

A review of the Halifax needle exchange program

Dan Steinitz, B.Sc.(H.K.)

Faculty of Medicine, Dalhousie University, Halifax, Nova Scotia, B3H 4H7

Acquired Immuno-Deficiency Syndrome (AIDS) is a deadly disease which is increasingly becoming a great concern to all health care professionals as well as the general population. The use of needles contaminated with the HIV virus has been clearly demonstrated to be a substantial contributor to the virus transmission. The sharing of needles in the intravenous drug using community clearly puts this population at increased risk of HIV transmission. The mandate of needle exchanges is to decrease the number of contaminated needles on the streets contributing to HIV transmission. "Main Line" is a Halifax-based needle exchange actively addressing these issues.

Acquired Immuno-Deficiency Syndrome (AIDS), a deadly disease which is reaching epidemic proportions, is a major health care concern today. In the United States, intravenous drug use ranks second as a risk factor for human immunodeficiency virus (HIV) contraction (1). Approximately 5,000,000 people around the world are intravenous (IV) drug users (2). One can clearly see the immediate need for reducing the risk of transmission of HIV in this population, and also their sexual partners and children (1,2).

One intervention to combat the prevalence of HIV transmission in this population is the opening of needle exchange operations in major centres (3). The goal of the needle exchange is to reduce the risk of transmission of HIV and other blood-borne infections such as Hepatitis B virus (HBV) among IV drug users. The strategy of Main Line is to remove contaminated needles from the street and replace them with clean needles (2,4, Personal Communication, Main Line staff).

Twenty-three percent of the adult cases of acquired immunodeficiency syndrome (AIDS), in the U.S. are contracted via IV drug use (1). In some large centres, such as New York City, IV drug use is the

primary risk factor for HIV infection. An estimated 60% of New York City's 250,000 IV drug users are infected with the HIV virus (1). Fifty-three percent of N.Y. City's IV drug users reported in a recent study that they always share needles with other drug users (1). A similar study from Great Britain, that interviewed long-term frequent injectors, found that 55% reported 'used equipment lending' while 52% reported 'used equipment borrowing' (5). Another N.Y. City study showed that 97% of a group of 261 IV drug users interviewed knew that HIV was transmitted via needle sharing (1). Obviously, this knowledge does not act as an effective deterrent. It has been established that the sharing of needles is not due to drug rituals or friendship, but primarily due to lack of a needle availability. Needle availability is compromised by the fear of arrest for possession of drug paraphernalia, the difficulty (frequent illegality) of purchasing needles, the shame experienced in needle purchase and the cost of needle purchase (1-4, Personal Communication, Main Line staff). One study by researchers at Yale University, showed that needles randomly sampled from a local shooting gallery were found to be 97% HIV positive. Needles from the surrounding streets were found to be 68% HIV positive (Referenced in 1). The potential for HIV transmission in epidemic proportions in this population is clear. All the above data are representative for major American cities, however, the trend is of grave

Address for correspondence:

Daniel Steinitz, Box 378, Tupper Building, Faculty of Medicine, Dalhousie University, Halifax, Nova Scotia, Canada B3H 4H7

importance when considering the health care of smaller centres such as Halifax, Nova Scotia.

Data on HIV/AIDS from the Nova Scotia Department of Health indicates that the cumulative incidence of AIDS in Nova Scotia from 1983 to 1993 totalled 131 cases with 92 deceased and 39 alive. The number of these cases associated with illicit IV drug use is three in total and two of these cases are deceased. The distribution of the AIDS cases in Nova Scotia shows that out of 131 total cases reported up to 1993, 96 were located in the Halifax Health Region (6).

Needle exchange programs are founded on four experimentally validated principles: needle sharing transmits HIV, IV drug users regularly share their needles, needles are shared primarily because of needle unavailability, and sharing of needles is reduced if needle availability is increased (1). Needle exchange programs have been shown to be frequented by IV drug users who are not in contact with other drug services (2,7, Personal Communication, Main Line staff). Thus, this program allows for contact and potential educational opportunities with members of this population. The needle exchange, without promoting drug use, or preventing abstinence, gives the IV drug user the option to adopt drug use behaviour that will reduce the risk of HIV infection. This reduced risk will translate to a decreased risk to the IV drug user, their sexual partners, drug partners, and children (1). Highly available clean needles will reduce needle rental and sharing, and reduce the prevalence of local shooting galleries where the aforementioned practices occur (8). The needle exchange programs, through a mixture of education and physical elimination of contaminated needles, attempt to disrupt the continuum between IV drug use and HIV infection (8). Primary motivators associated with risk reduction are reported as talking about AIDS with drug using friends and sexual partners, as well as knowing persons who are HIV positive (9). Studies have shown that it is not necessary to completely eliminate the risk to prevent an HIV epidemic (2,9). Research shows that while it is possible to prevent or stabilize epidemics in an IV drug user population, the reversal of an HIV epidemic is far more difficult (2).

An unofficial needle exchange program was started in Nova Scotia in 1989. In 1992, an official needle exchange, "Main Line", began operation in Halifax (Personal Communication, Main Line staff). This paper will attempt to describe the importance, need and effectiveness of this program.

MAIN LINE

In order to review the needle exchange program in Halifax an interview was performed with a member of the "Main Line" staff. Because of the personal nature of some of the responses the interviewee will remain anonymous. Main Line's statistical data was also ex-

amined.

