

HIV/AIDS

BEHAVIORAL

SURVEILLANCE

SURVEY

VIETNAM 2000

BSS Round 1 Results
English Report



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Ha Noi, 2001

HIV/AIDS

BEHAVIORAL

SURVEILLANCE

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VIETNAM 2000

ROUND 1

STUDY SITES

HA NOI

HAI PHONG

DA NANG

HO CHI MINH CITY

CAN THO

STUDY POPULATIONS

STREET-BASED SEX WORKERS

KARAOKE-BASED SEX WORKERS

INJECTING DRUG USERS

LONG DISTANT TRUCK DRIVERS

MIGRANT WORKERS

(SEAFARERS, CONSTRUCTION WORKERS, PORTERS)



Ha Noi, 2001

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ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal care
ARO	Asia Regional Office - FHI
BCC	Behavioral Change Communication
BSS	Behavioral Surveillance Survey
CSP	Casual sex partner
DOPM	Department of Preventive Medicine
FHI	Family Health International
FSW	Female sex worker
HCMC	Ho Chi Minh City
HIV	Human Immunodeficiency Virus
HR	Harm Reduction
HSS	HIV Sentinel Surveillance
IDU	Injecting drug user
KSW	Karaoke-based sex worker
LDTD	Long distant truck driver
MB	Management Board - BSS
MCW	Migrant construction worker
MOH	Ministry of Health
MOLISA	Ministry of Labour, War Invalids, and Social Affairs
MOPS	Ministry of Public Security
MSM	Men who have sex with man
NAC	National AIDS Committee
NASB	National AIDS Standing Bureau
NCAPDPC	National Committee for AIDS Prevention and Drug and Prostitution Control
NIHE	National Institute of Hygiene and Epidemiology
NTG	National Technical Group
PE	Peer Education
PLWHA	People living with HIV/AIDS
RSP	Regular sex partner
RTI	Reproductive Tract Infection
SF	Seafarers/fishermen
SSW	Street-based sex worker
STD	Sexually transmitted disease
STI	Sexually transmitted infection
VCT	Voluntary Counseling and Testing

DEFINITIONS

Casual sex partner - A sex partner for less than one year who is not a spouse, live-in partner, or commercial sex partner

Commercial sex partner - A partner who is paid money in exchange for sex (i.e., the partner is a sex worker).

Consistent Condom Use - Use of condoms every time during sexual relations with individuals in high-risk situations (e.g., using condoms every time with casual sexual partners; with sex workers; or if condom user has HIV or other STI ---- with their regular sexual partner such as spouse or steady girlfriend/boyfriend).

High-Risk Behavior - Any behavior that puts an individual or individuals at increased risk of contracting HIV/STI or transmitting HIV/STI to another individual (e.g., having multiple sex partners without using condoms consistently; sharing used non-sterile needles among IDUs).

Injecting Drug User - (IDU) An individual who has injected illegal drugs (e.g., heroin, opium) or injected various other drugs or combination of drugs for the purpose of getting high rather than for medical reasons.

Karaoke-based Sex Worker - Women who work in a variety of establishments such as karaoke-bars, restaurants, hotels, massage parlors, truck stops who also sell sex to customers. They are considered to be indirect sex workers.

Long Distance Truck Drivers - Truck drivers (males in the BSS samples) who transport materials between cities and/or provinces who are often required to be away from home for one or more nights on a regular basis.

Migrant Workers - Workers (males in the BSS samples) who move from place to place to seek work opportunities on a temporary or semi-permanent basis in locations that require them to live away from their family/home of origin for periods of time of a month or more (such as construction workers; seafarers/fishermen; porters/stevedores).

Non-paying partner - A partner of a sex worker who does not pay for sex (includes regular and non-regular partners).

One-time client - A first-time or only-time client of a sex worker. The sex worker has not had any previous sex work experiences with the client and the sex worker does not know the client.

Regular client - A client with whom the sex worker has had commercial sex more than once.

Regular sex partner - A spouse, live-in partner or sex partner for one year or more.

Sharing Needles and/or Injecting Equipment - Reusing needles, syringes or other injecting equipment with other IDUs without properly sterilizing these equipments.

Street-based Sex Worker - Women who sell sex directly on the streets, actively soliciting clients outside or with the help of a pimp.

PREFACE

Ten years ago the first case of HIV in Vietnam was detected in a married woman in Ho Chi Minh City (HCMC). Since that time, HIV prevalence has risen countrywide, in particular among injecting drug users (IDUs) whom have tested over 50 percent HIV positive in some provinces. In the year 2000, HIV sentinel surveillance has found 20 percent all IDUs tested to be HIV+, over 4 percent HIV prevalence in female sex workers and about 2 percent in STD patients. HIV has attained epidemic proportions in these groups and is now reaching into the general population, as evidenced by the sharp rise in HIV positive military recruits between 1996 and 2000.

A pivotal undertaking in monitoring the disease was the establishment of a nationwide HIV sentinel surveillance (HSS) program. Begun in 1994, the HIV sentinel surveillance system originally included 20 provinces and cities, but it has recently expanded to include 10 more provinces. The HSS is conducted in six populations including injection drug users, female sex workers, male STD patients, tuberculosis patients, ANC women, and military recruits.

While HIV sentinel surveillance has been successful in constructing an understanding of disease status among these populations, it is not capable of explaining what behaviors are contributing to the rising levels of infection. High-risk behaviors - such as unprotected sex and injection drug use - can change quickly. Behavioral surveillance surveys (BSS) are designed to monitor these changes over time so that well-designed and cost-effective interventions can be implemented among high-risk populations before the risk translates itself into even higher rates of HIV.

The first round of behavioral surveillance was implemented in Vietnam in 2000 by the National Committee for AIDS Prevention and Drug and Prostitution Control (NCADP) and the Ministry of Health (MOH), with financial and technical support from Family Health International under the IMPACT project funded by the United States Agency for International Development. The MOH appreciates the efforts of the Management Board and the National Technical Group (NTG) in coordinating the staff and participating organizations in Hanoi, Hai Phong, Da Nang, HCMC and Can Tho and for supervising the day-to-day activities of the project.

The BSS 2000 is the first large-scale behavioral study ever conducted in Vietnam. After a year of preparation and implementation, the study was successfully completed in March 2001, and I am pleased to introduce the important findings detailed in the body of this report. The National AIDS Standing Bureau (NASB) welcomes any comments or suggestions pertaining to the findings and hopes that the BSS will be a useful tool to all organizations and institutions working to lessen the impact of HIV in Vietnam.

Thank you for your cooperation.

Professor Chung A.
Executive Director
National AIDS Standing Bureau

EXECUTIVE SUMMARY

The Behavioral Surveillance Survey (BSS) was introduced in Vietnam in 2000 to complement the extensive sero-prevalence and passive HIV surveillance systems instituted nationally. Vietnam is currently experiencing an HIV epidemic 'concentrated' primarily in populations with specific high-risk sexual and injecting drug practices. Behavioral surveillance was conducted in five provinces - Hanoi, Hai Phong, Da Nang, HCMC, and Can Tho and the sub-populations surveyed include the following:

- Street-based sex workers (all provinces) SSW
- Karaoke-based sex workers (all provinces) KSW
- Injection drug users (all provinces) IDU
- Long distance truck drivers (all provinces) LDTD
- Migrant workers
 - Seafarers and fisherman (Hai Phong, Da Nang)
 - Migrant construction workers (Hanoi, Ho Chi Minh City)
 - Porters/stevedores (Can Tho)

These groups were chosen because of their potential for higher exposure to HIV infection. BSS endeavored to quantify characteristics and risk behaviors among these groups through a cross-sectional survey using probability-sampling techniques. Specific standardized indicators were used to allow the measurement of behavioral change over time. A questionnaire was administered by trained interviewing teams that covered socio-economic and demographic characteristics, sexual partners, condom use practices, alcohol and injection drug use, sexually transmitted

diseases, availability and access to HIV testing, HIV knowledge and beliefs, and exposure to HIV interventions. Data were analyzed by sub-population and by province.

This report is the English summary of the results of the first round of the HIV/AIDS Behavioral Surveillance Surveys (BSS) for Vietnam. The fieldwork for BSS Round I was conducted from June to November 2000, and preliminary results were disseminated in a workshop in March 2001. The basic objectives of the BSS are to: (1) Provide a description of the basic socio-demographic characteristics of these groups; (2) Identify risk behaviours necessitating interventions among sub-populations; (3) Identify priorities for planning prevention programs and for appropriately distributing limited resources; (4) Establish a baseline for monitoring trends and patterns in risk behavior; (5) Provide information to explain changes in HIV prevalence; (6) Provide key information for advocacy and policy making; and (7) Provide information to measure program impact.

Round I of the BSS serves as a baseline to benchmark levels of different risk behaviors in the various target groups included in the survey. The total sample size for all five study population in all five populations is 10,192, including 2,302 karaoke-based sex workers, 1,300 street-based sex workers, 1,787 male injecting drug users, 2,337 long-distance truck drivers, and 2,466 male migrant workers. The BSS Round I provides us, in many instances for the first time, with fairly representative population-based data on the socio-demographic characteristics of sex workers, IDUs, long-distance truck dri-

vers and various types of migrant workers (seafarers/fisherman; construction workers; and porters/stevedores) in the five provinces included in the study. Together with the HIV/AIDS behavioral risk information, this information on the socio-demographic background of these groups will be helpful for developing relevant and targeted information and interventions to specific audiences and risk-groups.

Round II of the BSS fieldwork will be completed in December 2001 and will allow us to examine behavioral changes over the past year. The BSS data also complements the HIV sentinel surveillance data on sero-prevalence for some of the same target groups (e.g., sex workers and IDUs). BSS questions on exposure to HIV/AIDS prevention and care interventions allows us to assess the effectiveness of ongoing interventions, the reach of behavioral change communication efforts, and the association and possible impact these interventions activities have had on HIV/AIDS knowledge and risk behaviors over time.

A summary of the major findings of the BSS Round I are provided below followed by a brief discussion and some main conclusions based on the BSS Round I results.

Summary of Main Findings

Sex Workers

The life circumstances, background socio-demographics, and levels of HIV/AIDS risk behaviors were quite different for SSWs compared to KSWs and also varied substantially across the five provinces for the two types of sex workers. In general, the SSWs' life circumstances and HIV-risk situations were worse than for KSWs. SSWs tended to

be considerably older than KSWs, on average, and were much more likely to be divorced/widowed/ separated (and probably have more children), were less mobile, were more likely to have used drugs, were more likely to have had STD symptoms in the past year, and had more sexual partners on average than the KSWs in most of the five provinces included in the study.

Most KSWs and SSWs had some education and many had secondary schooling. HCMC had the highest levels of illiteracy among both the KSWs (6.5%) and the SSWs (19.4%). The percent of currently married KSWs and SSW ranged from 3 to 7 percent and was higher in the south. The mean number of clients in the last day worked ranged from 0.3 in Da Nang and Can Tho to 3.1 in Hai Phong for KSWs, and from 1.6 in Da Nang to 3 in Hai Phong for SSWs. In the past week, sex workers in Hai Phong reported the highest mean number of clients, 22.5 among KSWs and 17 among SSWs. In other provinces, SSWs had higher mean numbers of clients than KSWs, with a mean of 15 clients in both HCMC and Can Tho, 10 in Hanoi and 8 in Da Nang.

Knowledge of condom as a method for HIV prevention was high in both KSWs and SSWs (ranging from 89 percent to 100 percent), except among KSWs in HCMC where condom knowledge was 72 percent.

Although knowledge of condoms as a means of HIV prevention was very high among sex workers, the prevalence and consistency of condom use between sex workers and their sexual partners was lower and varied considerably according to type of sex worker (KSW or SSW) and by type of sexual partner (one-time client; regular client; non-paying part-

ner/spouse/steady boyfriend). Reported condom use during the last sexual encounter with one-time clients was extremely high, with upwards of 90 percent of both KSWs and SSWs reporting condom use during last sex with a new client. Consistent condom use with new clients was considerably lower, ranging from only 32 percent in Hanoi to 79 percent in Hai Phong among KSWs and from a low of 56 percent in HCMC to a high of 82 percent in Da Nang among SSWs. Reported condom use at last sex with regular clients and non-clients was much lower than condom use with one-time or new clients.

Reported drug use was higher among SSWs than KSWs, especially in the south. Among KSWs, the percent ever using drugs in Hanoi was 18 percent and in HCMC, 9 percent. In Can Tho, Hai Phong and Da Nang, very few KSWs reported ever using drugs. However, among SSWs the percent of drug users was substantially higher than for KSWs at 44 percent, 19 percent, and 20 percent in Hanoi, Hai Phong and HCMC respectively. In Da Nang and Can Tho the percent of SSWs using drugs was also very low.

