

Evaluation of the AIDS Prevention Street Nurse Program: One Step at a Time

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Le programme de prévention du SIDA mené par les infirmières de rue utilise des infirmières spécialisées en santé communautaire dotées d'une formation spéciale dans le but de promouvoir la prévention du HIV et des MTS auprès d'une clientèle marginale, difficilement atteignable et à risque élevé. Cette démarche s'inscrit dans un effort pour diminuer les problèmes et promouvoir la santé. Des infirmières de rue ($n = 17$), des pourvoyeurs de soins ($n = 30$), des représentants d'autres programmes HIV/MTS dans la province canadienne de la Colombie-Britannique ($n = 5$) et des clients ($n = 32$) ont été interviewés au cours d'une évaluation dans le but de décrire le travail qu'effectuent les infirmières, les défis qu'elles doivent relever, l'harmonisation de ce programme avec les autres services et l'impact du travail des infirmières. Cet article décrit les effets du travail des infirmières auprès des clients. Les changements sur le plan de l'impact/des résultats indiquaient une progression en matière de niveaux de connaissances et de comportements, et des indicateurs majeurs de santé/maladie. Les effets exercés sur la clientèle incluaient : une meilleure connaissance du HIV/SIDA, de leur propre situation et des options; l'utilisation de fournitures essentielles destinées à réduire les problèmes et à promouvoir la santé; un changement de comportements visant à réduire la transmission de maladies, améliorer la résistance et promouvoir la santé; l'utilisation de ressources d'aide; un sentiment de mieux-être avec eux-mêmes et leur entourage; un sentiment d'être soutenu et d'exercer une influence sur les autres; le sentiment de recevoir plus rapidement de l'attention, face à des problèmes; un meilleur état de santé avec ou sans HIV; l'intégration de changements majeurs en ce qui a trait à l'usage de drogues; et une baisse probable de morbidité et de mortalité. Le programme s'est révélé nettement efficace et ses effets sur la clientèle se sont avérés positifs.

The AIDS Prevention Street Nurse Program uses specially prepared community health nurses to focus on HIV and STD prevention with marginalized, hard-to-reach and high-risk clients within a broader context of harm reduction and health promotion. Street nurses ($n = 17$), service providers ($n = 30$), representatives of other HIV/STD programs in the province of British Columbia, Canada ($N = 5$), and clients ($n = 32$) were interviewed during an evaluation for the purpose of describing the nurses' work, the challenges the

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nurses' face, the fit of the program with other services, and the impact of the nurses' work. This article describes the impact of the nurses' work on clients. Impact/outcome changes reflected a progression from knowledge to behavioural levels and to major indicators of health/illness. Impact on clients included: knowing more about HIV/AIDS, their own situation, and options; receiving essential supplies to reduce harm and promote health; changing behaviour to reduce disease transmission, improve resistance, and promote health; connecting with help; feeling better about themselves and others; feeling supported; influencing others; receiving earlier attention for problems; being healthier with or without HIV; making major changes in drug use; and likely decreasing morbidity and mortality. The Program was found to be clearly effective in making a positive impact on clients.

The AIDS Prevention Street Nurse Program (the Program), an innovation that uses specially prepared community health nurses to work "on the street," was initiated as a pilot project in Vancouver, British Columbia, Canada, in January 1988. Prior to 1988 a smaller, outreach sexually transmitted disease (STD) program was specifically targeted to persons in jail. This was redirected in response to the HIV/AIDS epidemic. In the Program, the nurses work with challenging clients and complex situations in an expanded nursing practice role that includes several delegated medical functions.

Two previous evaluations of the Program (Chan, 1990; Wachtel, 1992) did not, according to the nurses, address areas helpful in informing and influencing their practice. Also, several changes were made to the Program since these were conducted. Both studies used mainly quantitative methods. Chan administered a structured questionnaire to 86 street people and Wachtel primarily analyzed client contact records. The nurses wanted to have the nature of their work and its challenges described so that it was visible, and they wanted to have the impact on clients described. As Cohen and Kibel (1993, cited in Julian, Jones, & Deyo, 1995) suggest, in complex, natural environments, traditional evaluation questions related to cause and effect are less important than questions related to impact. Cohen and Kibel define key evaluation questions in terms of understanding the environment in which programs are implemented and tracking progress towards the achievement of specific outcomes.

The goal of the present evaluation was to describe the work of the street nurses and the challenges posed by that work from the perspective of the nurses and others (including clients), and to identify changes resulting from the nurses' work. It was believed that such an analysis would help the street nurses articulate their role and their contributions and identify ways in which the Program might be made more effective. The description of the nurses' work might assist others wishing to offer

community outreach services and might help identify gaps in service. This article describes the impact of the nurses' work on clients.

The Program

The primary mandate of the Program is prevention of HIV and STD within a broader context of harm reduction and health promotion, with a focus on the South and Eastside areas of downtown Vancouver. The target populations are marginalized, hard-to-reach, and high-risk street-involved adults and youth; non-street-involved gay, lesbian, bisexual, and transgendered populations; and refugees and immigrants at risk for HIV and STD who may or may not be street-involved. The target population is not homogeneous. The Program also serves as the provincial training site for STD/AIDS outreach programs.

