

## Drug use, sexual behaviours and practices among male drug users in Hanoi, Vietnam—a qualitative study<sup>☆</sup>

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Received 4 March 2003; received in revised form 11 June 2003; accepted 12 June 2003

### Abstract

A qualitative study was conducted among drug users in Hanoi, Vietnam in May and June 2001 to describe their drug use practices and sexual behaviours, as well as potential factors that might contribute to the recent increase of HIV among them and local sex workers. A total of 63 drug users in five main districts of Hanoi were recruited for in-depth interviews and focus group discussions. The study found that drug users in Hanoi have been engaging in high-risk injecting behaviours and practices. They reported frequently visiting female sex workers (FSWs) and low condom use. Drug users had poor understanding and practices of cleaning injecting equipment, little knowledge of infection through sexual routes, and infrequent knowledge of their HIV infection status. The study provided evidence that young and new injecting drug users (IDUs) are at particularly high risk of HIV infection, are sexually active, and can serve as a bridge between the drug user and FSWs populations. They and sex workers should be the focus of intervention activities.

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**Keywords:** HIV/AIDS; Drug users; Vietnam; Sex workers; Risk behaviours

### Introduction

Since the first case of HIV infection was identified in Vietnam in 1990, HIV has spread to every province of the country, and infections are now also occurring in the general population (Gorbach, Ryan, Saphonn, & Detels, 2002). In the early years of the epidemic, HIV infection occurred mostly among injecting drug users (IDUs), primarily in South Vietnam. The HIV prevalence among female sex workers (FSWs) remained at around 0.5% in most parts of the country, despite detection and monitoring efforts (Vietnam's National HIV/AIDS Program, 2001). In 1998, however, sentinel surveillance revealed a rapid increase among the IDUs in the north, especially in the two northern cities of Quang Ninh and Hai Phong. The HIV prevalence among IDUs in Quang Ninh and Hai Phong, re-

spectively, rose from 0 and 0.1% in 1996, to 65.9 and 32.5% in 1998, and 64.9 and 64% in 1999 (Vu, Chung, Hoang, & Dondero, 2000). A rapid increase among the IDUs was observed in Hanoi, from 2% in 1997, to 5.5, 10.5, 17.5, 22.3, and 25.3% in 1998, 1999, 2000, 2001, and 2002, respectively (Subcommittee of HIV/AIDS Surveillance, 2003; Vietnam National AIDS Committee, 2001). Following the HIV outbreak in the IDUs, there was a rapid rise in HIV prevalence among FSWs. In northern cities and provinces such as Hanoi, Hai Phong, and Quang Ninh, the prevalence jumped from 0.5% to around 10% in only 2 years (Vietnam National AIDS Committee, 2001; Vietnam's National HIV/AIDS Program, 2001).

A survey among the IDUs in Hai Phong in 1998 indicated that young IDUs were practicing unsafe sharing of needles and syringes. They were also sexually active and usually practiced unprotected sex with their partners (Nguyen, Hoang et al., 2001).

To better understand the reasons for the rapid increase in HIV prevalence in both drug users and sex workers, we conducted a qualitative study among the drug user population in

<sup>☆</sup> This project was supported by a grant from the National Institutes of Health/Fogarty International Center, #TW00013.

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Hanoi which described their risk characteristics and their interaction with FSWs. A similar study was conducted among FSWs in Hanoi and is reported separately. The studies used in-depth interviews and focus group discussions to generate insights into the social and cultural aspects of drug users' behaviours and practices. The information from these two qualitative studies provides insight into which interventions are most likely to be successful to control the spread of HIV infection in these two populations.

## Methods

The study was conducted using in-depth interviews and focus group discussions among drug users, from May to June, 2001. Subjects were selected from five districts in Hanoi, including four urban (Dong Da, Cau Giay, Ba Dinh, Hai Ba Trung) and one suburban (Gia Lam) district. These five districts were selected non-randomly because they were suspected of having the highest number of drug users in Hanoi. Initially, in-depth interviews were conducted with three IDUs. The results of these interviews were used to verify the topics of the focus group discussions, which were conducted with 60 subjects in all five districts. For example, they provided an understanding of the general drug situation, the slang used by the drug users, and ensured that the questions were culturally appropriate.