Reported STD symptoms in the past 12 months among sex workers were highest in Hanoi and HCMC: 31 percent and 33 percent among KSWs, respectively; and 46 percent and 27 percent among SSWs, respectively.

- KSWs were generally more mobile than SSWs, particularly those in Hai Phong and Da Nang; the data do not provide clear reasons for why the KSWs have higher mobility than SSWs in some provinces;
- Injection drug use was high among SSWs in Hanoi (22 percent) and in HCMC (16 percent);
- Mean number of clients in the past week was highest among KSWs and SSWs in Hai Phong;
- On average, SSWs had more than twice as many sexual partners in the last week compared to KSWs (except in Hai Phong)
- Consistent condom use with a one-time client was higher among SSWs than KSWs in Hanoi, Da Nang and HCMC.
- Reported condom use during last sex with a one-time client was relatively high for sex workers in all five provinces.
- However, only about one-third of KSWs and SSWs in Hanoi and HCMC reported consistent condom use during past 12 months with their one-time clients, and in HCMC only one-sixth of SSWs used condoms consistently with their regular clients; and
- STD symptoms reported by sex workers were highest in Hanoi and HCMC.

Conclusions: Sex Workers

Efforts to approach sex workers for HIV preventive interventions may face some difficulties due to their socio-demographic characteristics and their involvement in high-risk illegal activities (sex work and drug use) frequently targeted by police and the Social Evils Department. The relatively high proportion of drug use among sex workers in Hanoi and HCMC highlights the need for also implementing intervention activities for safe injection among KSWs and SSWs who are also IDUs. The high average number of clients of KSWs and SSWs in Hai Phong, which is a tourist area as well as one with mobile populations (truck drivers, seafarers/fishermen, porters/stevedores/longshoremen), and the inconsistent condom use with clients indicates that behavior change interventions for this group should be intensified.

In fact, the BSS results indicate that consistency of condom use between sex workers and their one-time clients, regular clients and non-paying partners needs to be improved in all five provinces. In brief, a comprehensive program for HIV prevention among sex workers should be developed and implemented in Vietnam. A peer education program, similar to that in place for the SSWs in some provinces, should be developed for the KSWs. For HIV/AIDS prevention interventions for sex workers to be successful on a large scale, BCC materials and media, peer education, condom supply, harm reduction efforts for sex workers who are also IDUs, and efforts to carry these prevention messages and encourage condom use among the clients of sex workers are all needed.

IDUs

The mean age of all the IDU respondents in the five provinces combined was about 28 years old and approximately three-fourths had attended at least secondary school. The percent of IDU respondents who were currently married ranged from only 6 percent in HCMC (where only younger IDUs were recruited) to a high of 35 percent of IDUs in Hanoi. Heroin and opium were the two main drugs reported to be used most frequently. A large proportion of the IDU respondents reported injecting at least 2-3 times per day (e.g., 41 percent in Hanoi, 58 percent in Can Tho and 80 percent in HCMC), with lower injecting frequency in Hai Phong and Da Nang (with only 26 percent and only 7 percent, reporting injecting at least 2-3 times a day, respectively). The percent that reported ever having shared needles in the past six months ranged from a high of 44 percent in HCMC to a low of 8 percent needle sharing in Can Tho. The mean overall number of sexual partners of IDUs in the past year ranged

from a high of 2.3 partners in Hanoi down to a low of only 0.5 in HCMC.

Almost two-thirds of IDUs in Da Nang and half of the IDUs in Hanoi and Hai Phong reported having at least one sexual partner in the past year, compared to only 41 percent in Can Tho and only 23 percent in HCMC. The percent of IDUs who had had commercial partners in the past year ranged from a high of 23 percent in Hanoi, 20 percent in Da Nang down to a low of 6 percent in Can Tho. The percent of IDUs that had had casual sex in the past year ranged from a high of 20 percent in Da Nang to a low of 4 percent in Can Tho. Reported consistency of condom use during the past 12 months last sex with a regular, casual, and commercial partner was very low across the five provinces, ranging from only 28 percent consistent condom use with commercial sex partners in Hanoi to a high of 56 percent consistent condom use with sex workers in Hai Phong. In all five provinces, the consistency of condom use by IDUs with their casual and regular partners was substantially lower still.

- Education levels of IDUs were relatively high, with three-fourths having attended at least secondary schooling;
- Most IDUs had been living in the province (and district) where they were interviewed for five or more years;
- More than 10 percent of IDUs reported that they had injected drugs in other cities during the past 12 months, and some of these IDUs reported that they also shared needles in the other cities during this time period.
- A majority of IDUs in Hanoi, HCMC, and Can Tho injected two to three times a day;
- Reported needle sharing during the past six months was highest in

HCMC at 44 percent, almost one-third in Hanoi and Da Nang, about one-quarter in Hai Phong, and slightly less than 10 percent in Can Tho;

- About one-quarter of IDUs surveyed in Hanoi, one-fifth of IDUs surveyed in Da Nang, and one sixth of all IDUs surveyed in Hai Phong reported that they had visited a sex worker in the past 12 months, compared to less than 10 percent in HCMC and Can Tho;
- 15 percent of IDUs in Hanoi and 8 percent in Da Nang had four or more commercial partners in the past 12 months;
- IDUs' reported condom use during last sex with a sex worker ranged from a low of 57 percent in Can Tho to a high of 82 percent in Hanoi; and
- Among IDUs visiting sex workers, reported consistent condom use with sex workers during the past 12 months, was low, ranging from a low of 28 percent in Hanoi up to 56 percent in Hai Phong reporting that they used condoms every time with sex workers.

Conclusions: IDUs

Because a substantial level of needle sharing was reported among IDUs in most of the five provinces; because many IDUs in the survey reported injecting two or more times per day; and because many IDUs reported being sexually active in the past year (with their regular sex partners and/or with sex workers), the need for expanded harm reduction interventions, including peer education, needle exchange, and condom promotion among IDUs is quite evident from these data. These intensified intervention efforts will not only help to keep the HIV infection rates among IDUs as low as possible, but will also help to prevent the further transmission of virus from HIV+ IDUs to

other IDUs and to the sexual partners of the HIV+ IDUs. It should be noted that HIV sentinel surveillance data for IDUs in the year 2000 report high HIV infection rates among those tested in the five provinces included in the BSS: (Hanoi - 18 percent; Hai Phong - 70 percent; Da Nang - 38 percent; HCMC - 58 percent; and Can Tho - 21 percent.

A case in point is Hanoi, where the HSS indicates for the year 2000 that 10 percent of the sex workers tested and 18 percent of the IDUs tested were HIV positive. The fact that one-fourth of IDUs in Hanoi had sex with sex workers in the past year and that only 28 percent of those IDUs who had sex with sex workers in that city used condoms consistently, and the fact that 22 percent of SSWs and 6 percent of KSWs in Hanoi injected drugs themselves in the past six months: these are sharp warning signs of the prospects of HIV being transmitted from IDUs to sex workers, and from sex workers to other non-IDU male clients and possibly on to the general population.

Despite the known high HIV infection rates among IDUs, consistent condom use among IDUs was low for all partner types especially regular partners. Sharing needles and sexual risk behaviors among IDUs in Vietnam are cause for serious concern. The available data indicate that some risk reducing behaviors are already being practiced by some IDUs, such as condom use and non-sharing of needles. However, more in-depth and qualitative research is needed to understand the high-risk and risk-reduction behavioral patterns that have been observed. Substantial proportions of IDUs in some provinces are still reporting needle sharing. Given the high prevalence of HIV in the IDU community, interventions should be aggressively pursued and scaled-up to further reduce needle sharing. Action is also needed to increase the

consistency of condom use between IDUs (especially HIV-infected IDUs) and their sexual partners.

Long Distance Truck Drivers (LDTDs)

The majority of all LDTDs surveyed were in their 30s, had secondary schooling, and about two-thirds of them were currently married. Many LDTDs reported traveling away from their families for one or more continuous months in the past year (from a high of 47 percent in HCMC to a low of only 6 percent in Can Tho).

Less than 10 percent of the LDTDs in each of the five provinces reported having ever used drugs. Alcohol consumption was highest in Hanoi where more than half of the LDTDs (55%) said they drank alcohol daily.

Many LDTDs were sexually active in a variety of sexual relationships. The average number of sexual partners LDTDs had in the past 12 months ranged from a mean of 2 partner each in Da Nang and Can Tho, to 3 in Hai Phong to 5 in Hanoi, up to an average of 7 partners each in HCMC. Between two-thirds and three-fourths of the LDTDs had at least one regular partner in the past 12 months. More than one-quarter of the LDTDs in Hai Phong reported having one or more casual sex partners in the past 12 months, and LDTDs in Can Tho reported the highest percentage having one or more commercial sex partners in the past 12 months (39%), followed by Hai Phong (35%), Hanoi (33%), HCMC (27%) and Da Nang (23%). Fourteen percent to 19 percent of the LDTD in Hai Phong, Hanoi, and HCMC had four or more commercial sex partners in the past 12 months.

Condom use during last sex with a commercial partner was above 90 percent for all

provinces and with a casual partner ranged from one-half in Da Nang to three-fourths in Hai Phong. Between a half and 84 percent of the LDTDs reported consistent condom use with their sex worker partners, and between one-fifth and less than one-half of LDTDs reported consistent condom use with their casual partners in the past 12 months.

Between one percent (Da Nang) and seven percent (Hanoi) of LDTDs reported having an STD symptom in the past 12 months.

Conclusions: LDTDs

Among the male populations surveyed, LDTDs were the most likely to have at least one commercial sex partner in the past 12 months, and multiple commercial partners were common in Hanoi, Hai Phong, and HCMC. Most of the LDTDs were currently married but spent long periods of time away from their homes, and many had multiple sex partners during the past year. Few of the LDTDs had been reached by HIV interventions that included condom distribution, even though the LDTDs reported high levels of peer education. Because of their relatively high level of sexual activity, multiple sexual partners including casual and commercial as well as regular, and because of their inconsistent condom use in all types of sexual relationships, behavioral change interventions that include more accessible condom distribution and that promote consistent condom use should be a priority activity for this occupational group.

Migrant Workers

Migrant workers surveyed in the BSS Round I were of different occupational groups in the five provinces (i.e., construction workers in

Hanoi and HCMC; seafarers in Hai Phong and Da Nang; and porters/stevedores in Can Tho).

The mean age of seafarers in Hai Phong and Da Nang was 36-37 years, compared to a mean age of only 29 years among construction workers in Hanoi and HCMC and among porter/stevedores in Can Tho. This age difference helps explain why over three-fourths of seafarers were married compared to only 59 percent and 42 percent of construction workers in Hanoi and HCMC, respectively. The porters/stevedores in Can Tho had the lowest level of education (65 percent with five years of schooling or less), while seafarers in Hai Phong and Da Nang had the highest education levels (64 percent and 30 percent with 10 years of schooling or more) among the migrant workers surveyed.

Migration for work was most common among construction workers in Hanoi and HCMC and seafarers in Hai Phong; 99 percent of the respondents in Hanoi, 96 percent in HCMC and 93 percent in Hai Phong had lived in the cities for less than one year.

The prevalence of drug use was relatively low, ranging from 1 percent in Da Nang to 4 percent in HCMC. The median age of first sex ranged from 21 in Can Tho to 25 in Hai Phong. Daily alcohol consumption ranged from a low of only 5 percent of stevedores in Can Tho to a high of 40 percent among seafarers in Hai Phong.

Seafarers in Da Nang and Hai Phong were the most likely to have at least one regular sex partner in the past 12 months (84% and 78%). Ten percent or fewer of all migrant populations reported having a casual sex partner in the past 12 months. The percent of

migrant workers with at least one commercial sex partner in the past 12 months ranged from a high of 20 percent in Hai Phong down to a low of 7 percent in Can Tho. Five percent of construction workers in Hanoi and HCMC had four or more commercial sex partners in the past 12 months. Seafarers in Hai Phong and construction workers in HCMC had the highest total mean number of sexual partners in the past year, an average of two sexual partners each in these migrant groups in the two provinces.

The use of condoms during last sex with casual sexual partners was relatively low: 27 percent in Can Tho, 43 percent in HCMC, 51 percent in Hanoi, 63 percent in Da Nang and 69 percent in Hai Phong. Use of condoms during last sex with a commercial sex worker was lower in HCMC (74%), Can Tho (74%), and Hanoi (77%) and substantially higher in Da Nang (94%) and Hai Phong (91%). However, consistency of condom use was lower between migrant workers and sex workers, ranging from 50 percent in HCMC to 75 percent in Hai Phong. Self-reported STD symptoms in the past 12 months were highest in Hanoi (6%) and Da Nang (4%) and 2 percent or less in HCMC, Can Tho and Hai Phong.