The Program increased from 7.5 street nurses (Full Time Equivalent — FTE), one administrator, and one clerk in 1994; to 8.5 street nurses and two health-care workers in 1995; to 11 street nurses (FTE), two administrators (FTE), two health-care workers (FTE), and two clerks (FTE) in 1998/99.

The nurses and health-care workers go where the clients are, in addition to having established sites of contact such as jails, detoxification centres, clinics, and drop-in centres. Nurses also go door-to-door in single-room occupancy (SRO) hotels and make on-the-street contacts both on foot and via mobile van. The Program is operated by the STD/AIDS Control Division of the British Columbia Centre for Disease Control (BCCDC). Formerly a division of the Ministry of Health, the BCCDC is now part of the Greater Vancouver/Richmond Health Board.

Harm Reduction

The concept of harm reduction embodies beliefs and values that provide direction for social policy, programs, and interventions related to the unintended effects of the use of psychoactive substances (Drucker, 1995; Riley, 1993). Harm reduction has been most often associated with efforts to control the spread of HIV infection among injection drug users (IDUs) and more recently in slowing the rates of hepatitis C infection in the same population (Drucker).

Beliefs and values surrounding the use of non-medical drugs range from a prohibitionist/abstinence perspective to a legalization/decriminalization-of-drugs perspective (DuPont & Voth, 1995). While most of the recent discourse has focused on the use of illicit drugs, the notion of

harm reduction is also applicable to tobacco and alcohol use — for example, driving-under-the-influence laws (Griffin, 1997). Prohibition was the predominant model in the last century until the 1960s when the world saw a proliferation in the availability and use of illicit drugs (DuPont & Voth). The appearance of the AIDS epidemic among the IDU population in the 1980s raised serious questions about the effectiveness of existing drug policies (Drucker, 1995).

Harm reduction encompasses a range of strategies such as addiction treatment (including methadone maintenance), needle-exchange programs, education in safer drug use and safer sexual practices, and reformation of public policy and drug laws (Drucker, 1995). Nurses in the Program are directly involved in needle exchange and in educational measures directed towards safer drug use and safer sexual behaviour. They are indirectly involved in the referral of clients to addiction treatment programs and in the support of clients in those programs.

Methods

An Evaluation Advisory Committee (EAC) was established comprising representatives of the street nurses, the project coordinator hired for the evaluation, and the evaluators. Both qualitative and quantitative methods were used in this participatory evaluation. Participatory research was deemed appropriate because of its emphasis on collaboration (Erlandson, Harris, Skipper, & Allen, 1993). Qualitative methods are particularly appropriate in responsive evaluation because of their openness and sensitivity to the diverse perspectives of various stakeholders (Patton, 1987). The qualitative methods used in this evaluation included semi-structured interviews and focus groups as well as content analysis of relevant Program documents, such as BCCDC annual reports, for additional information.

A series of nominal group-process sessions conducted by the EAC identified key client groups and service providers to be interviewed. Interviews and focus groups were held with four main groups involved with the Program: clients ($n = 32$), street nurses ($n = 17$), other service providers ($n = 30$), and representatives of other HIV/STD programs in the province of British Columbia ($n = 5$) (Table 1). A total of 63 interviews were conducted with 84 individuals; these included 50 individual interviews, four client focus groups, four street nurse focus groups, and five service provider focus groups. Several of the client interviews were conducted in languages other than English.

Table 1 Client Groups Interviewed	
Client Group	Number
Female IDUs and sex trade workers	3
Male IDUs	7
Male/transgendered sex trade workers	6
Mobile outreach home-visit client	1
Street youth	6
Bute Street clients	2
Jail	2
Detox client	1
Latino outreach client	1
Francophone client	1
Southeast Asian client	1
Ex-clients	1
Total	32

Clients interviewed were representative of the various target groups of the Program. They were recruited through contacts with the street nurses or approached individually. Clients received a small remuneration for their participation in the study. Interview locations ranged from SROs in the Downtown Eastside to the British Columbia Correctional Centre for Women. In addition, individual interviews were conducted with six street nurses to provide further clarification in several areas. The interviews, which ranged from 30 minutes to two hours in length, were taped and transcribed and, if appropriate, translated. All participants were fully informed and gave their written consent. Procedures were approved by the University of British Columbia Ethics Committee.

Interview questions were developed in consultation with the EAC. Client questions that focused on impact included: (1) As a result of your work with the nurses, has anything changed for you? (2) What kinds of things have you learned from the nurses, and what have you done with that information? (3) Has your work with the street nurses changed how or which services, including health-care services, you use? If so, describe the changes.

Interview questions for the street nurses and other providers focused on client changes they believed to be a result of the Program. They were asked for case examples to help describe those changes, in order to obtain both general perspectives and perspectives related to

changes in particular clients. The client situations described by the nurses and other providers did not necessarily refer to the same clients who were interviewed.