Subjects were recruited with the help of peer educators, using the "snowballing" method. Most of the peer workers were current IDUs. The inclusion criteria were male drug users who had had sexual experience with FSWs. The participants were either young and new users or long-time users. The young and new users could be heroin smokers or IDUs, but all the long-time users were IDUs. Group compositions varied in order to provide a range of information. Among the discussion groups, one group included only smokers, three groups included both smokers and IDUs, and five other groups included only IDUs. We defined the young drug users to be 30 years of age or younger. The new drug users were defined as those who had used drugs for 2 years or less. The study participants were verbally given informed consent. Each in-depth interview lasted about 2.5 h, and each group discussion lasted about 1.5 h. The interviews and discussion sessions were conducted in private locations that were selected for the participants' convenience. Questions asked and topics discussed included the basic characteristics of the drug users, such as age, marital status, occupation, duration of drug use and injecting, types of drugs used, sharing behaviours and practices, sexual behaviour and attitudes, and HIV testing experiences. We used an inductive design, in which topics and questions in the subsequent sessions were modified according to the results of the previous sessions, in order to focus on issues not adequately discussed in the previous focus groups, such as unusual sexual practices, relations with the FSWs, or drug use characteristics. The sessions were conducted by

the first author of the paper. Both the in-depth interviews and the discussions were taped, then transcribed and noted down immediately after each session. The transcripts were analysed by topic area for consistency and frequency of similar responses. Salient themes were identified and verified in subsequent focus groups, and these are reported here. The study was conducted with the understanding and consent of each participant, and was approved by the Institutional Review Boards of the University of California, Los Angeles and the Vietnam National Institute of Hygiene and Epidemiology.

## Results

### *Study population*

There were 63 study subjects, aged 19 to 45 years. Mean and median ages were 29.7 and 29 years, respectively. Because of the selection criteria, all new drug users were young (30 years old or less). The long-time users included all ages. All subjects were male. Among the participants, 18 were heroin smokers and 45 were IDUs, 37 (58.7%) were not working, 10 (15.9%) were workers, 11 (17.5%) were small business owners, 2 (3%) were long-distance truck drivers, and 3 (4.8%) were in college or high school. Most of the subjects reported that they had a good job and were wealthy in the past, but had become poor after becoming involved with drugs. Thirty-nine of the 63 participants (62%) were single, amongst whom only 7 currently had a girlfriend.

### *Drug use behaviours*

All study participants mentioned heroin, called "white", as the most common drug used in Hanoi. Heroin is sold in a package costing 30,000–50,000 Vietnamese dong (VND) or US\$ 2–3.30, called a "tep" (3–5 g), which can be used for both smoking and injecting. A user normally uses two to three packages a day. Opium, called "black", which was the major drug used until the mid 1990s, is now much less popular. The drug users also used "Western drugs" like Seduxen (called "Sen"), Pipolphen (called "Phen"), Dolagan (called "Do"), or Novocaine combined with "white" to increase and prolong the high. Because these drugs are expensive, they are only used on special occasions or when the drug users have money. Wealthier users also use meth-amphetamines. The popular types of meth-amphetamine sold on the black market are called "Pink pill", "Mercedes", "Shaking pill", or "the Queen", and are most commonly used in dancing clubs. They are very expensive and only the rich can afford them. Cannabis and morphine were not mentioned as currently being used. Shooting galleries have now become less popular due to harsh police campaigns tracking down drug users and traders. Most subjects reported that they buy drugs and inject themselves (or with friends) at

any convenient place without having to go to the shooting galleries that once were popular in parts of Hanoi.