Between 3 percent and 12 percent of the migrant workers in the groups from the five provinces were exposed to interventions that promoted condoms, although between 31 and 58 percent of the migrants in the groups from Hanoi, Hai Phong HCMC, and Can Tho were exposed to HIV/AIDS prevention information through peer education.

- Porters in Can Tho were the least literate migrant groups, on average, while seafarers/fisherman in Hai Phong and Da

Nang had the highest average education among the migrant groups surveyed;

- Almost all of migrant workers in Hanoi, HCMC and Hai Phong had been in the city for less than one year;
- Seafarers in Da Nang and Can Tho were 7-8 years older, on average, and more likely to be married than construction workers in Hanoi and HCMC and the porters in Can Tho;
- Few migrants reported using drugs;
- Less than ten percent of all migrant workers had a casual sex partner in the past 12 months;
- Over one-fifth of seafarers/fishermen in Hai Phong had commercial sex in the past year, and one-sixth of the construction workers in Hanoi reported being with a sex worker in the past year; Over 5 percent of construction workers in Hanoi and HCMC had four or more commercial partners in the past 12 months;
- Three-fourths or more of the migrant workers reported using a condom with their last commercial partner, and consistent condom use with commercial partners in the past 12 months (i.e., used condoms every time with sex workers) ranged from 75 percent in Hai Phong to 50 percent in HCMC; and
- Consistent condom use with casual sex partners was low, less than one-third in all provinces.

Conclusions: Migrant Workers

Migrant workers, in particular construction workers and seafarers, live in areas often far from their families. Some migrant workers in each of the five provinces reported engaging

in sex with commercial sex partners in the past year, although to a lesser extent than LDTDs. Condom use between migrant workers and commercial, casual and regular sex partners was not consistent. Thus, as the reported prevalence of HIV in sex workers rises, the migrant workers are increasingly vulnerable not only to becoming infected themselves, but also bringing the virus home to their wives and/or other regular and casual sexual partners. Interventions targeting increased condom use among migrant workers should be implemented or expanded from the already strong peer education pilot projects that exist in some of these provinces.

General Recommendations

Although mostly descriptive baseline information, the results and findings of the BSS I do support a number of recommendations for HIV/AIDS prevention and care and further analysis, dissemination and utilization of BSS results. Some key recommendations include the following activities:

- Sustain HIV/AIDS education activities in the general community, especially men and youth, using both mass media and interpersonal communication to emphasize the dangers of HIV/AIDS to anyone engaging in high-risk behaviors; as well as focusing on the high-risk populations of SWs and IDUs;
- Continue to prioritize, strengthen, and scale-up behavioral change intervention programs for high-risk populations, including harm reduction for IDUs, needle exchange and greater accessibility of disposable needles, increased condom accessibility and promotion of consistent condom use through social marketing and life skills training, and supporting

- successful injecting drug abuse prevention and rehabilitation strategies;
- Establish effective voluntary HIV counseling and testing centers, ensuring that those voluntarily tested are, informed of the results and properly counseled, provided essential HIV/AIDS prevention information, and if necessary, are checked and treated for STDs and referred for care and support if found to have HIV/AIDS; and
- Further analyze the available BSS behavioral data, including the inter-relationships between behavioral risk information and socio-demographic and program intervention exposure variables, and ensure that the data and key findings are thoroughly disseminated and utilized by policy and program people at both the national and provincial levels in Vietnam.

Lessons Learned for the Second Round of BSS: 2001

The lessons learned and general experience of the “pilot” Round I of the Vietnam BSS conducted in five provinces have resulted in a number of modifications, refinements and recommendations for BSS Round II being conducted from August-November 2001, including the following:

- Further standardization of the sampling procedures and the questionnaires for all five provinces more completely based on the results, feedback and experience from BSS Round I and include the changes/modifications in the BSS Round II training;
- More clearly defined sex partner categories;
- More clearly defined the concept of sharing needles, syringes and injecting equipment;
- Time the fieldwork of BSS Round II to be similar to the timing of fieldwork in BSS Round I to avoid seasonal variations in behavior (e.g., due to Tet holidays, summer vacations, seasonal variations in migrations, mobility and work and recreation patterns);
- Standardization of time indicators for number of sex partners, past sexual behavior, and needle and syringe sharing, focusing on behaviors in the past day, week and month rather than on the past six months or a year;
- Further standardizing the key indicators and analysis plans for the BSS final reports;
- Implement qualitative research to clarify information and to help explain quantitative study findings. Additional social research should be conducted during mapping of the second round BSS;
- Included in the BSS II report will be comparisons of BSS Round II results and indicators with baseline results and indicators from BSS Round I;
- Coordination with other donor organizations and implementing agencies that will be supporting and/or conducting the BSS in additional provinces to ensure comparable and high quality survey results in all provinces participating.
- Provincial level dissemination activities of the BSS Round I results throughout the year 2001 helped to ensure utilization of the relevant survey findings for HIV/AIDS prevention programs.

I. INTRODUCTION

As of November 30, 2001, there were 42,365 people reported to be living with HIV/AIDS in Vietnam, of which 6,343 people had clinically diagnosed AIDS. The actual numbers are likely to be several times higher. There have been 3,474 reported deaths in Vietnam from AIDS since the start of the epidemic.¹ Men make up the vast majority of the detected infections, and about four-fifths of the reported cases have been in people under the age of 40 years old. Despite rising prevalence rates, Vietnam is still in the early stages of an HIV epidemic. HIV is still 'concentrated' primarily in populations with specific high-risk behaviors - such as injection drug users and female sex workers - and it has not yet spread extensively into the general population.

In an effort to provide government leadership in combating HIV, the National AIDS Committee (NAC) was established by the Vietnamese Government in 1990. In 1994, the Prime Minister responded to the increasing need for HIV/AIDS prevention and control by creating the National AIDS Bureau (NAB) as the implementing and coordinating body of the NAC. Recently, the NAC was reorganized into the National Committee for AIDS Prevention and Drug and Prostitution Control (NCADP), and the NAB is known today as the National AIDS Standing Bureau (NASB).

The Behavioral Surveillance Survey (BSS) was designed in 2000 by the NAC with support from Family Health International to compliment the HIV Sentinel Surveillance (HSS) and passive HIV detection systems that were already in place. In the past, epi-

demiological surveillance has focused primarily on HIV testing to measure prevalence in high-risk populations. The BSS is a cross-sectional survey implemented in high-risk populations and intended to be systematically repeated in order to measure behavioral trends over time. It measures what characteristics of high-risk groups are affecting changes in HIV prevalence. The BSS acts as an early warning system of established risk activities in a sub-population while following changes in these activities over time. The BSS can also inform governments and organizations on how to best tailor their interventions and allocate their resources.

The basic objectives of the Vietnam BSS Round I conducted in the year 2000 were to:

1. Provide a description of basic socio-demographic characteristics of these groups;
2. Identify risk behaviours necessitating interventions among sub-populations;
3. Identify priorities for planning prevention programs and for appropriately distributing limited resources;
4. Establish a baseline for monitoring trends and patterns in risk behavior;
5. Provide information to explain changes in HIV prevalence;
6. Provide key information for advocacy and policy making; and
7. Provide information to measure program impact.

A structured questionnaire was given to karaoke and street-based sex workers,

¹Ministry of Health, Estimates and Projections of HIV/AIDS from 2001-2005

injection drug users, long distance truck drivers, and migrant workers in Hanoi, Hai Phong, Da Nang, HCMC and Can Tho provinces. Adapted from a core questionnaire that utilizes standardized and country-specific indicators, the surveyed included questions on demographic information, sexual behavior and condom use, drug use, STI history, HIV knowledge, and access to HIV interventions.

The following report provides a comprehensive overview of the survey methodology, results, and recommendations and conclusions.

1.1 PARTICIPATING INSTITUTES AND ORGANIZATIONS

To ensure effective implementation of the BSS, the National AIDS Committee (NAC) and the Ministry of Health (MOH) established a management board and technical working group to oversee and execute the project.

BSS Management Board

The BSS Management Board, established by NAC/MOH, is responsible for assisting the Chairman of the NAC in the management and implementation of the BSS. Its specific functions and responsibilities include the following:

- 1) To develop, manage, observe, implement and evaluate the Behavioral Surveillance Survey in Vietnam;
- 2) To develop a detailed budget for BSS implementation for inclusion in the yearly National HIV/AIDS Prevention Program; and,

- 3) To coordinate with concerned bodies and to mobilize international support for BSS implementation.

The BSS Management Board draws on staff from a wide range of disciplines including the following:

- National AIDS Standing Bureau
- Sub-Committee on HIV Surveillance, National Institute for Hygiene and Epidemiology (NIHE)
- Department of Preventive Medicine (DOPM), Ministry of Health
- Health Department, Ministry of Public Security (MOPS)
- Department of Anti-Social Evils, Ministry of Labor, War Invalids and Social Affairs (MOLISA)
- National Sociology Institute
- Hanoi Medical College

Nationally, the Executive Director of the NASB chairs the Management Board. At the local level, Provincial BSS Management Boards were established in each province and are headed by the Director or Deputy Director of Provincial Health Services.

National Technical Group

The National AIDS Committee established the BSS Core Technical Group to assist the Management Board in the implementation of the BSS. The Core Technical Group is comprised of eight members representing the National AIDS Standing Bureau, the Department of Preventive Medicine, and the Sub-Committee on HIV Surveillance, the Department of Public Health, and the Hanoi Medical College.

Provincial Organizations and Community Members

The BSS Management Board and National Technical Group worked closely in the field with a number of organizations and community members including the provincial health services staff, and representatives of social organizations including the Women's Union, Youth Union, Labor

Union, the Department of Anti-Social Evils, IDUs and sex worker peer educators, and key informants for long distance truck driver and migrant workers.

International Organizations

Family Health International provided financial and technical support to the implementation of the BSS.

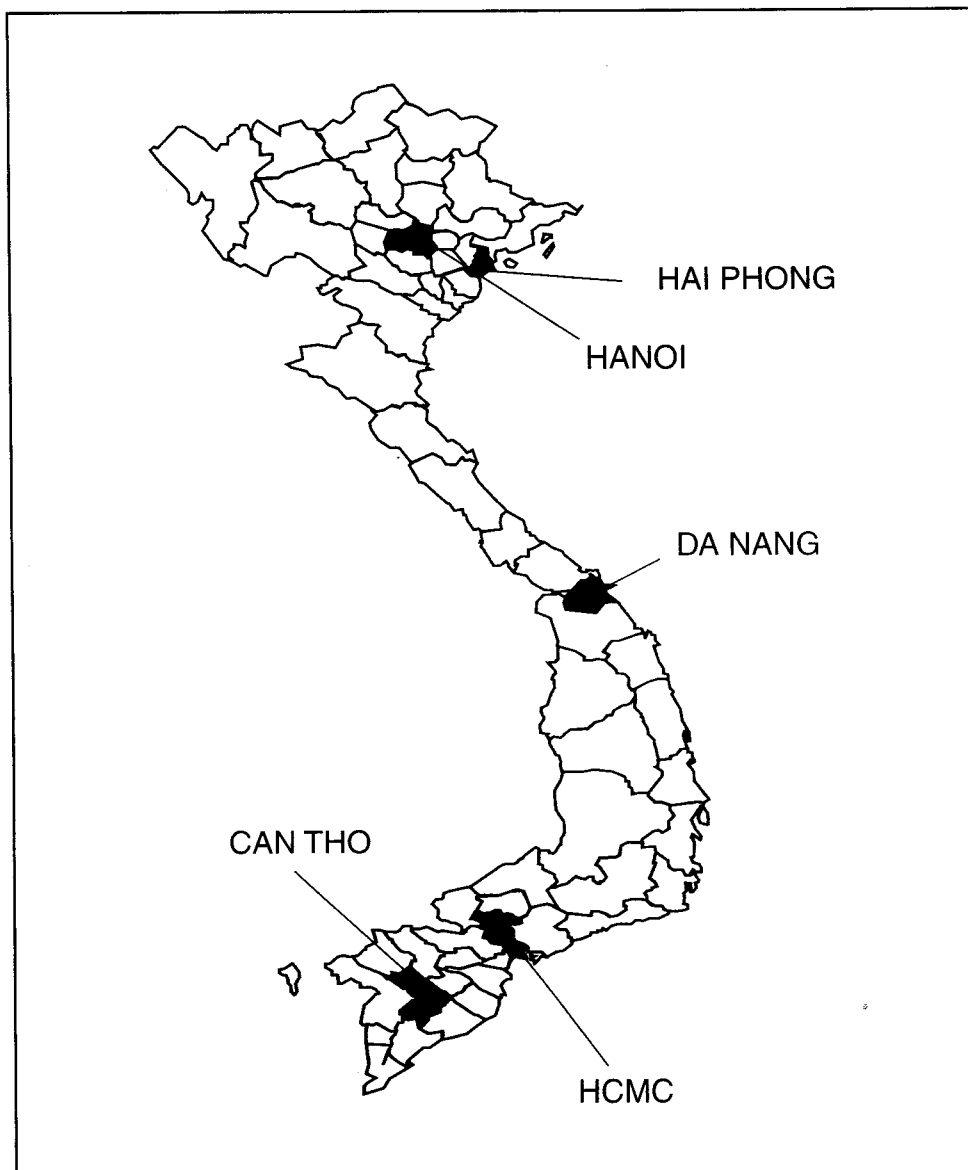
II. METHODOLOGY

2.1 SURVEY DESIGN

Selection of Geographical Areas

Five provinces were selected for inclusion in the first round of behavioral surveillance in Vietnam including Hai Phong and Hanoi in the northern region, Da Nang in the central part of the country, and Can Tho province and HCMC in the south. These provinces were

chosen for the following reasons: 1. They represent diverse ecological areas of Vietnam; 2. Reported HIV prevalence data indicates that they are regions with high risk for disease spread; 3. There are currently many HIV/AIDS interventions in all five areas; and, 4. The capacity of the provincial government staffs and networks within the selected populations was strong enough to enable the study teams to successfully implement the survey.