The transcriptions were read carefully. Although the data were generally segmented by responses to interview questions, any comments in the interviews relating to changes that might have resulted from the nurses' work were included in the analysis of impact. Open coding was used to identify ideas, and further analysis reflected higher order themes. Constant comparative analysis was used to help clarify and refine (Strauss & Corbin, 1990). The team met to discuss the categories and to further refine and define them, as well as to increase the specificity of the codes and to develop higher order themes. Trustworthiness and rigour were supported by clarifying the decision trail (auditability), staying close to the informant's words, using quotations in presenting the results (credibility), discussing themes as they were identified, and supporting evidence with the team and others (fittingness) (Denzin & Lincoln, 1994; Lincoln & Guba, 1985). This process facilitated identification of properties and dimensions and verification of fit.

Findings

To help put the findings on the impact of the nurses' work into context, the themes that emerged on the nature of their work will be identified and briefly described. Further description of the nature of the nurses' work can be found in Hilton, Thompson, and Moore-Dempsey (1999, 2000). All participants contributed to an understanding of the nature of the nurses' work. Reaching marginalized populations at high risk for HIV/STDs focused on the nurses' accessibility, consistency, and flexibility in going where the clients were and establishing contact. Building and maintaining trust, respect, and acceptance focused on the nurses' provision of care in a user-friendly, non-threatening, non-judgemental way. Working towards HIV/AIDS/STD prevention, early detection, treatment, and referral focused on promoting harm reduction within a holistic framework — working with the client's agenda first; educating for harm reduction; testing, monitoring, and contact tracing for HIV/STD, tuberculosis, and pregnancy; providing resources such as needle exchange and condom distribution; and dealing with other care issues such as vein maintenance, wound care, and first aid. Connecting clients with and helping them negotiate the health-care system focused on the nurses' role in providing instrumental and emotional support. The nurses' work also reflected their role in influencing the system and other people to be responsive to the needs of the target population.

Changes Due to the Nurses' Work

Many Program-related changes were identified, but nurses commented on the difficulty of evaluating the impact of their work because of clients being influenced by many powerful factors. To make a significant impact, the Program would have to address core issues such as addictions, poverty, housing, and employment — issues that it could not effectively address in the short term. The nurses also found it difficult to evaluate change because it was impossible for them to know what happened to clients in the long term. As one nurse said, "Did they move out? Did they die? Did they clean up their act? We never know, but it's changing all the time." Nurses also explained that their expectations became more realistic after they had worked in the Program for a while:

I'm going to hand out a whole bunch of condoms — that's going to solve the problem? I mean, that's called a finger in a very large dike. There's no way that can happen, because you have to go for a core behaviour change before you're going to get anywhere, and you're not going to get core behaviour change in a short or long period of time... Survival is the biggest thing down there, so AIDS has never taken a big front seat, so in order to be able to offer services, you're going to have to deal with what's going on and then get to what it is you need to get to, and that happens over and over and over again with every interaction.

In spite of these challenges, results of the nurses' work were identified by clients, other service providers, and the nurses themselves. Their work also affected other services and programs. Its impact on clients reflected the theme *taking one step at a time*. Changes occurred both directly and indirectly. Clients were quite clear on how the street nurses' work impacted on them, reflecting a progression from knowledge changes through to behaviour changes related to primary and secondary prevention through to health promotion (Figure 1).

Major areas of nurses' impact on clients were reflected in the following themes: knowing more about HIV/AIDS/STDs, their own situation, and their options; receiving essential supplies to reduce harm and promote health; changing behaviour to reduce disease transmission, improve resistance, and promote health and well-being; connecting with help or care; changing feelings about themselves and others; feeling supported; influencing others; receiving earlier attention, thereby reducing the severity of problems; being healthier with or without HIV; making major changes in drug use; and changing indicators likely reflective of decreased morbidity and mortality. Each of these themes will be described using supporting quotes and information.

Knowing more about HIV/AIDS/STDs, their own situation, and their options. As a result of the Program, clients were more aware of and more knowledgeable about HIV/AIDS/STDs, risk behaviours, transmission, prevention, and harm reduction; other health problems and concerns; the availability of resources/services in general and those specific to the individual client; their own health state/situation; and how to care for themselves and make better health-care choices. Because efforts were made to provide services in languages other than English, these changes were noted in clients from diverse cultures. Their new awareness and knowledge helped clients to clarify misconceptions, but they did not necessarily apply all their newly acquired information. Making behavioural or attitudinal changes reflected higher levels of Program impact. Comments from clients included the following:

I know my health status: before, I didn't. When I was hustling. Before I got involved with them [street nurses] and got any tests done I had no clue whether I was positive or negative for any disease and now at least I know, and that's definitely a direct result of them.