Sharing was defined as using needles and/or syringes previously used by other injecting users or lending them to someone else. The majority of IDUs said that sharing was very common 1–2 years ago, but had become less frequent since then. A 32-year-old IDU who was interviewed in-depth said, “I think it was a big change. If you talk about a few years ago, everybody thought sharing was safe and convenient. These days, not many share needles and syringes. They are of course scared of AIDS.” A 40-year-old IDU added an interesting point, “One or two years ago and back in the past, we often went to shooting galleries for injection. Many people would use the same syringe, pumping in and out the same pot of black. These days, shooting galleries are wiped out by the police, people stab for themselves.” Sharing most often occurred when individuals were injecting at night when all shops and pharmacies were closed and they could not buy syringes. Although hospitals are open at night, they were usually too distant and not convenient for buying syringes and needles. Frequently, when a group of users shared money to buy a package of drugs, due to lack of money, they were likely to buy only one syringe for use by all. Most study participants knew that sharing was dangerous but admitted having sharing experiences with others. The IDUs said that they were more likely to share with users whom they knew, or those who looked healthy. A 23-year-old IDU said, “I only share with friends who I think are disease-free. At least, he must look healthy and not have skin infections or problems.” This meant that young and new users are more likely to share than older ones. Older users also share amongst themselves, but they prefer to share with young users who look healthier and whom they believe are more likely to be disease-free. A 42-year-old IDU reported, “Nowadays, I share much less often, not as in the past. And I mostly play at home. Sometimes, I still share with other brothers, young or old, but I like sharing with the young ones.” However, when experiencing withdrawal, people might share, disregarding the risk of HIV infection or any other adverse consequences. “When I am withdrawing, even if I know I will die after pulling the needle out from the vein, I will still play. So who cares about HIV or who to share with?” said a 25-year-old IDU.

The most frequent method of sharing is to liquefy the drug with water in a container, which could be a small cup or an old syringe. Then, with the only syringe they have, they take an equal amount from this container to inject. They clean the syringe with water by pumping in and out several times. Most of the participants said it was to remove the visible blood to avoid fever, rather than to kill the virus. However, some mentioned that cleaning made them more comfortable about reducing infection. Cold boiled water was most frequently mentioned as the cleaning agent. However, most subjects agreed that it could be any water. Bleach was rarely used, and only a few mentioned alcohol as the cleaning agent. One less common type of sharing, practiced mostly

by the poor, migrant workers, or withdrawing injectors, is to ask to share while their companion is in the process of injecting the drug.

According to the study participants, there are some male IDUs who partner with IDU FSWs. They live together, have unprotected sex, and frequently share needles and syringes. Most of the female partners are streetwalkers who inject drugs. A 39-year-old IDU told us, “I have lived with two streetwalkers at different times. At night, I took them to work and back home. Sometimes I helped them find clients. When they got money, I bought drugs for us. We always shared the syringe.”

#### *Subgroups at particular risk of HIV*

It was widely accepted among the study participants that young and new IDUs are at higher risk than old ones. “The reason is because the youngsters tend to have high-risk behaviours and practices in general, like they are enjoying deadly motor racing, disregarding the consequences,” said a 42-year-old IDU. Both young and old participants agreed that the youngsters are more likely to form groups of two to three, which increases the likelihood of sharing. The young are often new IDUs, so that they have to hide from others in the community, which makes them inject drugs in unsafe and poor conditions and places, such as public toilets, dark street corners, or deserted areas. Hiding from others forces them to inject quickly, thereby increasing the chances of sharing and not adequately cleaning the equipment. Many participants mentioned that old IDUs are well recognised in the community as IDUs, so that they do not have to hide their drug use, unlike the young ones. As mentioned above, young and new IDUs also look healthier than the old IDUs, which makes the sharing partners more comfortable.

According to the study participants, females are at higher risk of infection than males because most female IDUs are also sex workers, so that they encounter twice the risk. Further, female users often partner with male users, thereby increasing their possibility of getting infected through the sexual route due to the high infection rate among male drug users. Subjects also confirmed that those who inject on the street or in shooting galleries are at higher risk compared to those who inject at home. Poor IDUs and those who are migrant workers are at higher risk than more affluent or local IDUs, because they are more likely to share injecting equipment with others and not to be the first user. This is because they often do not have shooting places of their own, or do not have enough money to buy drugs, and are thus more dependent on others.

#### *Sexual behaviours and practices*

The participants define “new” drug users as those who are still not drug-dependent and do not use drugs regularly. This period usually lasts from 3 months to a year, but

averages 6 months, until the new user becomes dependent on drugs. The duration varies, depending on the characteristics of the individual and how frequently and heavily he uses drugs. As found in other studies (Eicher, Crofts, Benjamin, Deutschmann, & Rodger, 2000; Nguyen, Le, Phan, & Wolffers, 2000; Ton & Nguyen, 2001), it is during this period that the “new” drug users are most sexually active. Many of the subjects reported that during this period, they felt a more intense “high” when having sex, had stronger sexual desire, and could prolong intercourse. The latter was mentioned by quite a few long-time user participants as an incentive to try drugs. Because drug use prolongs sex, it was believed that drug use increases orgasms for their lovers or simply increases the pleasure of sex with the FSWs, giving them increased value for their money.

