Syringe Disposal
December 2005

It is estimated that an individual IDU injects about 1,000 times a year and that persons with diabetes who use insulin inject once or twice a day. Providing community-based ways to safely dispose of used syringes is an important public health priority.

As of 2004, injection drug use accounted for about one-fifth of all HIV infections and most hepatitis C infections in the United States.***(1,2)*** Injection drug users (IDUs) become infected and transmit the viruses to others through sharing contaminated syringes and other drug injection equipment and through high-risk sexual behaviors. Women who become infected with HIV through sharing needles or having sex with an infected IDU can also transmit the virus to their babies before or during birth or through breastfeeding.

To effectively reduce the transmission of HIV and other blood-borne infections, programs must consider a comprehensive approach to working with IDUs. Such an approach incorporates a range of pragmatic strategies that address both drug use and sexual risk behaviors. One of the most important of these strategies is ensuring that IDUs who cannot or will not stop injecting drugs have access to sterile syringes. (See the related fact sheets, Access to Sterile Syringes and Physician Prescription of Sterile Syringes to Injection Drug Users.) Ensuring access is only part of the equation, however.

Why Are Syringe Disposal Programs Needed?

It is estimated that an individual IDU injects about 1,000 times a year.***(3)*** This adds up to millions of injections, requiring millions of syringes every year. Providing ways for IDUs to safely dispose of used syringes is an important public health priority.

The problem is much larger than just IDUs, though, for an estimated 2.4 million diabetics also make about 1 billion injections of insulin each year. A 1990 survey of diabetics who inject insulin reported that 93% of them threw their used syringes in the trash, 3% disposed of them in the toilet, and only 4% placed them in puncture-resistant containers.***(4)***

Is the Public Concerned About Syringe Disposal?

With the advent of AIDS, used syringes discovered on the streets and in parks have created a high level of public concern. Several instances in the late 1980s of medical waste, including syringes, washing up on the beaches of New York focused intense attention on the need to regulate and improve the safe disposal of used syringes and other "sharps" to prevent both needle stick injuries and the possible transmission of blood-borne diseases, such as HIV and viral hepatitis. Federal, state, and local agencies have taken some steps to address this problem by passing laws and

regulations controlling syringe and other hazardous waste disposal in health care settings.

Although needle stick injuries are occupational risks for sanitation, housekeeping, and janitorial workers, the risk of acquiring HIV infection from an accidental needle stick in the community is extremely low. The risk of acquiring hepatitis B and/or C is probably higher. Despite this low absolute risk, the sheer volume of syringes used every year and the high level of public concern mean that communities must address the issue of safe disposal of used syringes. This is also important in light of the fact that the potential for used syringes to be discarded on streets and in neighborhoods is a primary factor in community opposition to programs that are intended to increase IDUs' access to sterile syringes, such as pharmacy sales and syringe exchange programs (SEPs). For example, pharmacists, who play a pivotal role in efforts to increase the pharmacy sales of sterile syringes, cite the risk of discarded syringes near their stores as one of their greatest concerns in decisions whether or not to sell syringes.***(5)*** (See the related fact sheet Pharmacy Sales of Sterile Syringes.)

What Safe Disposal Initiatives Have Already Been Tried?

SEPs provide an important way for IDUs to safely dispose of used syringes. IDUs report a distinct preference for SEPs compared to other safe disposal methods, because they receive a sterile syringe in exchange for every used one.***(6)*** (See the related fact sheet Syringe Exchange Programs.)

Three other methods used in the U.S. also provide avenues for safe syringe disposal:

- Placing used syringes in puncture-resistant containers, such as bleach or soda bottles, which are then thrown in the trash. Holding on to used syringes, however, places IDUs at risk for arrest. This approach also has little to offer homeless persons who have no place to store containers, and it presents some risk to sanitation workers because even heavy-duty bleach bottles will break under sufficient pressure. A law passed in 1994 in Washington State actually prohibits disposal of syringes in residential trash.***(4)***
- Providing sharps containers and designating drop-off sites in pharmacies, hospitals, and health departments. The containers are then picked up as part of ongoing biohazard disposal programs. San Francisco's Safe Needle Disposal Program has used this method in pharmacies to collect about 1.5 million used syringes a year. Needle stick injuries among San Francisco sanitation workers dropped from 21 the year before implementation to 1 in 1994 and 3 in 1995. ***(4)***
- Using drop boxes, located on street corners in neighborhoods with high drug traffic. Drop boxes have been supported by the communities in which they have been tried because they are "one-way only"—syringes go into the box but cannot be retrieved. This reduces the reuse of contaminated syringes and the risk of accidental needle sticks. For example, during a 6-month evaluation period, community residents, IDUs, and police officers in Baltimore found acceptable Operation Red Box, which placed four converted mailboxes in locations chosen by the Baltimore City Health Department in consultation with community associations.***(7)***

What Are the Barriers to Safe Syringe Disposal?