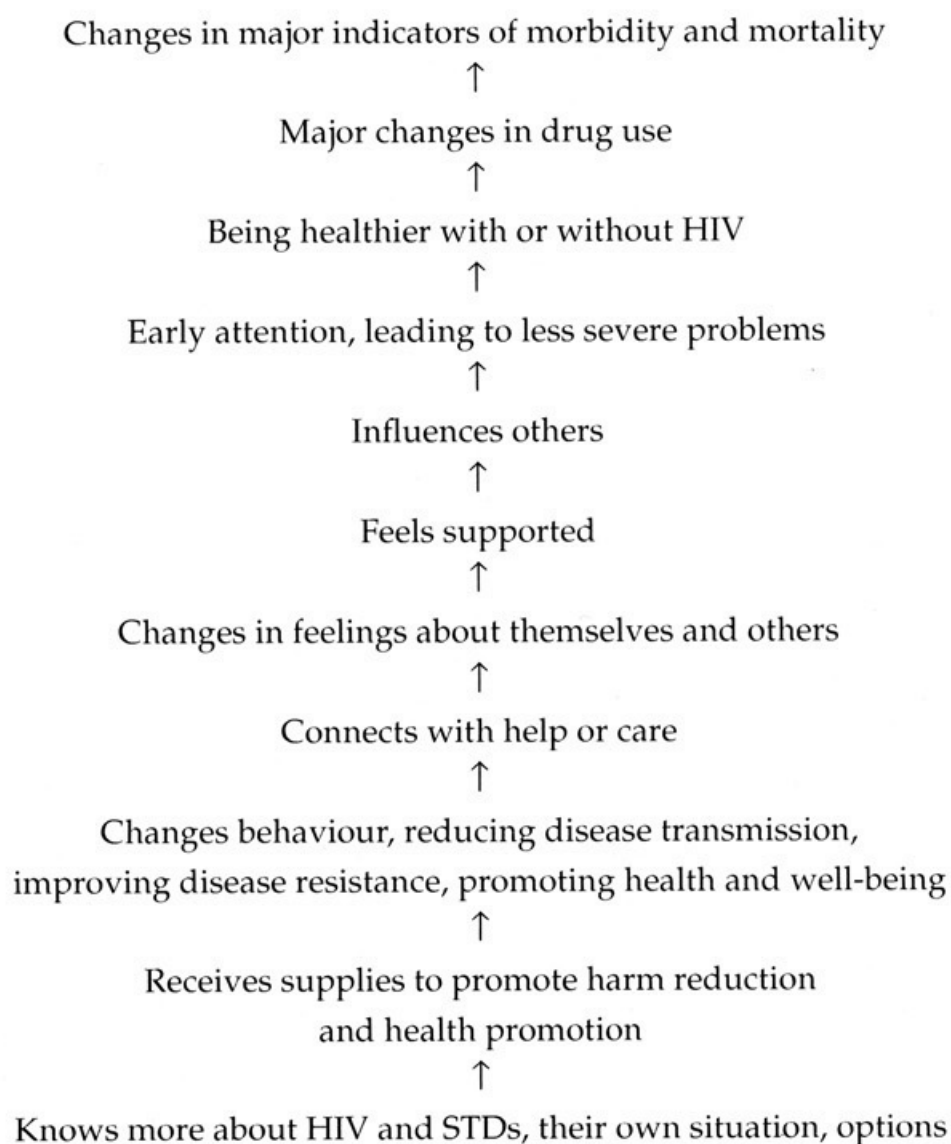
You shouldn't share your water without bleach...they give you a little paper with all this stuff on it and they sit down and talk about it and tell you what not to use...you should always clean before you inject.

Receiving supplies to reduce harm and promote health. Clients received supplies, such as condoms, bleach, and clean needles, for the prevention and transmission of disease. They also received medicines for the alleviation of discomfort and the promotion of health. These helped promote behavioural change; without them, change was not likely to occur.

In 1997/98 the Program distributed 386,067 needles; in 1999/2000 a projected 407,664 will be distributed (British Columbia Centre for Disease Control [BCCDC], 1998/99). In 1997/98 the return rate of needles exchanged was high, 391,910 — more than were distributed. The street nurses also instituted a bulk needle exchange to better meet the needs of IDUs who require a larger number of needles, partly because these clients were less likely to access exchange locations consistently.

Bulk needle exchanges also make secondary needle exchange possible. Secondary needle exchange occurs when nurses exchange needles for IDU peers unwilling or unable to access the services of street nurses. Other providers saw bulk exchange as a counter-productive strategy, whereas the nurses saw it as an appropriate strategy for increasing the likelihood of IDUs using clean needles each time they injected.

Figure 1 *Client Changes Reflecting a Process of Enablement*



Changing behaviour to reduce disease transmission, improve resistance, and promote health and well-being. Influencing behavioural changes in the marginalized, hard-to-reach population is an important step in preventing and reducing disease transmission and improving health. It is not easy to initiate behavioural changes in this population, yet clients said they did things differently because of the nurses. These behavioural changes were key to reducing disease transmission, increasing resistance, and promoting improvements in health and well-being. Clients changed their habits related to needles, drugs, and

condoms. They described themselves as using safer injection techniques more often, using condoms more often, managing wounds more effectively, and using drugs in a less dangerous manner. Clients said they now used new needles "every time," were more careful about sharing needles, and used condoms more consistently. One client said he would "never again" share needles. Another said he had been using condoms incorrectly until seeing the nurse demonstrate proper use. Another stated, "I would never do it without a condom," while another spoke about changing his injection methods. A street youth said, "I cleaned up my act when I learned my HIV status" from the nurse. Although it is not possible to know the number and consistency of these behavioural changes, it was evident that positive changes had come about as a result of the nurses' work and that these changes would lead to a decrease in disease transmission. The street nurses and other service providers corroborated each other's testimony on changes in risk behaviours.

