Perspective

AIDS and IV Drug Use

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HUMAN IMMUNODEFICIENCY VIRUS (HIV) HAS DRAMATICALLY changed the personal, public health, and political consequences of injecting illicit drugs. Intravenous (IV) drug use is the second most common risk behavior among persons with AIDS in the United States and Europe, accounting for about 30% of the current cases (*1*). IV drug users are also the major source for heterosexual and perinatal HIV transmission in the United States and Europe (*1*). HIV has spread rapidly among IV drug users in some developing countries, including Brazil, Argentina, and Thailand (*2*).

Control of the spread of HIV among and from IV drug users remains a realistic possibility. This will take the political courage to act on presently incomplete research findings and a new generation of studies that can provide better answers for the questions asked by public health and political leaders.

Different sampling techniques make comparisons difficult, but two conclusions can be drawn from studies among IV drug users. First, wide geographic variation exists. New York City, San Francisco, and Los Angeles have roughly equal seroprevalence rates among homosexual men, but rates of approximately 50%, 15%, and 5% among IV drug users. Second, low seroprevalence rates can quickly become high seroprevalence rates. Increases of 10% or more per year have been observed in New York City, parts of Italy, Edinburgh, and Bangkok (*2*).

Differences in questionnaires and sampling complicate any attempt to synthesize data on risk behaviors associated with HIV exposure. Most risk factor studies find infection is associated with frequency of drug injection and "sharing" of injection equipment with large numbers of other IV drug users, such as occurs in "shooting galleries" (places where IV drug users rent injection equipment) or with "house works" (injection equipment lent by drug dealers to customers).

The pharmacologies and subcultures of different drugs may also lead to differences in HIV infection. In Sweden, more than 50% of heroin injectors are infected, as compared to 5% or less of amphetamine injectors. Several U.S. studies show that cocaine injection is more closely linked to HIV exposure than heroin injection (*2*). Present limitations on treatment for cocaine dependence, and the possibility of increased European cocaine injection, make its association with HIV exposure particularly worrisome.

One surprise emerging from AIDS research among IV drug users is the frequency with which deliberate risk reduction is found. Risk reduction among IV drug users has been shown in association with antibody testing and counseling, methadone treatment, outreach and bleach distribution programs, syringe exchange programs, over-the-counter sale of syringes, increased illicit marketing of sterile syringes, and AIDS information campaigns (*3*). These behavior changes must be considered risk reduction, not risk elimination. Relatively few IV drug users have permanently stopped injecting or always practice safe syringe hygiene. Drug users undergoing withdrawal or intense drug craving are particularly likely to engage in high-risk injection.

The ultimate effectiveness of these behavior changes has yet to be determined. Risk reduction has been followed by relative stabilization of seroprevalence among IV drug users in five cities—New York City, San Francisco, Innsbruck, Stockholm, and Amsterdam—suggesting that behavior changes among IV drug users can reduce the spread of HIV at the community level (*4*).

A three-component model has been proposed as a way of organizing risk reduction: (i) IV drug users in a local area must believe AIDS is a threat, (ii) the means for behavior change (drug abuse treatment, sterile injection equipment, or a way to decontaminate used equipment) must be readily available, and (iii) reinforcement for the new behavior must occur over an extended period of time (*5*).

The most common responses by public health and political authorities to HIV infection in IV drug users have been denial or expansion of previous drug abuse control efforts. Most arguments against dramatic changes have held that proposed actions would not work and would also encourage or condone drug addiction. This argument has been applied to proposals for increasing legal access to sterile injection equipment in the United States and for methadone maintenance in England, Scotland, France, and Germany.

Current data provide no support for such fears. Studies of syringe exchange and other "safer injection" programs have found no increases in IV drug use (*3*). Methadone treatment has been associated with reduced rates of HIV infection (*3*) and produces complete abstinence at about the same rate as drug-free treatment (*6*). Providing treatment to reduce drug injection and providing means for safer injection may be complementary rather than contradictory forms of AIDS prevention. Treatment is needed because it is very difficult to practice safer injection when drug use is out of control, and safer injection programs are needed because drug abuse treatment is not uniformly successful.

Besides the fears of possibly counterproductive efforts, there are other reasons for the relative lack of AIDS prevention programs. With a few exceptions, such as the Netherlands and Australia, IV drug users are not organized to lobby for AIDS prevention programming, and the "not in my backyard" reaction is a frequent community response to programs for drug users.

Over the next 10 years, the pressure generated by HIV infection among IV drug users, their sexual partners, and their children will undoubtedly create more opportunities for both "more-of-the-same" and locally innovative programming. Unfortunately, present research is rarely capable of answering the fundamental question "Will this work?" There have been very few studies that have linked a well-described intervention to quantified behavior change to actual HIV seroprevalence among IV drug users. Comparison of these few studies is greatly hampered by different methods of recruiting subjects and different units of measurement for behavior change, and the lack of a model for how seroprevalence "should" change in the absence of an effective intervention.

Cross-national studies can help break through rhetoric about drug use that often limits public health programs. Two such cross-national studies, with the standardized sampling and measurement strategies needed to permit generalization across sites, are currently being organized by the World Health Organization and the European Economic Community.

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