Between its opening in May 1992 and November 1993, Main Line has been visited by 4,743 clients and has distributed over 36,000 needles. Main Line is visited by a variety of clients ranging in age from 16 to 64 and coming from all over Halifax and even the remote areas of Nova Scotia. Most of the clients are opiate addicts in search of clean needles, but other services are provided by Main Line. Referrals are made to addiction treatment centres and information on HIV transmission and AIDS is readily available at the centre. The centre also distributes condoms free of charge and disposes of used needles. The used needles are taken to the Victoria General Hospital for incineration. The centre operates on the basis of a trust relationship with their clients. A user will come to the clinic for needles and will not be harassed or lectured on the evils of drug use; rather, all the workers at the clinic are recovering addicts who get to know the clients personally after a few visits. This relationship helps the staff make information about treatment programs and reduced risk behaviour available to the clients without making the clients feel threatened. This is important as users of a needle exchange clinic are individuals not likely to be in contact with other drug treatment programs (Personal Communication, Main Line staff). Main Line makes approximately 16 referrals to treatment clinics per month. Unfortunately, many of these clients get turned away from the treatment programs because of limited space. The space limitation is usually blamed on lack of funding. This is detrimental to the client and the program as a critical healing opportunity may be missed (Personal Communication, Main Line staff).

Main Line has a 75% return on needles distributed even though they neither mark their needles nor require the disposal of a needle to receive a needle. In reality, the needle exchange increases the number of needles on the street, however, it decreases the number of contaminated needles. Even though the cost of needles is not very high (approximately three dollars) and the buying or carrying of needles is not illegal in Nova Scotia, the apparent factor causing needle sharing is still lack of needle availability. When an addict is in need of a "hit" even the risk of HIV infection is insufficient to deter him/her from using a possibly contaminated needle and the first needle available will do. Almost all of the clients are likely aware of the risks of HIV infection (Personal Communication, Main Line staff).

Main Line is well situated in the North End of Halifax and runs an outreach program to other areas including some of the local bars. It has been estimated that Main Line reaches 30% of metro Halifax's IV drug using population (Personal Communication, Main Line staff). Although the prevalence of HIV infection among IV drug users is likely not as high in Halifax as in major American cities, it is at this juncture that the prevention of an epidemic is most feasible. Main Line, by providing limitless clean needles free of charge, reduces the need

for needle selling/sharing on the streets (Personal Communication, Main Line staff).

Main Line is definitely meeting its goals of providing community risk reduction for HIV transmission. This is a critical form of preventative medicine which treats the cause of the disease rather than the symptoms.

COMMUNITY IMPACT

Another such program, the New Haven needle exchange program operates at a cost of approximately 150,000 dollars per year and offers the potential of preventing numerous HIV infections. This cost is minuscule when compared with the medical costs for treating an individual in the US with AIDS which can surpass \$35,000 a year (American data; 1). Main Line presently operates on provincial funding of approximately \$86,000 dollars a year (1993 data; Personal Communication, Main Line staff). This is a small figure when compared to the health care costs of treating AIDS patients. This cost reduction extends to society and particularly to families of AIDS patients in both financial and emotional manifestations. It is very difficult to evaluate the effectiveness of the needle exchange program without doing some correlative work on the rate of HIV infection in the IV drug using community before and after the implementation of the Main Line program. No local study of this nature has been performed, however confidence in the program seems justified after examination of similar programs in major centres. A study examining the needles disposed of at Main Line for prevalence of HIV would determine the risk reduction potential of the program, however, the importance of risk reduction should not be minimized by any lack of HIV prevalence. The effectiveness of the Main Line program can also be appreciated with respect to client enrolment in treatment programs, especially since the clientele are likely not in contact with any other drug treatment programs. Thus, the referral of approximately 16 people a month to treatment programs is a very positive factor both for risk reduction and general community health. The Halifax needle exchange is an excellent example of effective community medicine. It combats the problem of HIV transmission and infection at the level of the individual as well as the population.

REFERENCES

1. Firlirk AD and Schreiber K. AIDS prevention by needle exchange. *New York State Journal of Medicine* 1992; 92:426-430.
2. Friedman SR Des Jarlais DC. AIDS and the use of injected drugs. *Scientific American*, February 1994: 82-88.
3. Guydish J, Clark G, Garcia D, Downing M, Case P and Sorenson J L. Evaluation needle exchange: Do distributed needles come back? *American Journal of Public Health* 1991;81:617-619.
4. Bardsley J, Turvey J and Blatherwick J. Vancouver's needle exchange program. *Canadian Journal of Public Health* 1990;81:39-45.
5. Hart J H, Woodward N, Johnson A M, Tighe J, Parry J V and Adler M W. Prevalence of HIV, Hepatitis B and associated risk behaviors in clients of a needle-exchange in central London. *AIDS* 1991;5: 543-547.
6. Update: HIV/AIDS in Nova Scotia, Epidemiology, Nova Scotia Department of Health, 1993.
7. Carvell A.M., Hart G.J. Help-seeking and referrals in a needle exchange: A comprehensive service to injecting drug users. *British Journal of Addiction* 1990;85:235-240.
8. Joseph S C. Current challenges of AIDS in New York City. *New York State Journal of Medicine* 1989;89:517-519.
9. McConnell H, "Needle exchange slows HIV rates: IX International Conference on AIDS", *The Journal*, July/August 1993.



We know what ails you

We know as well as you do that as health care professionals, success in achieving practice and financial independence depends on continuous sound planning and business management ...We also know financial independence is more of a challenge today than ever before.

KPMG Peat Marwick Thorne and KPMG Management Consulting are here to help. We've developed a comprehensive approach to providing advice in practice management, financing, investments, insurance, tax planning and cash management. Through ongoing consultation, your goals can be identified and we'll develop strategies which will change along with your changing economic and financial needs at each stage of your career on into retirement.



Offices in Halifax, Sydney and Yarmouth