Clients also said they looked after themselves more, had improved diets, and were taking better care of their bodies. They requested information on how to care for themselves. The nurses indicated that clients were making healthier choices, staying on their medications, and following routines. One of the nurses said, "I've seen clients go from living on the streets to being able to find, if not necessarily the best housing, at least some form of housing...and being able to find other options in terms of nutrition and how to feed themselves more adequately."

Connecting with help or care. The nurses also connected clients with resources. Clients had better access to care, increased STD and HIV testing, earlier diagnosis, and access to mainstream services. Reports indicated that street nurse encounters numbered approximately 45,000 annually, of which 8,500 related to clients with STD or HIV (BCCDC, 1999). The Program accounted for 11% of all STD visits in the province (BCCDC, 1997, 1998/99).

Because of the Program, many clients were tested and subsequently treated for HIV and STDs. Of all positive HIV tests in British Columbia (3,101, out of 140,278), the street nurses identified 10% — a clear indication of an effective program facilitating early treatment (BCCDC, 1997, 1998/99). In addition, the Program served to identify other STDs, many of which would have gone undetected for long periods, often leading to further complications. In 1997, 2,040 STD clients were seen in the Program (1,260 males, 767 females, and 13 transgendered persons). Of the 2,010 people screened for STDs, 776 were diagnosed with a variety

of STDs, some particularly serious — and the sooner treatment is begun the better, not only for the affected clients but also for those to whom they might transmit. The return-visit rate of clients after testing was excellent, ranging from 76% to 87% at various clinic locations.

The nurses were also effective in helping providers, such as Tuberculosis Control, to locate clients and contacts requiring follow-up. Service providers were very clear about the important role of the nurses in connecting and following up with clients who were hard to locate, those “no one else could find.” One of the nurses spoke about a client who had returned, after several years, to be treated for HIV:

You are trying to fit them in [to services] so that it would be helpful for them, but they make that decision. They're the ones that initiate that, but they know that you're there for them. It doesn't matter how many times they screw up or whatever happens to them, they can come in and sit down and talk to you and say, "Look, this is what is happening and I'm ready. I think I'm ready to change," and it happens. It's amazing how that happens sometimes. You haven't seen someone for years. Someone I hadn't seen for eight years who was HIV positive — she was just a young girl, 15, [and she] showed up at the clinic one day and said she remembered me and "I'm ready to do something about being HIV positive, now, what shall I do?" So we must make an impact somewhere for someone to do that and for her to know that she feels really comfortable doing that — no judgements.

The nurses provided clients with many services besides STD and HIV testing. They effectively addressed counselling and follow-up care, wound and abscess care, and crises such as thoughts of suicide. Clients became connected with mainstream services when they needed them and with health and social service providers that were acceptable to them. Because the nurses helped them negotiate the health-care system, the clients were more likely to receive the care they required. High-priority clients — for example, those with bleeding wounds or showing indicators of endocarditis — received more immediate attention.

Several case studies revealed the nurses' part in making those connections. Many clients would not have accessed care otherwise, or would have taken longer to access care, or would have only reluctantly gone to a clinic or sought out a service. Clients were asked what they would have done had the street nurses not been there. Several indicated that they would not have gone elsewhere: “If I can't see a nurse, well, too bad. I'll take care of it myself.” “I'd have nowhere else to turn to get anonymous testing.” Others said they would have taken longer to access care, waiting until the situation worsened: “I know I couldn't go to my regular doctor and talk to him or to any of the nurses [in other

programs] because they just, like I said, they just look at me as sort of, 'oh, you're an ex-junkie,' you know." "I probably wouldn't go for a pap smear until something felt weird." Others indicated that they would have used other resources, though in some cases only reluctantly: "I can open up with the nurses, but I cannot fully open up with the doctor, the doctor is not the same."

Changing feelings about themselves and others. Clients spoke about how their work with the nurses made them feel better about themselves and others. Gaining trust in marginalized populations is a challenge that must not be underestimated. Once the nurses had gained their trust, clients were more likely to be open to having their health issues, including HIV and STD, identified and dealt with, and more likely to accept and complete recommended treatment. Once trust was established, clients were also more likely to incorporate suggested harm-reduction strategies into their lifestyle.