In the five provinces, populations were mapped and selected from the provincial capitals because these urban sites had the highest density of identifiable sub-population members. In Can Tho, however, additional sex workers were chosen from along Route 1, the main traffic route through the region. At the border area where Can Tho, An Giang and Kien Giang provinces meet the sex industry has thrived due to the high volume of traffic through the area and the difficulty posed to the police in regulating this area across border jurisdictions.

Study Populations

The different population groups discussed below were chosen for the BSS because of

their potential for higher exposure to HIV infection.

Sex Workers

As of 1995, there were an estimated 70,000 female sex workers in Vietnam. Sentinel surveillance has found HIV prevalence in female sex workers to be between 2 percent and 18 percent, depending on the province. Sex work is provided in a variety of locations throughout the country, and the industry is too broad-based to attempt to generalize the characteristics of all sex workers under one definition. For this reason, sex workers in this study were sampled in two separate groups: those who work in karaoke bars and similar entertainment establishments and those who work on the streets.

Table 1: Sub-populations included in BSS

No.	Province/city	Sub-populations
1	Hanoi	IDUs, karaoke-based sex workers, street-based sex workers, long distant truck drivers, migrant construction workers
2	Hai Phong	IDUs, karaoke-based sex workers, street-based sex workers, long distant truck drivers, seafarers/fisherman
3	Da Nang	IDUs, karaoke-based sex workers, street-based sex workers, long distant truck drivers, seafarers
4	Ho Chi Minh City	IDUs, karaoke-based sex workers, street-based sex workers, long distant truck drivers, migrant construction workers
5	Can Tho	IDUs, karaoke-based sex workers, street-based sex workers, long distant truck drivers, porters/stevedores

- **Karaoke-Based Sex Workers (KSWs)**

Karaoke-based sex workers were defined as women who met their clients in entertainment establishments such as karaoke bars, coffee and tea bars, and beer bars. They are considered to be indirect sex workers who work in various establishments selling drinks or food, but earning much of their income through sex work with clients they meet at the establishments. Before participating in the study, KSWs were screened to determine whether they were sex workers, and only those women who sold sex in exchange for money were selected for the study.

- **Street-Based Sex Workers (SSWs)**

Unlike the karaoke-based sex workers, street-based sex workers did not work within formal establishments. Instead, they congregated and met their customers on the streets, in alleys, football stadiums, bus stations, and inexpensive small guesthouses, outside of bars and in other similar places. SSWs usually support themselves through sex work only and do not have any other sources of income.

Injecting Drug Users (IDUs)

Since 1996 a steady rise in HIV infection has been detected among IDUs in 20 provinces. As of the year 2000, up to 20 percent of IDUs had HIV/AIDS, and IDUs currently make up over 60 percent of HIV infections countrywide.²

For the purposes of this study, IDUs were defined as persons who used illegal and non-medically prescribed drugs by injecting in the past three months (HCMC, Can Tho, Hanoi) or in the past six months (Hai Phong, Da Nang). In Hanoi, Hai Phong, Da Nang and Can Tho provinces, there was no limitation put on the age of the participant. In HCMC, investigators selected only IDUs thirty years old or younger for the study. Investigators in HCMC believed that the risk of needle sharing in the younger population of IDUs was higher and that resources should be concentrated on this population.

Long Distance Truck Drivers (LDTDs)

Male long distance truck drivers and their assistants were surveyed in the five study provinces. Truck drivers are considered a mobile population in this study because they travel away from their families and communities, often for long periods of time. Mobility often creates an increased risk for being infected with HIV. Truck drivers have fewer social constrictions when away from home and often have more money in their pockets. Research has found that LDTDs often have commercial sex partners along their travel routes, and alcohol plays an important role in unsafe sexual practices of LDTD.³

Migrant Workers

Three different all-male populations of internally migrant workers were included in the study, varying province to province. The population surveyed in each province depended

² Sub-Committee on HIV Surveillance, Ministry of Health, Vietnam, *HIV Status and Trends in Vietnam*, presentation, 2001.

³ Tung N, Son N, Trung N, *Population Mobility, Prostitution and Factors Related to HIV Transmission on Vietnam Main Transportation Routes*, Vietnamese-German Technical Cooperation HIV/AIDS/STD Control in Vietnam, Feasibility Study, November 2000, Hanoi

on the number of migrant workers who could be found meeting the specific classification, and different types of migrant workers were never combined in one province.

- Construction workers (Hanoi and Ho Chi Minh City) - Migrant workers who traveled to specific sites, often far from their home province, to work on construction projects.
- Seafarers/Fishermen (Da Nang and Hai Phong) - Sailors who traveled on boats as crewmembers.
- Porters/Stevedores (Can Tho) - Migrant workers in rice processing factories and cement factories.

Migrant workers, similarly to the mobile long distance truck drivers, are considered potentially high-risk populations for acquiring HIV because they have moved away from their homes in search of work. The new communities they create with other migrant men may encourage drug and alcohol use and visits to sex workers.

Questionnaire Design

The questionnaire was comprised of 70-80 questions, depending on the population group, and it took, on average, 25-30 minutes to administer. A core questionnaire including an informed consent statement was developed for all groups and adapted to meet provincial language differences. Because there were perceived variations in the characteristics of sub-population members in different provinces, in particular among the IDU, some questions were adjusted accordingly. For instance, IDUs in HCMC and Hanoi were asked about sharing injection equipment in the past month and past six

months while the other three provinces were asked only about the past six months.

Questionnaires were revised during the interviewer and supervisor training with input from the participants. The questionnaires were then pre-tested for comprehensibility and appropriateness of language during the mapping exercise and finalized by the Technical Care Group before the beginning of data collection.

Selected Indicators of HIV Risk

There are a number of key indicators of HIV risk and knowledge. These indicators can be general to the entire study or specific to behavioral risks of certain sub-populations. When carefully standardized, they allow comparison of risk between different populations and geographical areas and can be repeated to look at behavioral trends over time. The BSS uses core indicators, which have been tested and modified over a period of many years in a spectrum of countries and circumstances. Whenever feasible, the indicators and definitions were adjusted to reflect cultural and language differences.

All Groups

1. % of population who correctly identified at least two of three effective means of protecting themselves from HIV infection (prompted).
2. % of population who requested an HIV test and have received the results.
3. % of population reporting exposure to a given intervention.
4. % of population reporting STD in the last 12 months.

Commercial Sex Workers (Karaoke-based Sex Workers and Street-based Sex Workers):

1. % of population reporting condom use during most recent sex act by type of partner (one-time client, regular client, non-paying partner)
2. % of population reporting consistent condom use in the past 12 months by type of partner (one-time client, regular client, non-paying partner)
3. Mean number of casual and regular clients in the last week.

IDUs:

1. % of population sharing injecting equipment at least once in the last month. Sharing is defined as using any syringe or needle that was previously used by someone else.
2. % of population reporting always using safe injecting equipment in the past 1 month or 6 months.

Male Groups (IDUs, LDTDs, Migrant Workers):

1. % of population with a casual partner in the past 12 months.
2. % of population with a commercial partner in the past 12 months.
3. % of population reporting condom use during the most recent sex act with a casual partner in the past 12 months.
4. % of population reporting consistent condom with casual partners in the past 12 months.
5. % of population reporting condom use during the most recent sex act with commercial partner in the past 12 months.

6. % of population reporting consistent condom with commercial partners in the past 12 months.

Interviewer and Supervisor Selection and Training

BSS interviewers were chosen based on the following criteria;

- Must be faithful, enthusiastic and responsible;
- Have previous interviewing experience in medical or social community surveys;
- Available to work outside of traditional working hours;
- Understand the objective of the BSS;
- Able to work under the supervision of the supervisors and Management Board;
- Information given by key informants during the mapping exercise (i.e. peer educators to interview sex workers and IDUs).

Staff of social organizations and agencies and health care workers at the district and communal levels were recruited for participation in the interviewer training. Where feasible, peer educators were also used.

BSS supervisors were chosen based on the following criteria;

- Met the aforementioned interviewer criteria;
- Have experience working as a supervisor; and
- Able to manage, monitor and supervise interviewers.

The field supervisors were all participants from the mapping fieldwork.

Training of interviewers was conducted by the National Technical Group and took place over a period of three days. It covered the objectives of the BSS, methodology and data collection, interviewing skills, review of and practice in using the questionnaire including role-playing, and sampling methodology. Interviewers and supervisors honed their skills during field practice and met later to discuss their experiences and to finalize the questionnaires. Supervisors took part in the interviewer training plus an additional day that covered supervisory skills. All participants were given interviewer and supervisor guidelines containing the results of the mapping, selection criteria of sub-populations, sample sizes and sampling methodology, and methods for approaching and interviewing group members.

Protection of Participants

Prior to survey implementation, the BSS tools and methodology were reviewed and approved by Family Health International to ensure the study offered full protection of the rights of participants and confidentiality of the information.

2.2 SURVEY IMPLEMENTATION

Mapping and Sampling

Qualitative information on each sub-population was collected during the social mapping segment of the fieldwork. Key informants were asked targeted questions to gather information on how to identify the group members, what characteristics of the groups influence their risk behaviors, how and when to access them for interviews, what would be the most effective type of interviewer, and what they felt

would be good intervention programs for the group.

Locations where the sub-populations congregated and the number of members at these sites during different periods of time were also collected during the mapping period. The results of the geographical mapping were recorded on physical maps to use in creating the sampling framework.

Investigators in the mapping phase were provincial health service staff, and representatives of social organizations including the Women's Union, Youth Union, Labor Union, the Department of Anti-social Evil, IDU and sex worker peer educators, and key informants for long distance truck driver and migrant workers. An extensive three-day training was held for the mapping staff, and the mapping fieldwork was supervised by the National Technical Group.

Based on the data collected during mapping, a sampling frame was developed for each group in each province. Details on the mapping results and the sampling strategies for the sub-populations were as follows:

Sex Workers

Social and geographic mapping was carried out to locate and contact key informants and to enumerate sex workers and their gathering points. In-depth interviews, group discussions, and a questionnaire provided information on perceived risk behaviors among the karaoke and street-based sex workers and in mapping areas where they could be found. During these discussions, investigators also received input on language and phrasing of the questionnaire. Long

distance truck, motorbike and taxi drivers were interviewed to determine 'hotspots' where karaoke and street-based sex workers could be reached.

Detailed maps were created of sites where the street and karaoke-based sex workers 'clustered'. Using systematic random sampling, a specified number of clusters were chosen for the street-based sex workers and a separate group of clusters chosen for the karaoke-based sex workers. During the second stage of sampling, a predetermined number of sex workers were chosen from each selected cluster either by taking all or through random selection. Sex workers were interviewed by peer educators whenever possible and also by health workers.

Injection Drug Users

Because of the underground nature of injection drug use, the study team found this population particularly challenging to identify, and they employed a variety of methods to reach IDUs. Using a social mapping technique, investigators held in-depth interviews and group discussions with key informants, peer educators and other IDUs in every province to collect detailed information about substance use, types of risk behaviors, IDU networks, and the best methods for interviewing this population. At the same time, the language in the IDU questionnaire was tested and adapted for appropriateness, sensitivity and comprehension.