The drug users admitted to frequently visiting sex workers, especially those in the young and new group, who would be either heroin smokers or injectors. The older and long-time users had lower sex needs, more erectile dysfunction (some reported being impotent), and less money. The most commonly mentioned group of sex workers visited by the male drug users was streetwalkers. Their services are said to be the fastest, most convenient, and the most affordable.

#### *Condom use*

The male drug users did not worry about getting HIV through the sexual route and experienced frequent unsafe sex. Most young users said they rarely used condoms, with many never using them. They also never used condoms with their girlfriends. The main reason was that condoms decrease sensation. Further, poor erectile function, mentioned as a prevalent problem of the drug users, was often blamed. A 30-year-old IDU said, “I never use condoms when having sex. It is just tasteless and nonsense. I have no feeling at all and it is hard to keep it erect if I use one.” Non-condom use seemed to be more common among unmarried users. Those who were married said they did use condoms to protect themselves, their wives and children. “You know, no one wants to use condoms, but I am married, so I have to use condoms to protect my wife and kids,” said a 45-year-old IDU.

One important reason for not using condoms mentioned by the male participants was that they are not afraid of getting AIDS through the sexual route because they think injecting drugs already has the highest risk. Many think that other risks are not important because they already accept the highest risk when injecting drugs, so there is no need to care about condoms. Some think that as long as they do not share needles and syringes, they are not at risk of getting HIV, ignoring the risk of unsafe sexual intercourse.

There is a small group of IDUs who are the real sex “players”. These individuals implant objects into their penis (small glass or metal balls, and/or pierce the penis head and stick in horse tail hair) to increase sensation for their sex partners. These would not be felt if they used condoms during sex, so they never use condoms.

Young and new users had visited sex workers who often insisted that they use condoms. At first they agreed, but then often “cheated” by removing the condom during intercourse. A 19-year-old smoker said, “Of course nobody wants to use a condom. You can never come. If the girl insisted on using it, I would cheat her by using it at the beginning but throw it away in the middle of sex. If she knows, well, what can she do [laugh], I am already inside her.” Several other drug users mentioned that because they often have very long sexual encounters with the girls, normally 1–2 h, condom slippage and breakage are quite common, and afterwards the girls become less keen on using condoms. Withdrawal is also used to negotiate with the girls for not using condoms. In the negotiation of condom use, the male drug users said that the FSWs often are determined at the beginning, but after a while, they give up. If the guy does not want to use condoms, he often eventually prevails.

#### *Males who have sex with males (MSM)*

All participants expressed little knowledge about gay men. They had heard about gay men, but rarely knew one. According to them, gay men are rare and do not use drugs (or at least they do not know any drug users who admit to being gay). It seems that acknowledged gay men are uncommon among the drug user population in Hanoi.

#### *HIV testing experience*

Most participants did not know their current infection status. Only those whose family had requested that they be tested or those who had just returned from the rehabilitation centres and were required to be tested there knew their status. Otherwise, none of them voluntarily went to health centres for the test. The main reasons for not getting tested were concerns subsequently about living a horrible life if they were found to have the disease (no treatment, no cure, but stigmatisation), lack of understanding about the test due to poor or no counselling, and the cost of the test. A few users did not get tested simply because they thought they were risk-free. “I think I am not at risk because I never share the syringe,” said a 27-year-old IDU. This injector said he had frequent sex without condoms with sex workers and his girlfriends. Many drug users do not care if they are infected. They have other concerns that outweigh that of HIV infection, such as obtaining money to buy drugs and avoiding police attention and arrest.

#### **Discussion**

Sharing of needles and syringes was previously very common among the IDU population in Hanoi, which may explain the rapid rise of HIV infection among the drug users in the capital city (Power, 1996). However, the recent decrease in sharing practices, as observed in this and other studies

(Le, 2001; Nguyen, Le et al., 2001), suggests that the drug users are changing their drug-injecting risk behaviour. This is encouraging, although it may not be entirely due to intervention efforts. However, some IDUs still continue sharing practices under circumstances facilitating the spread of HIV in this population. Young and new IDUs, poor IDUs, or those IDUs who are migrant workers, and the IDU FSWs who partner with male IDUs are subgroups that are likely to share equipment, putting them at high risk of HIV infection. Further, poor understanding and practice of cleaning needles and syringes, as well as ignorance of their infection status, may be important factors that can contribute to the increase of HIV infection among the IDUs. It may be that for those high-risk subgroups, the currently implemented interventions are not specific enough, and are ineffective to promote behaviour change. Different subgroups may require different approaches and intervention strategies. Appropriate and more specifically targeted interventions for each particular subgroup of IDUs may be needed to limit the transmission of the virus among them and from them to other populations.