After working with the street nurses, clients felt more positive about themselves, more trusting of other people, and more valued. They had a greater sense of self-respect and dignity, hope, and belief in themselves. One client said that the nurses "make me feel safe and I trust them... Somebody accepts me for who I am and even though some of my choices and those decisions aren't right, it's still OK." A woman in a correctional facility stated:

I'm OK even having HIV. They've given me that strength to believe that I can still be all of who I am with HIV...from nutrition to, like, all the things that go along with HIV and guiding me throughout like that time and you still come back and even so sometimes I wouldn't go there myself. Like, they've come out on the street looking for me. They work to bring me to the doctor. There was times that I had no hope left and stuff like that and they always been there to build me back up to say that things are going to be OK. Like, they do get better from here and at times when I know I need it because sometimes I don't have any hope and I just want to say forget it and I'd rather just be dead and I'd rather just OD and just being there sometimes, yeah, just opens up like more light like a whole new world kind of thing because you can just start again right from where you are and just look at what was going and keep on going.

In addition to the street nurse, some clients gained trust in others whom they would not have trusted previously. Gaining trust with one street nurse was important, but being able to extend that to other street nurses and other service providers was a significant shift.

I didn't trust anybody enough to let them into my life like that. I didn't. I guess because of fear and because I just didn't want them to know too much about me, and then slowly [because the same street nurse was not

in the clinic all the time] for [names another street nurse] to look at and take care of me and assist.

Feeling supported. Because clients felt accepted and supported, they were able to follow through with plans such as entering alcohol or drug detoxification centres, staying off drugs, commencing methadone maintenance, or going to the hospital for tests. Clients knew the nurses were there if needed. Clients felt accepted, whether or not they were successful in their attempts to change their behaviour. This acceptance influenced their participation in their own health care. A service provider said that when one woman who had been in and out of recovery houses ended up on the street again, the woman felt that the street nurses, unlike others, had not judged her for it. The nurses' unique attitude made her want to go back to them for support and medical care. In several other situations as well, clients said they felt it was acceptable to return to the nurses, but not to others, if the clients had — in their own eyes — failed in some way.

Influencing others. Several clients spoke about influencing others to go for HIV/STD testing and to seek assistance with their health-care needs. They did so through encouragement and support, through volunteering, and through teaching. A Spanish-speaking client said: "I could also accompany them [Spanish-speaking persons]. If one of the nurses could not speak Spanish, I could help translate. I want to help other people to know about the services that the nurses give."

Clients influenced others through one-on-one contact and were clearly proactive in making major system changes. One client was influential in having the street nurses first go to the women's correctional facility. Another client developed an excellent instruction packet for new staff about cocaine: how to prepare it for smoking and how to make a pipe.

Receiving earlier attention, thereby reducing the severity of problems. Early attention to health-care concerns can avert more severe problems. Because of the nurses, infections and abscesses were identified and treated early on. In some cases, endocarditis likely was prevented because of timely intervention. Although some conditions required emergency treatment and hospitalization, others were managed outside of hospital by the nurses, in some cases avoiding more serious problems that would have required hospitalization. Clients said they prevented or minimized problems by "fixing properly," "not tying too tight," and "doing proper vein maintenance." A service provider said:

The nurses have circumvented what could have been catastrophes. You see things that if a nurse hadn't gotten on to right away, it could have been a serious problem, and the nurses are more than just nurses. They're part counsellors... [A client] had slashes going up her arms...and you could see these marks going up...this kid was not aware. She thought it was a bruise. She wasn't really concerned with it at all, and this was a Thursday night...What would have happened if she had not seen a nurse? She could have died. It just could have become that much more serious... I had this kid that had a really bad abscess on the top of her hand and she was on the way to blood poisoning. It took a nurse to say, look, this is bad and you have to come with me.

Being healthier with or without HIV. Clients, nurses, and other service providers spoke about clients being healthier because of the Program; they were looking after themselves. Service providers commented that they "often see people start to improve health-wise just because they got that contact [with the street nurses] and they've got someone they can ask questions of and someone who can guide them." Even when clients were using drugs, they indicated that they felt healthier. As one nurse said, "One thing that we might have made a difference in is keeping them healthier during the time that they were using, or maybe helped them prevent catching HIV while they were using." Nurses also noted that they were seeing fewer wounds, likely because clients were using better injection methods. One client stated, "I was losing weight because of the dope I did and now I've been clean for a while and I'm gaining my weight back. I'm now riding a bike. I'm healthy."

Making major changes in drug use. Some clients, nurses, and providers linked the Program to major changes in drug-use behaviour. These changes would likely have been greater had sufficient detoxification beds or other addiction services been available, although nurses were working with some clients in home detox. A service provider said:

I'd love to say that the outcome of the street nurse program is that people get off the street and move to suburbia...that does happen and we know that, but because most of us work in that area we don't necessarily see those people...a lot of success stories get lost because of where we're situated...people don't necessarily want to come back downtown and say...I'm doing great... Those people might not be in contact with us any more.

Although this result was not universal, several clients spoke of major changes in their drug use. Some had been clean for a period of time — for example, 3 months off dope; some said the street nurses were instrumental in getting them off drugs. A service provider also made the connection: "One thing we've certainly seen in any number of the patients is perhaps a reduction in drug use, using drugs in a manner that's less

dangerous, in a safer manner." The nurses also recounted stories of successful entries to detox and of people who had "gone straight."