A list of registered IDUs was provided by the Provincial Sub-Departments of Anti-Social Evils and formed the basis for the IDU sam-

pling framework. Thirty clusters were selected from the list using a probability proportional to size (PPS) sampling methodology. From each of the selected clusters, index cases were chosen based on sub-categories or networks of IDUs that were identified during the mapping exercise. Each index case was asked by the interviewer to identify other injection drug users whom he believed would be willing to participate in the study, a recruitment technique known as "snowballing". The anonymity of all newly identified drug users was strictly maintained, and whenever possible IDUs were interviewed by IDU peer educators.

Long Distance Truck Drivers

Through social and geographic mapping, information was collected from LDTDs on rest stops and parking areas in each province and the estimated number of LDTDs at these sites every day. Parking areas were mapped and clusters were either randomly selected in the provinces with a large truck driver population or all clusters were chosen in the provinces with fewer truck drivers. At the second stage, a consecutive sample of truck drivers was chosen in a 24-hour period.

Migrant Workers

Social mapping enabled investigators to gather specific information about the male migrant populations, and all sites where the migrants congregated were listed during the geographic mapping portion of the fieldwork. Study teams selected all mapped sites and then chose clusters (houses or boats) either by random sampling or take all. Individuals in each of these clusters were then selected by random sampling or take all depending on the size of the cluster.

Table 2: Sample Sizes

	Hanoi	Hai Phong	Da Nang	HCMC	Can Tho	Total
KSWs	480	504	449	463	406	2320
SSWs	409	78	323	314	176	1300
IDUs	360	326	297	420	384	1787
LDTDs	500	500	452	422	463	2337
Migrants	487	514	453	506	506	2466
	2236	1922	1974	2125	1935	10192

* Sample sizes were calculated to allow for the detection of a 15% change over time in condom use by KSWs, SSWs, LDTDs and migrant workers and needle sharing by IDUs.

* Data on refusals was not collected but refusal rates were estimated to be low.

Data Collection

Data collection was conducted in the five provinces from June to November 2000 and lasted approximately one month per province. During the fieldwork, a member of the National Technical Group supervised each step of the process. In each province, six local staff members assisted the central supervisor, one responsible for each group.

Before conducting an interview, participants were read an informed consent statement explaining the objectives of the study and assuring them that their participation was voluntary and that all answers would remain confidential. If the interviewee chose to proceed with the questionnaire, the interviewer would sign his or her name to the consent

form to ensure that the identity of the participant remained anonymous. Small monetary incentives were given to interviewees to compensate them for their time lost from work.

Data Entry and Analysis

The National Technical Group developed a standardized coding guide, data entry instructions, and data entry program for each province. Data for each of the five provinces were entered at the central level in Hanoi using Epi-Info. Group-wise data analysis was conducted at the central level by four members of the National Technical Group using Epi-Info. They followed a detailed analysis plan to enable comparability of indicators across the target groups and across the five provinces.

III. RESULTS

3.1 SOCIO-DEMOGRAPHIC CHARACTERISTICS

Tables 3 through 7 provide the background socio-demographic characteristics of the five BSS target groups (i.e., karaoke-based sex workers (KSWs); street-based sex workers (SSWs), IDUs, long-distance truck drivers (LDTDs), and migrant workers).

Karaoke-Based Sex Workers

Table 3 shows that a majority of the KSWs are younger than 25, though on average, KSWs in Da Nang are about three years older than KSWs in the other provinces, with mean age of 25 years in Da Nang compared to mean ages between 21 and 22 years in the other four provinces/cities.

HCMC and Can Tho were the only provinces with more than 1 percent illiteracy among KSWs (6.5% and 4.2%, respectively). Ninety percent of the KSWs in Hanoi, 60 percent in Hai Phong, 58 percent in Da Nang, 52 percent in HCMC, and 42 percent in Can Tho had attended secondary school or higher.

The majority of KSWs in all five provinces had never been married, ranging from a low of 54 percent of KSWs being single in Da Nang to a high of 83 percent of KSWs being single in Hai Phong. Relatively small proportions of the KSWs were currently mar-

ried, between 3 and 11 percent across the provinces. KSWs in Da Nang were the most likely to be divorced, separated or widowed (42 percent), compared to the other four provinces which ranged between 13 and 21 percent in this category.

Over 50 percent of the KSWs in Hai Phong and Da Nang had lived in the provinces for less than one year, indicating that many of them had migrated to these areas from other provinces. One-third of the KSWs in Hanoi and one-quarter in Can Tho had recently moved there from another province. In contrast, 63 percent of the KSWs in HCMC had been living there for five or more years.

Access to television varied considerable between HCMC and the other provinces. Almost 50 percent or more of the KSWs in Hanoi, Hai Phong, Da Nang and Can Tho watched television every day in the past four weeks, and less than one-third of these KSW watched television less than once a week. KSWs in HCMC had less contact with televised media, with over half reporting that they watched television less than once a week. Listening to the radio was less common than watching television among all KSWs in all provinces; 50 percent or more KSWs reported that they listened to the radio less than once a week.

Table 3: Socio-Demographic Characteristics of Karaoke-Based Sex Workers

Characteristics	Hanoi %	Hai Phong %	Da Nang %	HCMC %	Can Tho %
Age Group					
▪ < 15	0.0	0.0	0.0	0.0	0.2
▪ 15-19	16.1	31.2	7.6	20.5	24.4
▪ 20-24	68.7	58.1	43.9	53.1	57.6
▪ 25-29	12.7	8.3	37.6	19.8	13.8
▪ ≥ 30	2.5	2.4	10.9	6.5	3.9
Mean Age (years)	21.9	21.0	24.6	22.5	21.7
Education Level					
▪ Illiteracy	0.0	0.6	0.7	6.5	4.2
▪ Primary school (1-5)	9.8	39.8	41.0	41.6	53.7
▪ Secondary school (6-9)	68.1	45.5	53.2	40.3	38.9
▪ High school (10-12)	21.0	13.9	5.1	10.8	3.2
▪ College/University	1.0	0.2	0.0	0.9	0.0
Marital Status					
Never Married	77.0	83.4	53.7	66.5	72.9
Currently Married	3.3	3.6	3.8	11.4	8.4
Divorced/Sep/Widowed	19.6	13.0	42.5	21.1	18.7
Years Living in City					
▪ < 1	32.9	66.4	56.6	9.7	25.1
▪ 1-2	26.0	14.0	25.2	13.4	39.7
▪ 3-4	23.1	8.5	10.7	13.8	11.8
▪ 5+	17.9	11.1	7.6	63.1	23.4
Watch Television in Past 4 Weeks					
▪ Everyday	62.5	52.4	47.0	27.2	48.0
▪ At least once a week	25.2	34.1	32.1	21.2	19.7
▪ Less than once a week	12.3	13.5	20.9	51.6	32.3
Listen to Radio in Past 4 Weeks					
▪ Everyday	18.3	13.4	2.7	5.7	27.8
▪ At least once a week	17.3	29.0	23.4	11.2	22.7
▪ Less than once a week	64.4	57.6	73.9	83.1	49.5
Number of Respondents	480	504	449	463	406

Street-Based Sex Workers

The socio-demographic characteristics of

street-based sex workers are shown in Table 4 below.

Table 4: Socio-Demographic Characteristics of Street-Based Sex Workers

Characteristics	Hanoi %	Hai Phong %	Da Nang %	HCMC %	Can Tho %
Age Group					
▪ < 15	0.0	0.0	0.0	0.0	0.0
▪ 15-19	7.1	1.3	1.6	14.4	12.5
▪ 20-24	47.8	9.1	5.0	24.7	35.2
▪ 25-29	23.3	35.1	19.7	23.4	14.8
▪ ≥ 30	21.8	54.5	73.7	37.5	37.5
Mean Age (years)	25.7	31.2	34.4	27.2	28.0
Education Level					
▪ Illiteracy	1.2	6.4	17.6	19.4	0.0
▪ Primary school (1-5)	26.3	52.6	48.0	51.9	23.3
▪ Secondary school (6-9)	55.8	28.2	29.4	23.6	54.5
▪ High school (10-12)	16.0	12.8	4.3	5.1	21.0
▪ College/University	0.7	0.0	0.6	0.0	1.2
Marital Status					
Never Married	60.1	27.3	19.2	31.8	40.9
Currently Married	5.3	13.0	10.6	16.9	13.7
Divorced/Sep/Widowed	34.6	59.7	69.2	51.3	45.4
Years Living in City					
▪ < 1	15.2	9.0	9.9	4.8	17.0
▪ 1-2	16.9	6.4	5.6	9.6	14.8
▪ 3-4	26.4	5.1	6.8	13.4	8.5
▪ 5+	41.6	79.5	77.7	72.3	59.7
Watch Television in Past 4 Weeks					
▪ Everyday	42.1	20.5	36.8	29.6	33.0
▪ At least once a week	29.1	33.3	26.3	18.5	31.3
▪ Less than once a week	28.8	46.2	36.9	51.9	35.7
Listen to Radio in Past 4 Weeks					
▪ Everyday	14.2	5.1	8.0	13.1	23.9
▪ At least once a week	14.7	16.7	12.1	14.3	30.1
▪ Less than once a week	71.1	78.2	79.9	72.6	46.0
Number of Respondents	409	78	323	314	176

SSWs in each province/city were four to ten years older than the KSWs, on average. In Hai Phong and Da Nang, 90 percent or more of the SSWs were 25 or older. In Hai Phong

and Da Nang, the mean age of SSWs was 31 years and 34 years, respectively, or ten years older than the respective mean ages for KSWs in those locales.

SSWs were much less likely than KSWs to have never been married. While 60 percent of SSWs in Hanoi were single women, less than one-fifth of SSWs in Da Nang had never been married. Marital disruption through separation, divorce, or widowhood was a very common experience among SSWs and could be part of the reason they became involved in commercial sex work to support themselves and their children (if any) in the absence of a husband. The majority of SSWs in Da Nang (69%), Hai Phong (60%), and HCMC (51%) were in the divorced/separated/widowed category, while almost half of the SSWs in Can Tho (45%) and over one-third of the SSWs in Hanoi were in that category.

Reported illiteracy was highest in HCMC (19.4%) and Da Nang (17.6%), while three-fourths of the SSWs in Hanoi and Can Tho had attended at least secondary school and about 1 percent attended college or university. SSWs living in Hanoi and Can Tho reported 15 percent and 17 percent, respectively having lived in the province for less than one year. Although the data are not shown in the table, over four-fifths of SSWs and KSWs in Hanoi were born in another province. Almost three-fourths or more of the SSWs in Hai Phong, Da Nang and HCMC had been living in their current province of residence for five or more years.

Half to three-fourths of all SSWs watched television at least once a week. One-quarter or less of the SSWs in Hanoi, Hai Phong, Da Nang and HCMC listened to the radio at least once a week, while over one-half of the SSWs in Can Tho listened to the radio at least once a week.

IDUs

The socio-demographic characteristics of male IDUs are shown in Table 5. Three-fourths of the IDUs in Hai Phong and Da

Nang, one-half in Hanoi and Can Tho, and one-third in HCMC were over the age of 25. IDUs in HCMC were asked their age before the interview began, and selection criteria for this province was to include only those IDUs who reported that they were thirty years or younger because injection drug use in HCMC was thought to be concentrated in a younger age group than in the other provinces. For this reason, a categorical age breakdown on IDUs in HCMC is not representative of the total IDU population in that province. Can Tho had the greatest proportion of IDUs who were younger than 20 (25%) followed by HCMC (19%). Less than 10 percent of the IDUs in the other provinces were below 20 years old.

Illiteracy among IDUs was greatest in HCMC (15.8%), with the other provinces reporting little illiteracy (between 0.6% and 4%). Less than one-half of the IDUs in HCMC had attended secondary school or higher, while one-third in Can Tho and three-fourths or more in Hanoi, Hai Phong and Da Nang had done the same. About one-third of the IDUs in Hanoi and Da Nang were currently married, while lower proportions married were reported in the other three provinces.

In order to understand the mobility patterns of IDUs, they were asked questions regarding their travel away from home and the length of time they had spent at their current residence. One-quarter of the IDUs in Hai Phong and HCMC reported having been away from home for one or more continuous months in the past year, and 16-20% of the IDUs in Hanoi, Da Nang and Can Tho had left their home for a least one month. Although IDUs are traveling to other cities, they do not report frequently moving to other cities. Over 90% of all IDUs said that they had been living for five or more

years in the city/province where they were interviewed. About 10 percent of IDUs reported injecting drugs in other provinces during the

past twelve months, and some of them reported sharing needles in these other locales (Tuan, et al., 2001 - BSS paper for 6th ICAAP).

