelling evidence that increasing the availability and utilization of sterile injecting equipment for both out-of-treatment and in-treatment injecting drug users contributes substantially to reductions in the rate of HIV transmission. For example, a study published in 2002 [1] compared HIV prevalence in 103 cities in 24 countries. The HIV infection rate had declined by an average of 18.6% annually in 36 cities with needle and syringe programmes, whereas it had increased by an average of 8.1% annually in 67 cities lacking such programmes. These findings confirmed those of earlier reviews [2, 3, 4]. For example a 1997 study [5] compared HIV infection rates among injecting drug users in 52 cities without and 29 with needle and syringe programmes in North and South America, Europe, Asia and the South Pacific. On average the HIV infection rate increased by 5.9% per year in the former and decreased by 5.8% in the cities with needle and syringe programmes.

▮ There is no convincing evidence of major unintended negative consequences of programmes providing sterile injecting equipment to injecting drug users, such as initiation of injecting among people who have not injected previously, or an increase

in the duration or frequency of illicit drug use or drug injection.

▮ Needle and syringe programmes on their own are not enough to control HIV infection among injecting drug users. They should be supported by a range of complementary activities, such as risk-reduction education and referrals to drug-dependence treatment and primary care services.

▮ Pharmacy-based programmes and vending machines increase the availability of sterile injecting equipment to injecting drug users and their utilization of it. However, needle and syringe programmes involving face-to-face contact have benefits additional to that of reducing the rate of HIV infection among injecting drug users, including an increase in recruitment into drug-dependence treatment and primary care services. Pharmacists are often not trained to provide additional information and HIV/AIDS prevention services.

▮ Legislation related to needles and syringes, e.g. paraphernalia laws that penalize injecting drug users and drug-dependent persons carrying their own clean injecting equipment, as well as penalizing health and outreach workers who make such equipment available, can be an important barrier to HIV control among injecting drug users.

▮ There is only limited evidence supporting the effectiveness of programmes that promote bleach and other disinfectants for the prevention of HIV/AIDS among injecting drug users. Such programmes may, however, be the last resort in situations and settings where needle and syringe programmes are not feasible.

<sup>1</sup> Health Outcomes International. *Return on investment in needle and syringe programs in Australia*. Canberra: Commonwealth Department of Health and Ageing; 2002. Available from: URL: <http://www.health.gov.au/pubhlth/publicat/document/roireport.pdf>

<sup>2</sup> General Accounting Office. *Needle exchange programs: research suggests promise as an AIDS prevention strategy*. Washington DC: US Government Printing Office; 1993.

<sup>3</sup> National Commission on AIDS. *The twin epidemics of substance use and HIV*. Washington DC: National Commission on AIDS; 1991.

<sup>4</sup> Lurie P, Reingold AL, editors. *The public health impact of needle exchange programs in the United States and abroad*, vol. 1. Atlanta: Centers for Disease Control and Prevention; 1993.

<sup>5</sup> Hurley SF, Jolley DJ, Kaldor JM. *Effectiveness of needle-exchange programmes for prevention of HIV infection*. *Lancet* 1997;349(9068): 1797-800.

## POLICY AND PROGRAMMING IMPLICATIONS

► Communities or countries threatened by or experiencing an epidemic of HIV infection among injecting drug users should urgently adopt measures to increase the availability and utilization of sterile injecting equipment and to dispose of used equipment. They should provide risk-reduction education, referrals to drug-dependence treatment and abscess management, promote condom use, HIV testing and counselling, and provide care, treatment and support for persons with HIV/AIDS and treatment of sexually transmitted infections. If necessary, legislation related to drug dependence and drug paraphernalia should be reviewed and amended in order to allow for and promote the implementation of needle and syringe programmes.

► Programmes should be implemented on a large enough scale to stop and reverse HIV/AIDS epidemics among injecting drug users. Pilot programmes may have a place in allowing the introduction of such programmes and testing different

delivery mechanisms in different contexts. However, the international experience across countries and regions is so convincing that there is no longer any real justification for such small-scale programmes. Pilot programmes may further delay the much-needed expansion phase and result in inadequate coverage. However, the exact modalities of needle and syringe programmes as well as service delivery options have to be adapted to specific local circumstances.

► Programmes aimed at providing sterile injecting equipment should be specifically designed to meet the needs of subpopulations of injecting drug users, e.g. women, inmates of prisons, male or female sex workers and ethnic minorities. Inmates of correctional facilities are at particularly high risk for HIV infection as they often continue to inject drugs while incarcerated.

► There is only limited evidence supporting the effectiveness of disinfection and decontamination schemes. They should only be advocated as temporary measures where it is not feasible to implement programmes for the provision of sterile injecting equipment .

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