Most states have drug paraphernalia laws, which establish criminal penalties for the manufacture, sale, distribution, and possession of any item, including syringes, used to produce and consume illegal drugs. (See the related fact sheet State and Local Policies Regarding IDUs' Access to Sterile Syringes.) IDUs in these areas have potent and realistic concerns that they will be arrested if they save used syringes or carry them to a disposal site. A qualitative study of IDU and community attitudes toward various methods of syringe disposal gave IDUs a chance to describe these fears:***(6)***

"They'd [the police] catch you with a dirty syringe and you'd go to jail for possession, so people ain't hardly gonna keep 'em laying around, keep 'em in a container or whatever."

"They know they can stop you, and if you come and dispose of them, they got a case there."

"Chance of going to jail, I'm not going to risk that. That's me. I got a probation, so I can't take the chance at all. I'm so scared now. Then I'd have to go back and do all that time."

Drug paraphernalia laws and the resulting fear of arrest, make it less likely that syringes will be safely disposed of, make it harder to implement safe disposal programs, and consequently, contribute to unsafe disposal of used syringes.***(6)***

Another potential barrier is that many local, state, and federal laws govern the handling and disposal of infectious waste. They are critically important in determining whether a disposal program is workable, but they differ substantially from community to community. This makes it difficult to develop programs that could be adopted in more than one community.

Finally, community opposition to syringe disposal programs can be an important barrier. This opposition centers around fears that such programs may create a public safety and health problem, appear to condone drug use, make communities where they are located look bad, attract more drug users and dealers, and present opportunities for vandalism.

What Have Communities Done?

Initiatives to ensure that all those who inject—both IDUs and diabetics—can safely dispose of their used syringes have been an integral component of national efforts to reduce hazardous waste in the community and to control the epidemics of HIV and other blood-borne diseases.

Program planners have encouraged wide community involvement and worked to generate strong local support, including participation by physicians and other health

care professionals, diabetes educators, law enforcement, pharmacists, community outreach workers, diabetics who use insulin, IDUs, sanitation workers, medical waste and refuse companies, and relevant state and national organizations. These discussions have addressed the laws and regulations that impede safe disposal efforts. Disposal programs have protected the safety and anonymity of IDUs to maximize their involvement.

An initiative in Minnesota shows how various groups have worked together to develop a strong safe disposal program. In 1997, the state legislature passed a comprehensive HIV prevention bill, which included safe syringe disposal as an integral element of an initiative to increase IDUs' access to sterile syringes through pharmacy sales. The Syringe Access Initiative allowed pharmacies to sell up to 10 syringes without a prescription and allows individuals to legally possess up to 10 unused syringes at a time. Pharmacies must certify that they participate in safe disposal activities and they may provide information to IDUs about drug treatment programs, safe syringe disposal, HIV counseling and testing, and HIV prevention. Safe disposal activities included distributing information and education materials, distributing and collecting sharps containers for used syringes, referring individuals to a medical facility that accepts used syringes, providing information about area SEPs, and collecting used syringes from individuals.

Key elements of the Initiative had a broad focus on all those who use syringes to inject—both diabetics and IDUs—and participation by many concerned groups, including pharmacists, health departments, community-based prevention workers, diabetes associations, legislators, and waste management companies.

For More Information

Read *A Comprehensive Approach: Preventing Blood-Borne Infections Among Injection Drug Users,* which provides extensive background information on HIV and viral hepatitis infection in IDUs and on the legal, social, and policy environment. It also describes strategies and principles for addressing these issues.

Sources

1. Glynn M, Rhodes P. Estimated HIV prevalence in the United States at the end of 2003. 2005 National HIV Prevention Conference; June 12–15, 2005. Atlanta, GA. Abstract T1-B1101.

2. Centers for Disease Control and Prevention (CDC). Hepatitis C fact sheet. December 1, 2005.

3. Lurie P, Jones TS, Foley J. A sterile syringe for every drug user injection: how many injections take place annually, and how might pharmacists contribute to syringe distribution? *Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology* 1998;18(Suppl 1):S45-S51.

4. Macalino GE, Springer KW, Rahman ZS, Vlahov D, Jones TS. Community-based programs for safe disposal of used needles and syringes. *Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology* 1998;18(Suppl 1):S111-S119.

5. Wright-De Agüero L, Weinstein B, Jones TS, Miles J. Impact of the change in Connecticut syringe prescription laws on pharmacy sales and pharmacy managers' practices. *Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology* 1998;18(Suppl 1):S102-S110.

6. Springer KW, Sterk CE, Jones TS, Friedman L. Syringe disposal options for injection drug users: a community-based perspective. *Substance Use and Misuse* 1999; 34(13):1917-1934.

7. Riley E, Beilenson P, Vlahov D, Smith L, Loenig M, Jones TS, Doherty M. Operation Red Box: a pilot project of needle and syringe drop boxes for injection drug users in East Baltimore. *Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology* 1998;18(Suppl 1):S120-S125.