Table 5: Socio-Demographic Characteristics of IDUs

Characteristics	Hanoi %	Hai Phong %	Da Nang %	HCMC %	Can Tho %
Age Group					
▪ < 15	0.0	0.3	0.7	1.4	1.8
▪ 15-19	6.4	4.6	10.1	17.1	23.2
▪ 20-24	35.3	22.1	14.1	46.2	23.7
▪ 25-29	20.3	31.8	14.1	30.7	8.3
▪ ≥ 30	38.1	41.1	60.9	4.5	43.0
Mean Age (years)	27.9	28.4	32.9	22.9	28.8
Education Level					
▪ Illiteracy	0.6	0.6	2.0	15.8	4.4
▪ Primary school (1-5)	10.3	26.4	21.5	40.6	29.7
▪ Secondary school (6-9)	49.7	46.6	41.8	34.8	53.4
▪ High school (10-12)	35.8	23.9	32.7	7.6	12.0
▪ College/University	3.6	2.5	2.0	1.2	0.5
Currently Married	34.8	22.3	31.9	6.3	25.0
Away from Home One Continuous Month or More in the Past Year	15.8	26.0	15.8	27.3	20.2
Years Living in City					
▪ < 1	0.6	0.9	2.0	1.4	0.3
▪ 1-2	0.6	0.9	3.7	3.3	0.5
▪ 3-4	0.6	1.8	1.7	3.3	1.8
▪ 5+	98.3	96.3	92.6	91.9	97.4
Watch Television in Past 4 Weeks					
▪ Everyday	68.1	71.0	36.5	45.2	70.6
▪ At least once a week	30.0	16.4	39.5	22.6	9.4
▪ Less than once a week	1.9	12.6	24.0	32.2	20.0
Listen to Radio in Past 4 Weeks					
▪ Everyday	28.6	25.2	5.4	11.7	37.7
▪ At least once a week	32.5	18.7	20.0	12.2	12.2
▪ Less than once a week	38.9	56.1	74.6	76.1	50.1
Number of Respondents	360	326	297	420	384

Access to television was high among IDUs in Hanoi, Hai Phong and Can Tho with a majority watching everyday in the past four weeks (68%, 71%, and 71% respectively). Fewer than half of the IDUs in Da Nang and HCMC watched the television everyday and one-quarter or more watched TV less than once a

week. Access to radio was also relatively low for those IDUs residing in Da Nang and HCMC: three-fourths listened to the radio less than once a week during the past four weeks. Almost one-half of the IDUs in Hanoi, Hai Phong and Can Tho were able to listen to the radio at least once a week.

Table 6: Socio-Demographic Characteristics of Long Distance Truck Drivers

Characteristics	Hanoi %	Hai Phong %	Da Nang %	HCMC %	Can Tho %
Age Group					
▪ < 15	0.0	0.0	0.0	0.0	0.2
▪ 15-19	1.0	1.0	4.0	3.8	4.5
▪ 20-24	11.6	12.8	12.8	16.1	13.2
▪ 25-29	20.4	19.2	18.6	27.3	29.6
▪ ≥ 30	67.0	66.9	64.6	52.6	52.5
Mean Age (years)	33.8	34.9	33.8	31.6	30.9
Education Level					
▪ Illiteracy	2.4	0.0	0.0	0.0	0.0
▪ Primary school (1-5)	2.2	6.0	1.6	7.1	20.1
▪ Secondary school (6-9)	50.0	38.4	52.9	44.3	54.2
▪ High school (10-12)	44.4	53.7	44.9	46.0	25.1
▪ College/University	1.0	1.8	0.7	2.6	0.6
Currently Married	68.8	67.9	70.8	54.3	62.9
Away from Home One Continuous Month or More in the Past Year	38.4	16.9	38.4	47.3	5.8
Watch Television in Past 4 Weeks					
▪ Everyday	56.0	32.7	34.5	27.3	13.6
▪ At least once a week	36.0	35.3	57.1	37.4	57.2
▪ Less than once a week	8.0	32.0	8.4	35.3	29.2
Listen to Radio in Past 4 Weeks					
▪ Everyday	41.0	29.2	14.6	13.3	20.5
▪ At least once a week	41.0	37.8	42.3	24.2	50.2
▪ Less than once a week	18.0	33.0	43.1	62.5	29.3
Number of Respondents	500	500	452	422	463

Long Distance Truck Drivers

A majority of all LDTDs were thirty years old or older (Table 6). The mean age of LDTDs ranged from 31 years in Can Tho to 35 years in Hai Phong. Hanoi was the only province where some LDTDs reported illiteracy (2.4%). Over 90% of the truck drivers in Hanoi, Hai Phong, Da Nang and HCMC and 80 percent of those in Can Tho had at least six years of education.

The majority of the truck drivers interviewed were currently married, ranging from a low of 54 percent in HCMC to 71 percent in Da Nang. LDTDs interviewed in HCMC reported the greatest percent away from home for one continuous month or more in the past year (47.3%), while LDTDs in Can Tho reported the lowest percent away for that time period (5.8%). Seventeen percent of the LDTDs in Hai Phong and 38 percent in Hanoi and Da Nang traveled away from their homes for extended periods of time.

At least two-thirds of the LDTD watched television at least once a week, though Hanoi and Da Nang reported greater frequency of television viewing. Access to radio was highest in Hanoi, where over 80 percent of the LDTD listened at least once and week, and it was lowest in HCMC where two-thirds of the LDTD said that they listened to the radio less than once a week in the past four weeks.

Migrant Workers

Migrant workers in Hai Phong and Da Nang were older than those in the other provinces, with mean ages of 37 years and 36 years in Hai Phong and Da Nang, respectively compared to a mean age of only 29 years in the other three provinces (Table 7).

More than half of the migrant workers in Hanoi (construction workers), HCMC (construction workers) and Can Tho (porters/stevedores) were younger than 30, and 7 to 9 percent of them in these three provinces were only 15-19 years old.

Illiteracy was highest in Can Tho (7.9%), and 2% or less in the other provinces. Only one-third of the migrant workers in Can Tho had a secondary school education or higher. In contrast, over three-fourths of the migrant workers in Hanoi, Da Nang (seafarers/fisherman) and HCMC and 97 percent in Hai Phong (seafarers/fishermen) had received at least some secondary schooling. Five percent of those seafarer/fisherman migrant workers living in Hai Phong and Da Nang had attended college or university.

At least three-fourths percent of the migrant workers in Hai Phong and Da Nang were currently married, while two-thirds in Can Tho, 59 percent in Hanoi and 42 percent in HCMC reported that they were currently married.

Migrant workers in Hanoi, HCMC, Hai Phong and Da Nang reported staying away from their homes for long periods of time (77.8% in Hanoi, 73.7% in Hai Phong, 69.2% in HCMC, and 61.6% in Da Nang). Well over 90% construction workers in Hanoi and HCMC and seafarers in Hai Phong had lived in the province for less than one year, and 57.8% of the seafarers in Da Nang had been there for less than a year. However, only one-third of the stevedore/porter migrant workers in Can Tho had been away from their homes for at least one continuous months in the past year. The same percent reported that they had been living in the city where they were interviewed for less than one year. The migrant workers in

Can Tho that were selected for participation in this study were all porters working in rice processing and cement factories. Their jobs

required far less travel than those of the construction workers (Hanoi and HCMC) and seafarers (Hai Phong and Da Nang).

Table 7: Socio-Demographic Characteristics of Migrant Workers

Characteristics	Hanoi %	Hai Phong %	Da Nang %	HCMC %	Can Tho %
Age Group					
▪ < 15	0.0	0.0	0.0	0.0	0.0
▪ 15-19	9.4	0.6	3.3	6.7	8.4
▪ 20-24	22.6	8.8	7.1	28.3	22.3
▪ 25-29	22.4	12.3	15.2	24.5	21.7
▪ ≥ 30	45.5	78.4	74.2	40.4	47.4
Mean Age (years)	29.2	36.8	35.7	29.0	29.3
Education Level					
▪ Illiteracy	0.4	0.0	1.6	2.2	7.9
▪ Primary school (1-5)	24.9	3.4	20.2	21.5	56.7
▪ Secondary school (6-9)	58.2	33.0	48.0	54.7	27.7
▪ High school (10-12)	15.8	58.0	24.9	19.8	7.5
▪ College/University	0.6	5.6	5.3	1.8	0.2
Currently Married	58.9	75.2	79.6	42.4	66.8
Away from Home One Continuous Month or More in the Past Year	77.8	73.7	61.6	69.2	32.2
Years Living in City/Province					
▪ < 1	99.3	93.4	57.8	95.5	33.2
▪ 1-2	0.7	1.9	2.0	3.8	40.5
▪ 3-4	0	0.8	0.9	0	20.2
▪ 5+	0	3.9	39.3	0.8	6.1
Watch Television in Past 4 Weeks					
▪ Everyday	36.1	84.0	31.5	32.4	46.4
▪ At least once a week	39.0	11.1	31.5	24.9	37.0
▪ Less than once a week	24.9	4.9	37.0	42.7	16.6
Listen to Radio in Past 4 Weeks					
▪ Everyday	18.5	75.5	49.9	17.0	32.0
▪ At least once a week	33.5	13.6	22.3	13.8	35.6
▪ Less than once a week	48.0	10.9	27.8	69.2	32.4
Number of Respondents	487	514	453	506	506

Migrant workers in Hai Phong had high access to television and radio, with 84 percent watching the television and 76 percent listening to the radio everyday (Table 7). A majority of migrant workers in the other provinces reported watching television at least once a week, if not everyday. Over half of the migrant workers in Da Nang, Can Tho and Hanoi listened to the radio at least once a week, compared to less than one-third of those in HCMC.

3.2. HIV RISK BEHAVIORS

Sex Workers

The median age when KSWs first had sex ranged from 18-20 years old (Table 8). In

Hanoi, Hai Phong, HCMC and Can Tho, KSWs reported a median age of first selling sex that was approximately one year older than the age that they first had sex. In Da Nang, there is a three-year difference between the median age of first sex (20) and age first sold sex (23).

Over four-fifths of KSWs in Can Tho reported that they drank alcohol everyday, while most of the KSWs in the other provinces drank alcohol much less frequently. Seventeen percent of the KSWs in Hanoi had ever used drugs, and 5.6 percent reported they had injected drugs in the past six months. Nine percent of the KSWs in HCMC reported having ever used drugs, and 4.3 percent reported

Table 8. First Sex and Alcohol and Drug Use among Karaoke-Based Sex Workers

First Sex and Alcohol and Drug Use	Hanoi	Hai Phong	Da Nang	HCMC	Can Tho
Median Age at First Sex (Age in years)	18	19	20	18	19
Median Age When First Sold Sex (Age in years)	19	20	23	19	20
Alcohol Consumption in Past 4 Weeks (Percent Reporting)					
▪ Everyday	19.0	6.2	30.3	39.0	82.5
▪ Once a week	11.0	2.8	12.0	11.5	13.1
▪ Less than once a week during last 4 weeks or did not drink	70.0	91.0	57.7	49.5	4.4
Ever Used Drugs (Percent)	17.3	1.4	0.0	9.3	0.0
Injected Drugs in Past 6 Months (Percent)	5.6	NA	NA	4.3	NA
Number of Respondents	480	504	449	463	406
NA-Information not available					

they had injected drugs in the past six months. In the BSS Round I, drug injection questions were not asked of the KSWs in Hai Phong, Da Nang or Can Tho. However, these questions have been included for all five provinces in BSS Round I. No KSWs in Da Nang or Can Tho and only 1.4 percent of KSWs in Hai Phong reported that they had ever used drugs.

Seventy-five percent KSWs in Hai Phong reported they had a one-time client in the last day the worked, and half of the KSWs in this province had three or more one-time clients the last day that they worked (Table 9). In addition, one-third of the KSWs in Hai Phong reported at least one regular client in the last day of work. The mean number of

Table 9: Number of Sex Partners among Karaoke-Based Sex Workers during Last Day Worked and Last Week.