Similar to findings from other studies in Hai Phong (Nguyen, Hoang et al., 2001) and Ho Chi Minh City (Le, 2000; Nguyen et al., 2000), there is a potential risk of HIV infection through the sexual route to non-IDUs and non-sharing injectors in Hanoi, especially by the young and new drug users. They are sexually active, frequently visit FSWs, and infrequently use condoms. The report of low condom use was supported by the drug users' negative attitudes towards FSWs and indifference to infection risk through the sexual route. Even when condoms were used, as found in other studies (Quirk, Rhodes, & Stimson, 1998; Rhodes, Quirk, & Stimson, 1995), participants reported that condom slippage and breakage occurred quite often during their longer-than-normal sessions of sexual intercourse. Quirk et al. (1998) classified condom failure as one of the three types of unsafe protected sex, which is associated with prolonged or vigorous penetrative sex resulting from drug use. This is not of concern to the drug users because they rarely use condoms anyway, but it definitely increases the risk of transmitting HIV to their sexual partners. Low condom use and possible condom failure therefore may not only put the drug users in Hanoi at substantial risk of infection through the sexual route, but also increase the likelihood of transmitting the virus from them to their girlfriends, lovers and other sexual partners. Studies around the world have shown that IDUs, at risk of acquiring and transmitting HIV through both sharing injecting equipment and unprotected sex, are a primary source of heterosexual transmission (Archibald, Reid, & Geduld, 2002; Panda et al., 2000; Saidel et al., 2003). Other studies demonstrated that it is more difficult to achieve decreases in risky sexual behaviours than in risky equipment-sharing behaviours (Des Jarlais et al., 1995; Rhodes, Stimson, & Quirk, 1996; Watters, 1994). Our study suggests that the drug users in Hanoi have poor knowledge, attitudes and practice of condom use, which makes them an important potential source

of infection and transmission. Kwiatkowski, Stober, Booth, and Zhang (1999) showed that multiple exposures to risk reduction information over time and in different settings may be an effective means of promoting sexual behaviour change. Therefore, vigorous, long-lasting, and effective efforts should be made to change sexual risk behaviours among the drug users in Hanoi.

The fact that the majority of the drug users use streetwalkers for sex puts the streetwalkers at higher risk of HIV infection than establishment-based sex workers. Streetwalkers who inject drugs are also at high risk through sharing needles with their male IDU partners. The drug users, however, may also acquire HIV infection from the streetwalkers. According to the HIV Sentinel Surveillance, the HIV prevalence among FSWs in Hanoi has increased rapidly from 0.84% in 1997 to 14.5% in 2002 (Subcommittee of HIV/AIDS Surveillance, 2003). Thus, FSWs have become an important pool of infection, in addition to IDUs (Vietnam's National HIV/AIDS Program, 2001). Therefore, the risk of HIV infection from and to the sex worker population in Hanoi through the sexual route is real, and should not be underestimated. Young and new drug users who are heroin smokers, and therefore are not at risk through injecting and sharing, may get infected by having unsafe sex with FSWs. Later, when users in this group becomes injectors, as described above, they are more likely to share injecting equipment, and to thereby transmit the virus to their partners. It is this population of young and new IDUs who may be taking double risks through both injecting and sexual contact.