Changing indicators likely reflective of decreased morbidity and mortality. From the perspectives of clients, nurses, and service providers, changes in morbidity and mortality were likely, although it is difficult to quantify those outcomes. Clients said they felt better and had less pain and discomfort because of medications they had received through the Program. They also said the Program was responsible for their not getting AIDS. "If it wasn't for this place, I would have AIDS." Nurses likely played a part in reducing the magnitude of the HIV epidemic because of their effectiveness in tracking and testing clients. There were fewer conversions to HIV positive (seroconversion) because clients used condoms and practised safer sex. One service provider was very clear on the incidence of HIV and the positive impact of the Program.

What we've seen is a slow decline in [HIV] incidence among men who have sex with men, one of the target populations. We're still seeing new rates of seroconversion, but every year since the program began we've seen a drop in their rates...but we're not down to an elimination of transmission... What we've seen in the street kids is a decline or a levelling in the heterosexually transmitted HIV. I'd say there's been a pretty good impact there... I think the nurses are responsible for reducing one of the major co-factors for transmission, genital ulcer disease...genital ulcer disease is responsible for increasing the transmission of HIV heterosexually sixfold...[the nurses] are bringing a lot of reality testing for people in terms of making...HIV testing much more available... There's a low level of sexually transmitted disease compared to a few years ago.

Some clients believed they were alive because of the nurses: "If it wasn't for the street nurses, I would probably be dead. I really believe that." "If it wasn't for Street Youth Services and the street nurse I probably would have ended up killing myself that night." Prevention of HIV through harm-reduction strategies results in fewer AIDS cases, and early diagnosis/treatment of HIV considerably extends the period between then and the development of AIDS. Assisting and encouraging clients to take better care of themselves promotes health and prevents disease. Although it is not possible to tease out the influence of the Program from other services and the use of triple-drug therapy, the AIDS mortality rate has decreased considerably since 1992: from 241 in 1992 to 11 in 1997; in addition, reported AIDS cases decreased from 296 in 1993 to 101 in 1998 (BCCDC, 1999), and the HIV-positive rate per 100,000 population decreased from 30.46 in 1987 to 12.09 in 1998.

The Program has also influenced other people, services, and programs. For example, the nurses' observations were important in identifying new outbreaks and epidemics, such as levels of syphilis and hepatitis C, and in influencing studies and program changes at the STD Control Division and the BCCDC. Program workers persuaded others, including key members of the drug-trafficking world, to make changes, changes that could have a direct and positive impact. For example, drug dealers agreed to stop selling drugs to youth in the area, although it is not known whether the agreement was honoured, or for how long.

Discussion

The impact of the Program's street nurses can best be understood in the context of health promotion and the concepts of empowerment and enablement. The *Alma-Ata Declaration* states that health promotion is the process of enabling people to increase their control over and improve their health (World Health Organization, 1978). The *Ottawa Charter for Health Promotion* states that "health promotion is the process of enabling people to increase control over, and to improve, their health...an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment" (World Health Organization, Health and Welfare Canada, & Canadian Public Health Association, 1986).

However, as McKnight (1985) states, it is impossible to produce health among the powerless. It is possible only to foster health by transferring tools, authority, budgets, and income to the powerless. Thus the Program had to empower the clients.

The term *empowerment* has been used widely. Though its definition varies, a core set of values and meanings has certainly been agreed upon. To empower is to give official or legal power or authority, to endow with ability, to enable. To enable means to authorize, to empower, or to make possible or effective (Rodwell, 1996). Both words connote the transfer of authority, knowledge, skills, resources, opportunities, and anything else necessary in granting someone the ability to do something they were previously unable to do.

In the context of health promotion, empowerment is a helping process that respects and values individuals and is intended to develop belief in oneself and one's future. At its core, enablement alters the distribution of power, but it also recognizes that power over one's health and well-being originates in self-esteem. Individuals make choices and

must accept responsibility for their actions. Thus health-care professionals cannot empower people; people have to empower themselves; what health-care workers *can* do is provide the resources, skills, and opportunities necessary to develop the client's sense of control.

If this transfer of resources, skills, and opportunities is to be fruitful, it must take place in an atmosphere of mutual trust and respect, education and support, participation and commitment (Rodwell, 1996), and power-sharing (Gibson, 1991).

This trust and respect must flow both ways; the power in the caregiver-client relationship must be shared. Health-care professionals need to surrender control or risk fostering dependence. They need to accept the fact that clients will sometimes make decisions counter to what the health-care professional wants for them. In fact, clients may reject their help altogether, and it is their right, as free cognizant human beings, to do so. In such a process, outcomes depend on individual differences; specifically, they depend on the client's growing self-awareness (Labonte, 1989) rather than on the services provided. In other words, the success of the step-by-step process of empowerment (with occasional backsliding) cannot be defined in any single way; it needs to be defined by the people concerned (Rappaport, Swift, & Hess, 1984).