Sex Partners	Hanoi	Hai Phong	Da Nang	HCMC	Can Tho
One-time clients:					
Last Day Worked					
<i>Percent KSWs having</i>					
0	55.6	24.0	77.1	42.0	84.7
1	29.0	14.5	18.3	36.1	13.1
2	9.0	11.5	3.3	16.0	2.0
3	5.2	20.6	1.0	4.2	0.3
4+	1.3	29.5	0.5	1.8	0
<i>Mean No. of Clients</i>	0.7	2.5	0.3	0.8	0.1
Last Week Worked					
<i>Mean No. of Clients</i>					
	2.6	19.2	1.5	4.0	0.6
Regular clients:					
Last Day Worked					
<i>Percent KSWs having:</i>					
0	51.0	65.0	95.6	50.3	88.2
1	37.7	19.4	4.2	34.7	11.6
2	7.9	10.5	0.2	12.5	0.3
3	3.1	3.0	0	1.3	0
4+	0.2	2.2	0	1.1	0
<i>Mean No. of Clients</i>	0.7	0.5	0	0.6	0.1
Last Week Worked					
<i>Mean No. of Clients</i>					
	2.4	3.2	0.4	3.5	0.7
Total clients:					
Last Day Worked					
<i>Mean No. of Clients</i>					
	1.3	3.1	0.3	1.5	0.3
Last Week Worked					
<i>Mean No. of Clients</i>					
	5.2	22.5	2	7.5	1.3
Number of Respondents	480	504	449	463	406

both one-time and regular clients of KSWs in Hai Phong in the past week was 22.5.

In Hanoi, 44 percent of the KSWs reported that they had one or more one-time clients in the last day they worked, and about half (49%) had at least one regular client. In HCMC, 58 percent had a one-time client and half (50%) had a regular client in the past day. The mean number of all clients in the past week for Hanoi was 5.2 and for HCMC was 7.5.

The KSWs in Can Tho and Da Nang had fewer one-time and regular clients in the last day worked and past week worked than the other provinces. Fifteen percent or less of the KSWs in Can Tho had a one-time or regular client in the last day worked, and of those who had a client, the majority had only

one. In Da Nang, almost one-quarter (22.9%) had at least one one-time client in the last day worked, and 80 percent of those KSWs with a one-time client had only one on that day. Less than 5 percent of the KSWs in Da Nang reported a regular client during the last day they worked (Table 9).

Table 10 (below) indicates that the median age at first sex of SSWs ranged from 18 (Hanoi, HCMC, and Can Tho) to 20 (Hai Phong) and 21 (Da Nang). In Da Nang, there was a seven-year difference between the median age at first sex (21) and the age when first sold sex (28), and in Hai Phong there was a five year difference (20, 25). In HCMC and Can Tho the median age of first sex was three years younger than when the SSW first began to sell sex and in Hanoi it was one.

Table 10: First Sex and Alcohol and Drug Use among Street-Based Sex Workers.

First Sex and Alcohol and Drug Use	Hanoi	Hai Phong	Da Nang	HCMC	Can Tho
Median Age at First Sex (Age in years)	18	20	21	18	18
Median Age When First Sold Sex (Age in years)	19	25	28	21	21
Alcohol Consumption in Past 4 Weeks					
<i>Percent</i>					
▪ Everyday	3.9	11.5	9.3	3.2	10.2
▪ Once a week	3.2	2.6	7.7	2.5	2.8
▪ Less than once a week during last 4 weeks or did not drink	92.9	85.9	83.0	94.3	87.0
Ever Used Drugs					
<i>Percent</i>	43.3	19.2	0.9	20.1	1.1
Injected Drugs in Past 6 Months					
<i>Percent</i>	21.5	-	-	15.6	-
Number of Respondents	409	78	323	314	176

Over four-fifths of all SSWs in each of the provinces reported drinking alcohol less than once a week. Only about one percent of the SSWs in Can Tho and Da Nang reported that they had ever used drugs. This is in sharp contrast to the 19 percent of SSWs in Hai Phong who had used drugs, 20 percent in HCMC

(with one-sixth (15.6%) of all SSWs in HCMC having reported having injected drugs in the past six months), and 43 percent reporting drug use in Hanoi (with 21.5 percent of all SSWs reporting having injected drugs in the last six months). Injection questions were not asked of SSW in Hai Phong, Da Nang or Can Tho.

Table 11: Number of Sex Partners among Street-Based Sex Workers during Last Day Worked and Last Week.

Sex Partners	Hanoi	Hai Phong	Da Nang	HCMC	Can Tho
One-time clients:					
Last Day Worked					
<i>Percent SSWs having</i>					
0	10.0	20.8	29.1	20.1	4.0
1	30.3	9.1	30.9	24.0	14.8
2	31.8	16.9	27.2	27.2	40.9
3	17.9	23.4	10.5	16.6	27.8
4+	10.0	29.9	2.5	12.1	12.5
<i>Mean No. of Clients</i>	1.8	2.5	1.3	1.9	2.3
Last Week Worked					
<i>Mean No. of Clients</i>	7.7	15.1	6.7	9.5	12.9
Regular clients:					
Last Day Worked					
<i>Percent SSWs having:</i>					
0	65.4	64.9	67.8	44.4	58.0
1	26.5	23.4	26.9	29.1	33.0
2	6.4	7.8	4.6	15.3	5.7
3	1.5	2.6	0.6	4.8	3.4
4+	0.3	1.3	0	6.4	0
<i>Mean No. of Clients</i>	0.4	0.5	0.3	1.0	0.5
Last Week Worked					
<i>Mean No. of Clients</i>	2.1	2.1	1.6	5.8	2.2
All clients:					
Last Day Worked					
<i>Mean No. of Clients</i>	2.2	3	1.6	2.9	2.8
Last Week Worked					
<i>Mean No. of Clients</i>	9.7	17.2	8.3	15.4	15.2
Number of Respondents	409	78	323	314	176

Hai Phong, HCMC and Can Tho SSWs reported the highest mean number of clients in the past week (17.2, 15.4, 15.2 respectively), Hanoi SSWs had 9.7 and Da Nang SSWs had 8.3 clients in the past week (Table 11). SSWs in all provinces reported more one-time clients than regular clients. Over half of the Hai Phong SSW had three or more one-time clients in the last day worked, while 40 percent in Can Tho, 29 percent in HCMC, 28 percent in Hanoi, and 13 percent in Da Nang had three or more one-time clients during the last day that they worked. One-third of the SSW in Hanoi, Hai Phong and Da Nang and around one-half of SSW in HCMC and Can Tho reported that they had had at least one regular client in the last day they worked.

Condom use at last sex with a one-time client was 90 percent or more among KSWs in Hanoi, Hai Phong, Da Nang and Can Tho, and it was between 78 and 94 percent among regular clients (Figure 2). There were high levels of reported condom use with non-paying partners in Da Nang (71.9%) and Can Tho (76.3%), while only one-third of KSWs in Hanoi and one-half in Hai Phong used a condom the last time that had sex with a non-paying partner. Condom use at last sex in HCMC was lower than in the other provinces. Eighty-two percent of KSWs in HCMC reported using a condom at last sex with a one-time client, 64 percent with a regular client, and only 15 percent with a non-paying sexual partner.

Figure 2: Condom Use at Last Sex among Karaoke-Based Sex Workers

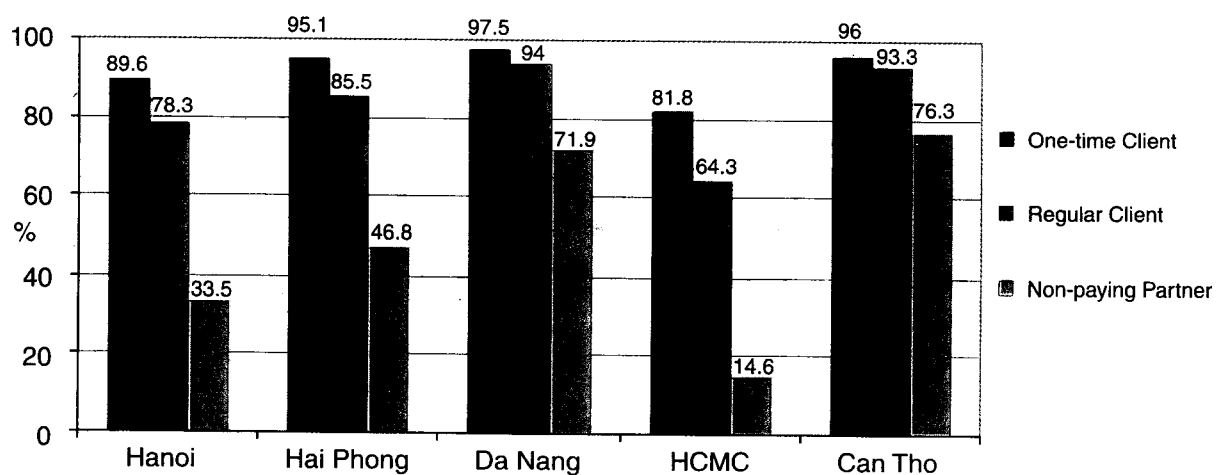
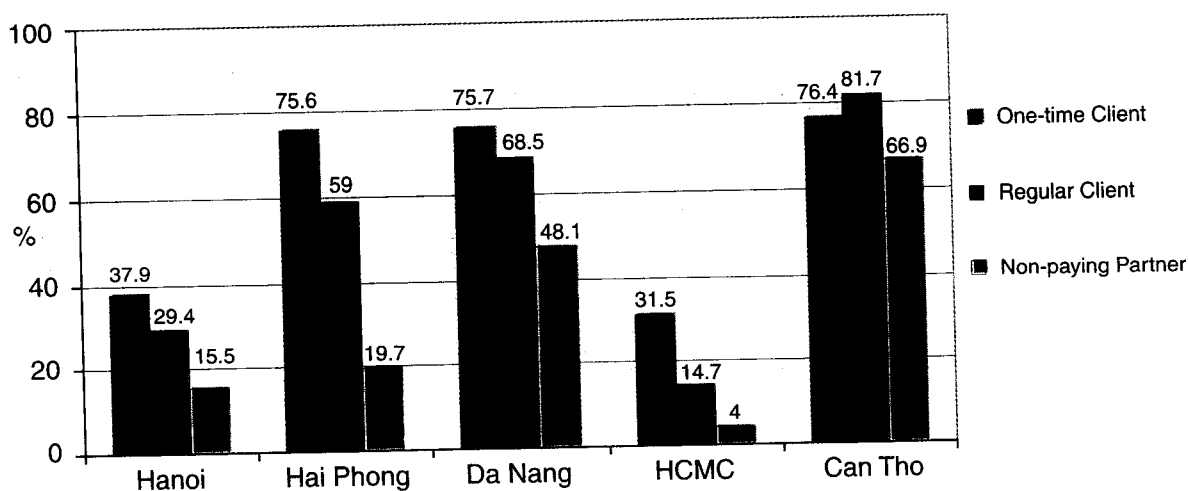


Figure 3: Consistent Condom Use in the Past 12 Months among Karaoke-Based Sex Workers



Consistent condom use varied considerably between KSWs in Hanoi and HCMC and those in the other provinces (Figure 3). About one-third of KSWs in Hanoi and HCMC reported using a condom consistently with all one-time clients in the past 12 months, and even fewer women in these provinces reported using a condom every time with regular clients (29.4% in Hanoi and 14.7% in HCMC). In contrast, three-fourths of the KSWs in Hai Phong, Da Nang and Can Tho used condoms consistently with all one-time clients in the past 12 months, and 59 percent (Hai Phong), 68 percent (Da Nang), and 82 percent (Can Tho) used a condom every time with all regular clients. Consistent condom use with non-

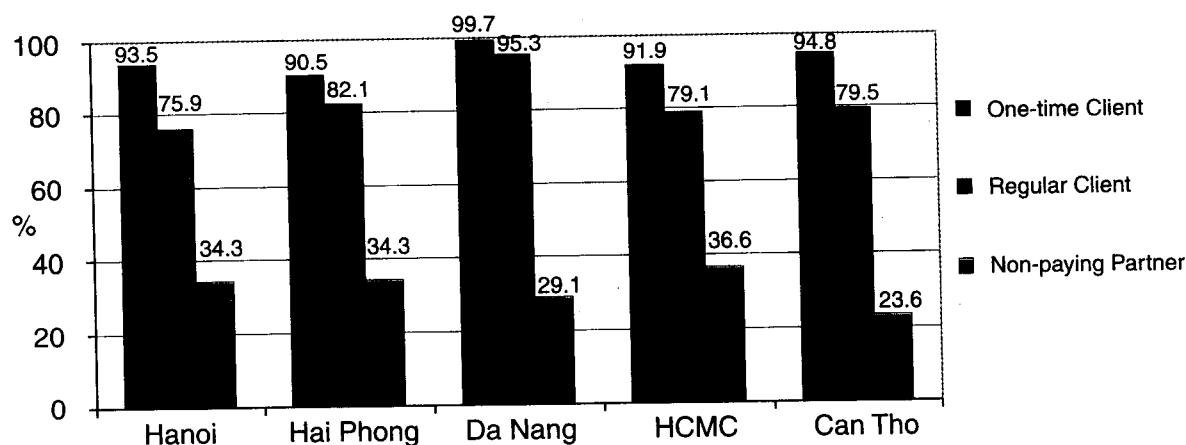
paying partners was highest in Can Tho (66.9%) and Da Nang (48.1%), while 20 percent of the KSWs in Hai Phong, 16 percent in Hanoi, and only 4 percent in HCMC reported using condoms consistently with all non-paying partners in the past 12 months.

