

does needle exchange work?

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why do we need needle exchange?

More than a million people in the US inject drugs frequently, at a cost to society in health care, lost productivity, accidents, and crime of more than \$50 billion a year.¹ People who inject drugs imperil their own health. If they contract HIV or hepatitis, their needle-sharing partners, sexual partners and offspring may become infected.

It is estimated that half of all new HIV infections in the US are occurring among injection drug users (IDUs).² For women, 61% of all AIDS cases are due to injection drug use or sex with partners who inject drugs. Injection drug use is the source of infection for more than half of all children born with HIV.³

Injection drug use is also the most common risk factor in persons with hepatitis C infection. Up to 90% of IDUs are estimated to be infected with hepatitis C, which is easily transmitted and can cause chronic liver disease. Hepatitis B is also transmitted via injection drug use.⁴

Needle exchange programs (NEPs) distribute clean needles and safely dispose of used ones for IDUs, and also generally offer a variety of related services, including referrals to drug treatment and HIV counseling and testing.

why do drug users share needles?

The overwhelming majority of IDUs are aware of the risk of the transmission of HIV and other diseases if they share contaminated equipment. However, there are not enough needles and syringes available and even these are often not affordable to IDUs.

Getting IDUs into treatment and off drugs would eliminate needle-related HIV transmission. Unfortunately, not all drug injectors are ready or able to quit. Even those who are highly motivated may find few services available. Drug treatment centers frequently have long waiting lists and relapses are common.

Most US states have paraphernalia laws that make it a crime to possess or distribute drug paraphernalia "known to be used to introduce illicit drugs into the body."⁵ In addition, ten states and the District of Columbia have laws or regulations that require a prescription to buy a needle and syringe. Consequently, IDUs often do not carry syringes for fear of police harassment or arrest. Concern with arrest for carrying drug paraphernalia has been associated with sharing syringes and other injection supplies.⁶

In July 1992, the state of Connecticut passed laws permitting the purchase and possession of up to ten syringes without a prescription and making parallel changes in its paraphernalia law. After the new laws went into effect, the sharing of needles among IDUs decreased substantially, and there was a shift from street needle and syringe purchasing to pharmacy purchasing.⁷ However, even where over-the-counter sales of syringes are permitted by law, pharmacists are often unwilling to sell to IDUs, emphasizing the need for education and outreach to pharmacists.

what's being done?

Around the world and in more than 80 cities in 38 states in the US, NEPs have sprung up to address drug-injection risks. There are currently 113 NEPs in the US. In Hawaii, the NEP is funded by the state Department of Health. In addition to needle exchange, the program offers a centralized drug treatment referral system and a methadone clinic, as well as a peer-education program to reach IDUs who do not come to the exchange. Rates of HIV among IDUs have dropped from 5% in 1989 to 1.1% in 1994-96. From 1993-96, 74% of NEP clients reported no sharing of needles, and 44% of those who did report sharing reported always cleaning used needles with bleach.⁸

Harm Reduction Central in Hollywood, CA, is a storefront NEP that targets young IDUs aged 24 and under. The program provides needle exchange, arts programming, peer-support groups, HIV testing and case management and is the largest youth NEP in the US. Over 70% of clients reported no needle-sharing in the last 30 days, and young people who used the NEP on a regular basis were more likely not to share needles.⁹

Says who?

1. Rice DP, Kelman S, Miller LS. Estimates of economic costs of alcohol and drug abuse and mental illness, 1985 and 1988. *Public Health Reports.* 1991;106:280-92.

2. Holmberg SD. The estimated prevalence and incidence of HIV in 96 large US metropolitan areas. *American Journal of Public Health.* 1996;86:642-654.

3. CDC. HIV/AIDS Surveillance Report. 1998;9:12.

4. Alter MJ, Moyer LA. The importance of preventing hepatitis C virus infection among injection drug users in the United States. *Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology.* 1998; 18(Suppl 1):S6-10.

5. Gostin LO, Lazzarini Z, Jones TS, et al. Prevention of HIV/AIDS and other blood-borne diseases among injection drug users: a national survey on the regulation of syringes and needles. *Journal of the American Medical Association.* 1997;277:53-62.

6. Bluthenthal RN, Kral AH, Erringer EA, et al. Drug paraphernalia laws and injection-related infectious disease risk among drug injectors. *Journal of Drug Issues.* (in press).

7. Groseclose SL, Weinstein B, Jones TS, et al. Impact of increased legal access to needles and syringes on practices of injecting-drug users and police officers—Connecticut, 1992-1993. *Journal of Acquired Immune Deficiency Syndromes.* 1995;10:82-89.

8. Vogt RL, Breda MC, Des Jarlais DC, et al. Hawaii's statewide syringe exchange program. *American Journal of Public Health.* 1998;88:1403-1404.

does needle exchange reduce the spread of HIV? encourage drug use?