The literature consistently identifies the following concatenation of benefits as outcomes, impact, or products of empowerment: positive self-esteem or self-concept, the ability to set and reach goals, a sense of control over life and change processes, a sense of hope for the future (Rodwell, 1996; Zimmerman & Warschausky, 1998), a sense of connectedness, self-development, social justice (in that people's choices have been respected), and an overall improved quality of life (Gibson, 1991). Gibson also indicates that an empowerment approach minimizes the client's sense of indebtedness.

These instilled or enabled personal attributes engender self-determined, independent health-promoting behaviours (Ellis-Stoll & Popkess-Vawter, 1998; Zimmerman & Warschausky, 1998). They enable individuals to become well and whole, to develop potential, to develop quality of life, or, if necessary, to let go of life (Jones & Meleis, 1993).

Needless to say, groups with the least power tend to be the ones most difficult to empower (Jenkins, 1991). This poses a challenge because it is precisely the most powerless groups, such as the chronically poor and the homeless, who experience the worst health (Rissel, 1994; Winkle & Ward-Chene, 1992).

In the AIDS Prevention Street Nurse Program, the nurses work with a complex and marginalized population, clearly a challenge in enabling positive health changes. However, the results of the evaluation show that the Program has enabled clients to make changes towards preventing HIV/AIDS and STDs, reducing harm, and promoting well-being. The changes reflected increasing levels of application and complexity, from promoting awareness, knowledge, and greater understanding to facilitating behavioural and attitudinal changes, which in turn promoted changes in health, illness, and disease transmission and resistance (see Figure 1).

Within a framework of non-judgemental care, trust, and respect, the nurses assisted and enabled clients to take one step at a time in becoming more aware of their health, factors influencing their health, and how to more effectively look after their health. Clients became connected to appropriate services and health-care providers and dealt with health situations at an earlier, less serious stage. The nurses helped prevent the transmission of HIV/AIDS and STD, and they assisted HIV-positive clients in increasing their longevity. Positive changes in clients' emotional and psychological well-being were also quite evident and reported by clients to be a result of the nurses' work.

At various points in the study, both the nurses and the clients stressed that the Program's benefits progressed through a series of stages, stages that are consistent with the "hierarchy of changes" described by Cohen and Kibel (1993) and consistent with the process of empowerment.

The nurses had to first generate interest and prove "effects"; then consolidate those effects into "gains" — sustained changes in knowledge, skill, attitudes, or behaviours; then get the clients to "buy in" — that is, to commit to implementing a problem-solving approach to their health. The third level in the process is "capacity enhancements" — actual changes in individual or organizational practices that prevent the onset of or reduce the severity of problems. The fourth level is "outcomes," or observable changes in the behaviour of target populations. The fifth and final level is "impacts" — the changes in social indicators reflecting reductions in problems. All of these levels of results were noted in the AIDS Prevention Street Nurse Program.

Though many of the clients seen by the street nurses remained in poor health, they demonstrated a "health within illness" perspective that emphasizes non-physical dimensions of well-being (psychosocial, social, and spiritual) that may increase or strengthen during the experi-

ence of an illness or transition (Moch, 1989). These clients grew in self-esteem, in their sense of control and understanding of their illnesses, and in their acceptance of their condition. Clients reported that these perceptions improved their quality of life.

When nursing interventions empower individuals or groups to develop their health potential, the nursing profession contributes significantly to achieving health for all.

However, the findings of this report must be interpreted in the light of limitations evident in the study, primarily due to the pragmatics of conducting such an evaluation. The limitations pertain more to the client group than to the nurses or other providers. Only those clients who consented to participate in the study were heard from directly, through their own input. Because the clients were from a marginalized and difficult-to-reach population, they presented more challenges than usual in having their voices heard. It may be that those who had negative experiences in working with the nurses were not heard from adequately; however, every effort was made to register the variation in voices. Although several efforts were made to include ex-clients, this was not feasible because there was no way of contacting them. In addition, even though the investigators made the best use of the resources that were available, the evaluation had only limited funding. In spite of these limitations, we believe the sample is reasonably representative of the thoughts and concerns of nurses, other providers, and clients.

In conclusion, the results of this evaluation reflect the effectiveness of the AIDS Prevention Street Nurse Program in encouraging clients to take one step at a time towards preventing HIV/AIDS and STDs, reducing harm, and promoting well-being. A single program is not likely to result in significant change at the community level, and should be viewed in terms of its contribution to the achievement of broader community outcomes (Cohen & Kibel, 1993). Many core issues cannot be addressed by programs such as the AIDS Prevention Street Nurse Program. It is just one of many that work with this particular client population. For maximal effectiveness, all parties concerned should take advantage of every opportunity for partnering, coordinating, and collaborating on current and future health-care delivery. The AIDS Prevention Street Nurse Program is identified by the Vancouver/Richmond Health Board and other user agencies as a good example of partnering and collaborating with clients and with other programs in the downtown areas of Vancouver. It is often cited as an example of successful community collaborating and partnering.

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