

# Needle exchange: Panacea or problem?

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## Résumé

DE NOMBREUSES DONNÉES PROBANTES INDIQUENT que les programmes d'échange d'aiguilles sont rentables et peuvent aider à contrôler la transmission de l'infection par le VIH chez les consommateurs de drogues injectées. Ils peuvent toutefois être moins efficaces dans le cas des personnes qui s'injectent de la cocaïne, dont le nombre est à la hausse, et l'on craint que, en attirant les consommateurs de drogues injectées les plus à risque, les programmes lancés dans de grandes régions métropolitaines ne servent à favoriser l'apparition de nouveaux réseaux sociaux. En bout de ligne, nous ne pouvons nous en remettre uniquement à ces programmes pour enrayer l'épidémie de VIH : il faut les intégrer à un vaste éventail de services supplémentaires qui mettent l'accent sur le traitement et la réadaptation plutôt que sur les sanctions.

Over the past 2 years there has been considerable debate in Canada and elsewhere concerning the role of needle exchange programs in slowing the rate of HIV transmission among injection drug users. In this issue Michelle Gold and colleagues contribute to the debate by arguing that such programs are cost-effective (page 255). Using data on direct health care costs, they make the point that if the local program they evaluated succeeded in averting just 1 case of HIV infection each year it would be justified from an economic point of view. The thorny issue remains as to the extent to which such programs reduce the incidence of HIV infection among injection drug users.

Conventional wisdom, based on experience in several cities in Europe and Asia, holds that once the prevalence rate of HIV infection in a community of injection drug users has reached 10%, it is difficult to control further transmission.<sup>1</sup> This level had been reached in Montreal by July 1989, when, under the National AIDS Strategy cost-sharing initiative, special projects aimed at preventing HIV transmission among injection drug users were announced. Projects were funded in 8 cities in 5 provinces, using a multiagency approach that included education on risk reduction, counselling, provision of condoms and bleach, linkage to other health and social services, and needle exchange. Today, hundreds of needle exchange programs are in place across the country in community clinics, hospital emergency departments, pharmacies, native friendship centres and other designated sites. Outreach programs incorporate needle exchange as part of general prevention activities; these programs employ peer-education strategies and take needles and disposal containers to users on the street and to other sites where drug injection is occurring.

## Is needle exchange effective?

There is considerable evidence that needle exchange programs are having their intended effect of reducing incidence rates of HIV infection among injection drug users without increasing rates of drug use.<sup>2,3</sup> In Canada, federally funded evaluations of the early programs looked at the number of people reached, the rates of needle and syringe exchange, demographic characteristics and behavioural factors, including drug injection practices and sexual activity. Reductions in needle sharing and increased use of bleach to clean needles were clearly demonstrated.<sup>4</sup> One can only hypothesize about possible outcomes had prevention strategies not been im-



*Editorial*

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plemented. Measuring the true impact of needle exchange programs is difficult: ethical and logistic constraints preclude the random assignment of communities or cities to intervention and nonintervention trial arms. However, contrasts between countries permit some calculations. For example, Australia instituted a national needle exchange strategy in 1987; it is estimated that, had the US done so at the same time, between 4394 and 9666 HIV infections in that country would have been prevented, resulting in savings in direct health care costs alone of between US\$244 million and US\$538 million.<sup>5</sup>

However, there are disquieting increases in the proportion of new AIDS cases reported among Canadian drug users. For women, the numbers are striking, rising from 6% of new cases before 1989 to 15% during the period 1989–92, and reaching 24% of new cases during the period 1993–96. Corresponding figures for men are 1%, 2.6% and 5%.<sup>6</sup> Dramatic increases in the number of HIV infections attributed to injection drug use have been reported in some areas: in BC, the proportion of new positive test results among injection drug users jumped from 9% before 1995 to 38% in 1995.<sup>7</sup> In Montreal and Vancouver respectively, 20% and 25% of injection drug users are now estimated to be infected.<sup>8</sup> More telling are the rates of new HIV infections among injection drug users in 1996: 8.2 per 100 person-years in Montreal<sup>9</sup> and 18.6 per 100 person-years in Vancouver.<sup>10</sup> The latter is the highest rate observed in North America today.

Why is this epidemic among injection drug users evolving? One reason may be the changing profile of drug consumption patterns. Increased injection of cocaine is being reported by communities across the country. Whereas heroin users may inject 2 or 3 times a day, often alone or with 1 other person, cocaine injectors may do so 20 or more times a day when they are bingeing, and often in larger groups.<sup>8</sup> Such conditions make keeping track of one's own needles problematic, thus increasing the risk of HIV exposure.

In Montreal, needle exchange participants are more likely to have paying sexual partners, to be men who have sex with men<sup>11</sup> and to have a higher HIV incidence than nonparticipants.<sup>12</sup> Needle exchange programs clearly are attracting a higher risk clientele. These findings give rise to concern that large needle exchange programs in metropolitan centres may be bringing together people who otherwise might not meet, thereby creating new social networks and fostering the mixing that has been shown to increase HIV transmission.<sup>13</sup> As well, quotas on the maximum number of needles that could be exchanged daily may have exacerbated the situation, and likely disadvantaged cocaine injectors more than heroin users.

Finally, across the country, access to detoxification services and to appropriate treatment and rehabilitation pro-

grams is generally poor. Many of these programs have long waiting lists. Four times more is spent on law enforcement for illicit drug use in Canada than on health care and treatment for users;<sup>14</sup> this is consistent with the punitive paradigm that is the hallmark of the US-led "war on drugs." Moreover, incarceration itself has been shown to constitute a risk for HIV acquisition.<sup>15,16</sup> When treatment options are available, those in need may not take advantage of them for fear of encountering discriminatory or uneducated attitudes on the part of treatment providers. Inadequate and ill-adapted treatment programs contribute to maintaining the number of active drug users, with devious implications for HIV transmission.

## What is to be done?

In its report of May 1997 the National Task Force on HIV and Injection Drug Use advocates changes in policy and legislation, a strengthening of prevention programming and modifications in treatment modalities.<sup>8</sup> Among its recommendations are proposals for improved needle exchange programs. These include providing wider access by increasing the number of needle exchange sites throughout the country in hospital emergency rooms, public health clinics, community-based clinics and pharmacies. The task force also advocates the integration of needle exchange programs with a wide range of additional health services, including detoxification, treatment and rehabilitation programs, health promotion and nutritional counselling, self-esteem training and advice on safe injection practices. These changes would require a cooperative, multisectoral approach. For example, police forces and judges should play an active role in referring drug users to needle exchange and treatment services.

Needle exchange programs have proven their capacity to attract participants and facilitate behavioural change without incurring community disapproval. However, they are not sufficient to stem the HIV tide among injection drug users.<sup>17</sup> Drug consumption patterns are changing, and access to treatment services is less than optimal. It is time to face the facts squarely and move rapidly to reduce HIV transmission among drug users. In addition to humanitarian considerations, there are significant direct health care costs to consider. There is also the reality that the HIV epidemic among drug users may ultimately touch other lives, infecting and affecting many Canadians who have never used drugs.

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