It is possible to significantly limit HIV transmission among IDUs. One study looked at five cities with IDU populations where HIV prevalence had remained low. Glasgow, Scotland; Lund, Sweden; New South Wales, Australia; Tacoma, WA; and Toronto, Ontario, all had the following prevention components: beginning prevention activities when levels of HIV infection were still low; providing sterile injection equipment including through NEPs; and conducting community outreach to IDUs.¹⁰

A study of 81 cities around the world compared HIV infection rates among IDUs in cities that had NEPs with cities that did not have NEPs. In the 52 cities without NEPs, HIV infection rates increased by 5.9% per year on average. In the 29 cities with NEPs, HIV infection rates decreased by 5.8% per year. The study concluded that NEPs appear to lead to lower levels of HIV infection among IDUs.¹¹

In San Francisco, CA, the effects of an NEP were studied over a five-year period. The NEP did not encourage drug use either by increasing drug use among current IDUs, or by recruiting significant numbers of new or young IDUs. On the contrary, from December 1986 through June 1992, injection frequency among IDUs in the community decreased from 1.9 injections per day to 0.7, and the percentage of new initiates into injection drug use decreased from 3% to 1%.¹²

Hundreds of other studies of NEPs have been conducted, and all have been summarized in a series of eight federally funded reports dating back to 1991. Each of the eight reports has concluded that NEPs can reduce the number of new HIV infections and do not appear to lead to increased drug use among IDUs or in the general community.¹³⁻¹⁵ These were the two criteria that by law had to be met before the federal ban on NEP service funding could be lifted. This is a degree of unanimity on the interpretation of research findings unusual in science. Five of the studies recommended that the federal ban be lifted and two made no recommendations. In the eighth report the Department of Health and Human Services decided that the two criteria had been met, but failed to lift the ban.¹⁵ The Congress has since changed the law, continuing to ban federal funding for NEPs, regardless of whether the criteria are met.

is needle exchange cost-effective?

Yes. The median annual budget for running a program was \$169,000 in 1992. Mathematical models based on those data predict that needle exchanges could prevent HIV infections among clients, their sex partners, and offspring at a cost of about \$9,400 per infection averted.¹⁶ This is far below the \$195,188 lifetime cost of treating an HIV-infected person at present.¹⁷ A national program of NEPs would have saved up to 10,000 lives by 1995.¹³

what must be done?

Efforts to increase the availability of sterile needles must be a part of a broader strategy to prevent HIV among IDUs, including expanded access to drug treatment and drug-use prevention efforts. Although the US federal government has acknowledged that NEPs reduce rates of HIV infection and do not increase drug use rates, it still refuses to provide funding for NEPs.¹⁵ Therefore, advocacy activity at the state and local community level is critical. However, the federal government should play a more active role in advocating for NEPs publicly, even if it doesn't fund them.

States with prescription laws should repeal them; those with paraphernalia laws should revise them insofar as they restrict access to needles and syringes. Local governments, Community Planning Groups and public health officials should work with community groups to develop comprehensive approaches to HIV prevention among IDUs and their sexual partners, including NEPs and programs to increase access to sterile syringes through pharmacies.

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9. Kipke MD, Edgington R, Weiker RL, et al. HIV prevention for adolescent IDUs at a storefront needle exchange program in Hollywood, CA. Presented at 12th World AIDS Conference, Geneva, Switzerland. 1998. Abstract #23204.

10. Des Jarlais DC, Hagan H, Friedman SR, et al. Maintaining low HIV seroprevalence in populations of injecting drug users. *Journal of the American Medical Association*. 1995;274:1226-1231.

11. Hurley SF, Jolley DJ, Kaldor JM. Effectiveness of needle-exchange programmes for prevention of HIV infection. *Lancet*. 1997;349:1797-1800.

12. Watters JK, Estilo MJ, Clark GL, et al. Syringe and needle exchange as HIV/AIDS prevention for injection drug users. *Journal of the American Medical Association*. 1994; 271:115-120.

13. Lurie P, Drucker E. An opportunity lost: HIV infections associated with lack of a national needle-exchange programme in the USA. *Lancet*. 1997;349:604-608.

14. Report from the NIH Consensus Development Conference. February 1997.

15. Goldstein A. Clinton supports needle exchanges but not funding. *Washington Post*. April 21, 1998:A1.

16. Lurie P, Reingold AL, Bowser B, et al. The Public Health Impact of Needle Exchange Programs in the United States and Abroad. Prepared for the Centers for Disease Control and Prevention. October 1993.

17. Holtgrave DR, Pinkerton SD. Updates of cost of illness and quality of life estimates for use in economic evaluations of HIV prevention programs. *Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology*. 1997;16:54-62.