According to the National Drug Control Program (2001), the epidemic of young and new IDUs is increasing very quickly in cities in Vietnam. A Ministry of Labour, Invalids and Social Affairs (MOLISA)—UNDCP collaborative survey of the drug use situation in seven provinces and cities representative of different socio-economic regions of Vietnam showed that drug use is associated with being urban, male, and in a younger age group (Report on Drug Abuse Situation in Vietnam, 2000). This increase will put a heavy economic burden on Vietnamese society, as well as impacting upon people's health and lifestyles. Our study suggested that the young and new IDUs in Hanoi are sexually active and likely to share equipment with their injecting partners, so they could potentially serve as an important bridge between the drug user and the sex worker populations, from whom the HIV epidemic is more likely to spread to the general population. Therefore, young and new IDUs should be a major focus for intervention efforts. The interventions should not only prevent the initiation of drug use among the youth, but also reduce their risks by promoting condom use and safe injecting practices. In Vietnam, drug use is considered a 'social evil', and efforts to control HIV/AIDS are closely associated with the government's program to combat 'social evils' (Nguyen et al., 2000). Identified drug users are sent to rehabilitation centres for education and addiction treatment, so in this social context, drug users are highly stigmatised, especially the young and new drug users. Consequently,

young and new drug users often hide their drug use from their family, school, and society, making it very difficult to identify and approach them. This creates great obstacles and challenges to the delivery of any interventions in this population. Therefore, interventions that address stigmatisation at the community level are urgently needed. Moreover, there is a need for programs that specifically focus on youth. Wu, Detels, Zhang, Li, and Li (2002) conducted a community trial to prevent initiation of drug use among youths in a rural district in Yunnan, China, and demonstrated a 62% decrease in incidence of drug use initiation among the young men in the intervention area. Studies are needed to examine the potential application of such an approach in the context of Vietnam.

This qualitative study contains potential limitations. The data represent subjective opinions of the participants and their proxy reports of peers' behaviours. We were unable to validate these data by other methods such as individual interviews or testing for biomarkers of drug use. Due to the sampling approach, it is also possible that the study participants are not representative of the drug user population in Hanoi, so the results of this study should be interpreted with caution and with recognition of the study's limitations. Nevertheless, the study describes risk behaviours and practices in detail, and provides useful insights that may be used to develop materials and messages to address common misconceptions among drug users.

In Hanoi, drug users in general, and IDUs in particular, are encountering risk of HIV infection. Interventions should focus on continuously educating not only young drug users and young persons at risk of drug use, but also FSWs, about these threats and the ways to protect themselves. Education should target drug users' unsafe behaviours and practices. Stigmatisation of drug users will not prevent drug use, and will isolate drug users from the rest of the society, thus increasing their risks. Harm reduction strategies and a more sympathetic attitude towards drug users would ultimately benefit both the drug users and society. The development of an effective and reliable testing and counselling system for HIV in Vietnam is urgently needed.

## Acknowledgements

We would like to thank the outreach peer educators and the staff of the Hanoi HIV/AIDS Office for their collaboration and for helping us to collect the data. We are also very grateful to Mr. Nguyen Anh Tuan at the National Institute of Hygiene and Epidemiology for his support of the study and for sharing his valuable experience.

## References

- Archibald, C. P., Reid, D., & Geduld, J. (2002). Heterosexual transmission of HIV from injecting drug users to non-users: Using surveillance data to estimate the magnitude. *Fourteenth International Conference on AIDS*. Barcelona, Spain (abstract TuOrC1220a).
- Des Jarlais, D. C., Friedman, S. R., Friedman, P., Weston, J., Sotharan, J. L., Choopanya, K., Vanichseni, S., Raktham, S., Goldberg, D., & Frischer, M. et al. (1995). HIV/AIDS related behavior change among injecting drug users in different national settings. *AIDS*, 9, 611–617.
- Eicher, A. D., Crofts, N., Benjamin, S., Deutschmann, P., & Rodger, A. J. (2000). A certain fate: Spread of HIV among young injecting drug users in Manipur, north-east India. *AIDS Care*, 2(Suppl. 4), 497–504.
- Gorbach, M. P., Ryan, C., Saphonn, V., & Detels, R. (2002). The impact of social, economic and political forces on emerging HIV epidemics. *AIDS*, 16(Suppl. 4), S35–S43.
- Kwiatkowski, C. F., Stober, D. R., Booth, R. E., & Zhang, Y. (1999). Predictors of increased condom use following HIV intervention with heterosexually active drug users. *Drug and Alcohol Dependence*, 54(Suppl. 1), 57–62.
- Le, T. G. (2000). *Harm reduction program for injecting drug users in Ho Chi Minh City*. National Policy Forum on Harm Reduction and Prevention of HIV/AIDS among Injecting Drug Users. Hanoi: UNDCP and Ministry of Health.
- Le, N. Y. (2001). *Harm reduction activities among drug users in five northern provinces*. Hanoi: National AIDS Standing Bureau, National Forum, "Intervention Activity for Drug Use Related HIV Infections".
- Ministry of Labor, Invalid, and Social Affairs, UNDCP. (2000). *Report on Drug Abuse Situation in Vietnam*. Hanoi: MOLISA and UNDCP.
- National Drug Control Program. (2001). *Drug use and drug control in Vietnam: Reality and challenge* (pp. 8–13). Hanoi: National AIDS Standing Bureau, workshop "Direction for harm reduction activities for drug users".
- Nguyen, A. T., Hoang, T. L., Pham, Q. V., & Detels, R. (2001). Risk factors for HIV-1 seropositivity in drug users under 30 years old in Hai Phong, Vietnam. *Addiction*, 96, 405–413.
- Nguyen, T. H., Le, T. G., Phan, N. B., Deville, W., van Ameijden, J. C. E., & Wolfers, I. (2001). Risk factors of HIV infection and needle sharing among injecting drug users in Ho Chi Minh City. *Vietnam Journal of Substance Abuse*, 13(Suppl. 1–2), 45–58.
- Nguyen, T. H., Le, T. G., Phan, N. B., & Wolfers, I. (2000). The social context of HIV risk behavior by drug injectors in Ho Chi Minh City, Vietnam. *AIDS Care*, 12(Suppl. 4), 483–495.
- Panda, S., Chatterjee, A., Bhattacharya, S. K., Manna, B., Singh, P. N., Sarkar, S., Naik, T. N., Chakrabarti, S., & Detels, R. (2000). Transmission of HIV from injecting drug users to their wives in India. *International Journal of STD and AIDS*, 11, 468–473.
- Power, R. (1996). Rapid assessment of the drug-injecting situation at Hanoi and Ho Chi Minh City, Vietnam. *Bulletin on Narcotics*, 48(1/2), 35–52.
- Quirk, A., Rhodes, T., & Stimson, G. V. (1998). 'Unsafe protected sex': Qualitative insights on measures of sexual risk. *AIDS Care*, 10(Suppl. 1), 105–114.
- Rhodes, T., Quirk, A., & Stimson, G. V. (1995). *Sexual safety in the context of drug taking and sexual lifestyle: A qualitative study among users of opiates and stimulants*. Final report to Department of Health. London: The Center for Research on Drugs and Health Behavior.
- Rhodes, T., Stimson, G. V., & Quirk, A. (1996). Sex, drugs, intervention, and research: From the individual to the social. *Substance Use and Misuse*, 31, 375–407.
- Saidel, T. J., Des Jarlais, D., Peerapatanapokin, W., Dorabjee, J., Singh, S., & Brown, T. (2003). Potential impact of HIV among IDUs on heterosexual transmission in Asian setting: The Asian epidemic model. *International Journal of Drug Policy*, 14, 63–74.
- Subcommittee of HIV/AIDS Surveillance. (2003). *HIV sentinel surveillance report*. Hanoi: Ministry of Health.

- Ton, T. B., & Nguyen, T. H. (2001). *Drug use and health impact in injecting drug users in Hanoi*. Hanoi: Hanoi Medical University/Hanoi HIV Prevention Committee/WHO.
- Vietnam National AIDS Committee. (2001). *Report of HIV/AIDS prevention activities, 1990–2000 period*. Hanoi: Vietnam National AIDS Committee.
- Vietnam's National HIV/AIDS Program. (2001). *HIV/AIDS country profiles*. Hanoi: Vietnam's National HIV/AIDS Program.
- Vu, M. Q., Chung, A., Hoang, T. L., & Dondero, J. T. (2000). HIV in Vietnam: The evolving epidemic and the prevention response, 1996 through 1999. *Journal of Acquired Immune Deficiency Syndrome*, 25(Suppl. 4), 360–369.
- Watters, J. K. (1994). Trends in risk behaviors and HIV seroprevalence in heterosexual injection drug users in San Francisco, 1986–1992. *Journal of Acquired Immune Deficiency Syndrome and Human Retroviruses*, 7, 1276–1281.
- Wu, Z., Detels, R., Zhang, J., Li, V., & Li, J. (2002). Community-based trial to prevent drug use among youths in Yunnan, China. *American Journal of Public Health*, 92(12), 1952–1957.