Table 12 indicates that, of the KSWs who reported using a condom at last sex with a one-time client, only those in HCMC and Hanoi responded with frequency that the client has suggested condom use (25.3% and 19.3%). KSWs said that the decision to use a condom at last sex was a mutual decision by the KSW and the client in only 7 percent of last sex episodes in Hai Phong to a high of 30 percent in Hanoi. Ninety-one percent of the

Table 12: Whom Suggested Condom Use at Last Sex with One-time Client among Karaoke-Based Sex Workers

Condom Use	Hanoi %	Hai Phong %	Da Nang %	HCMC %	Can Tho %
Suggested by:	N=326	N=445	N=358	N=320	N=191
▪ Respondent	50.3	91.0	68.7	59.7	73.3
▪ Client	19.3	1.8	5.0	25.3	6.8
▪ Mutual decision	30.4	7.2	26.3	15.0	19.9

Figure 4: Condom Use at Last Sex among Street-Based Sex Workers



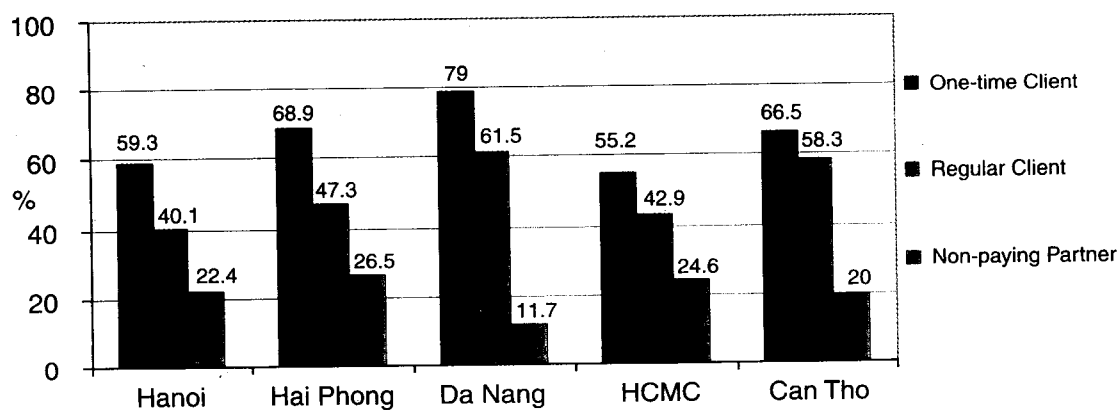
KSWs in Hai Phong reported that they themselves had suggested condom use at last sex, as did 73 percent in Can Tho, 69 percent in Da Nang, but less than 60 percent in HCMC, and only half in Hanoi.

Over 90 percent of all SSW reported using a condom at last sex with a one-time client, and three-fourths or more used a condom with their last regular client (Figure 4). Condom use with non-paying partners did not vary greatly between groups. In Can Tho (the lowest), 24 percent used a condom at last sex with a non-paying partner and in Hanoi (the highest) 34 percent did the so.

Consistent condom use with one-time and regular clients use was reported highest by

SSWs in Da Nang (79 percent with one-time clients and 62 percent with regular clients), but consistent condom use with non-paying partners was also lowest in this province (11.7%) (Figure 5). One-half to one-third of all SSWs reported using condoms every time with one-time clients in the past 12 months, and between 40-60 percent used condoms consistently with regular clients. One-quarter or fewer of the SSW used condoms consistently with all non-paying partners in the past 12 months. Condom use with one-time and regular clients was higher for SSWs in Hanoi and HCMC, was lower for SSWs than for KSWs in Hai Phong and Can Tho, and about the same as for KSWs in Da Nang.

Figure 5: Consistent Condom Use in the Past 12 Months among Street -Based Sex Workers



Between 70 and 90 percent of the SSWs in Hai Phong, Da Nang, HCMC and Can Tho responded that they themselves suggested condom use during last sex with a one-time client, while less than half (45%) of SSWs in Hanoi did so (Table 13). A surprisingly high

percentage of one-time clients of SSWs in Hanoi suggested condom use at last sex, compared to only between 5 and 17 percent of clients in the other four provinces. Thus, it appears that men in Hanoi are more highly aware of the need for safe sexual practices.

Table 13: Whom Suggested Condom Use at Last Sex with One-time Client among Street-Based Sex Workers

Condom Use	Hanoi %	Hai Phong %	Da Nang %	HCMC %	Can Tho %
Suggested by:	N=372	N=67	N=316	N=284	N=164
▪ Respondent	45.2	89.7	86.7	70.0	75.0
▪ Client	42.5	5.9	5.1	8.8	17.1
▪ Mutual decision	12.4	4.4	8.2	21.2	7.9

Injection Drug Users

Table 14: Drug and Alcohol Use among IDUs

Drug and Alcohol Use	Hanoi %	Hai Phong %	Da Nang %	HCMC %	Can Tho %
Age at First Drug Use					
▪ < 15	4.2	7.1	8.8	4.5	5.2
▪ 15-19	26.4	12.6	24.9	28.6	41.4
▪ 20-24	35.3	37.1	30.6	48.3	28.4
▪ ≥ 25	34.2	43.3	35.7	18.6	25.0
Frequency of Injection					
▪ < Once/day	31.4	39.9	68.4	3.3	6.3
▪ Once/day	27.8	34.0	24.6	16.7	35.4
▪ 2-3 times/day	40.8	25.2	7.1	67.6	56.5
▪ ≥ 4 times/day	0.0	0.9	0.0	12.4	1.8
Alcohol Consumption in Past 4 Weeks					
▪ Everyday	14.2	22.0	14.2	3.1	6.8
▪ Once a week	13.1	5.9	20.6	4.3	3.9
▪ Less than once a week	72.7	72.1	65.2	92.6	89.3
Number of Respondents	360	326	297	420	384

Between four and nine percent of the IDUs surveyed began injecting drugs before the age of 15, and over half were 20 years or older when they first injected. IDUs in Can Tho were more likely to have begun injecting between 15 and 19 than in the other provinces, and almost half of IDUs in HCMC began between the ages of 20 and 24 (Table 14).

The IDUs surveyed in HCMC and Can Tho reported the highest frequency of injecting. In HCMC, two-thirds of the IDUs injected 2-3 times a day and 12.4 percent four or more times a day (Table 14). In Can Tho, 56 percent injected 2-3 times a day and two percent injected four or more times a day. Forty percent of the IDUs in Hanoi and one-quarter in Hai Phong injected two or more times a day. In contrast, two-thirds of the IDUs in Da Nang reported that they injected less than once a day, one-quarter injected once a day, and only seven percent reported injecting two or more times a day.

One-quarter to one-third of the IDUs surveyed in Hanoi, Hai Phong and Da Nang drank alcohol one or more times a week, while only 7 percent of those in HCMC and 11 percent of IDUs in Can Tho drank at least once a week (Table 14).

Figure 6 below shows that, of the IDU populations surveyed, those interviewed in HCMC were most likely to have shared needles or syringes in the past six months (44.3%), followed by Hanoi (31.9%), Da Nang (30.7%), Hai Phong (24.2%), and Can Tho (7.6%).

Around one in every ten of the IDUs in all five provinces had traveled to and injected drugs in another city in the past 12 months (Table 15). Four percent of the IDU population in HCMC reported that they had shared needles or syringes in another city in the past 12 months, as did 3.4 percent in Da Nang, 2.8 percent in Hai Phong, 1.9 percent in Can Tho, and 0.8 percent in Hanoi.

Figure 6: Percent of IDUs Who Shared Needles or Syringes in the Past 6 Months

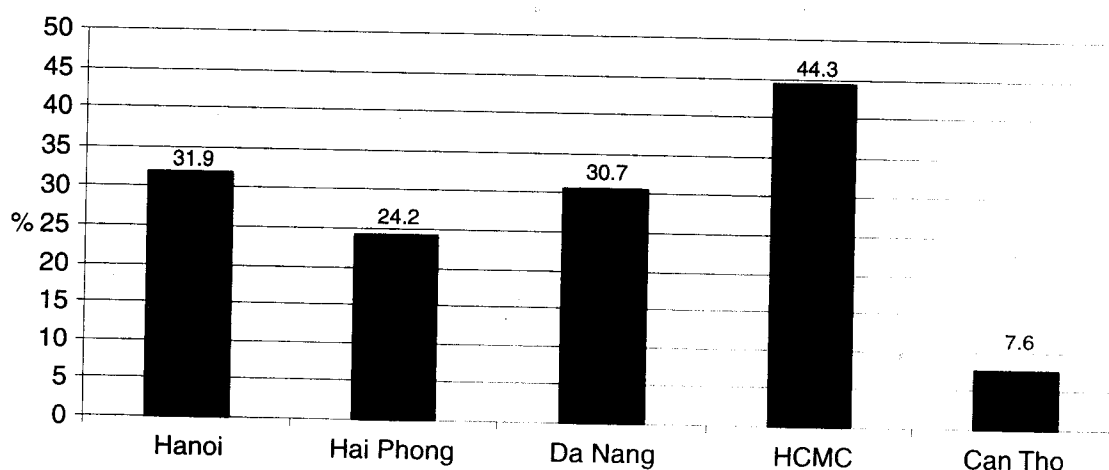


Table 15: Percent of IDUs Who Injected Drugs and Shared Needles or Syringes in Other Cities in the Past 12 Months

Drug Use in Other Cities	Hanoi %	Hai Phong %	Da Nang %	HCMC %	Can Tho %
Injected in Other Cities	10.6	11.1	11.8	10.7	9.4
Share Needles or Syringes in Other Cities	0.8	2.8	3.4	3.7	1.9
Number of Respondents	360	326	297	420	384

Table 16: Age at First Sex and Mean Number of Sex Partners among IDUs

First Sex and Sex Partners	Hanoi	Hai Phong	Da Nang	HCMC	Can Tho
Age at First Sex					
<i>Median</i>	21	20	20	18	18
Sex Partners in the Past 12 Months					
▪ Regular					
<i>Percent</i>					
0	63.0	59.2	57.2	85.4	65.9
1	35.0	39.6	41.8	12.7	31.8
2	1.7	1.2	1.0	1.0	1.0
3+	0.3	0	0	1.0	1.3
<i>Mean</i>	0.4	0.4	0.4	0.2	0.4
▪ Casual					
<i>Percent</i>					
0	91.8	93.6	79.7	95.2	96.1
1	7.3	4.6	13.9	1.9	3.1
2	0.6	1.2	4.7	0.7	0.3
3+	0.3	0.6	1.7	2.2	0.6
<i>Mean</i>	0.2	0.1	0.4	0.1	0.1
▪ Commercial					
<i>Percent</i>					
0	76.9	84.9	79.7	91.9	94.3
1	2.8	5.9	5.1	2.9	2.6
2	1.7	2.5	5.8	2.5	2.3
3	3.7	2.5	1.5	1.2	0.3
4+	14.9	4.4	8.0	1.4	0.5
<i>Mean</i>	1.7	0.4	0.8	0.2	0.1
TOTAL					
<i>Mean</i>	2.3	0.9	1.6	0.5	0.6
Number of Respondents	360	326	297	420	384

The mean age at first sex ranged from 18 in HCMC and Can Tho to 21 in Hanoi (Table 16). Almost two-thirds (64.5%) of IDUs in Da Nang had one or more sex partners in the past 12 months, compared to about half of the IDUs in Hanoi (49.7%) and Hai Phong (50.2%), 41 percent of IDUs interviewed in Can Tho and only 23 percent in HCMC (data not shown in the table).

The lowest percentage of IDUs with a regular sex partner was found in HCMC (14.7%) and the highest percentage in Da Nang (42.8%) (Table 16). Regular partners include wives and steady girl friends. As indicated previously in Table 5, the percent of IDUs who were currently married varied from a high of 35 percent in Hanoi, 32 percent in Da Nang, 25 percent in Can Tho, 22 percent in Hai Phong, and only 6 percent in HCMC (the HCMC IDU sample was limited only to IDUs under 30 years old).

IDUs in Da Nang reported that 20 percent of their population had a casual sex partner in the past 12 months, while only between four and eight percent of the IDUs in the other provinces reported having a casual sex partner in the past 12 months (Table 16).

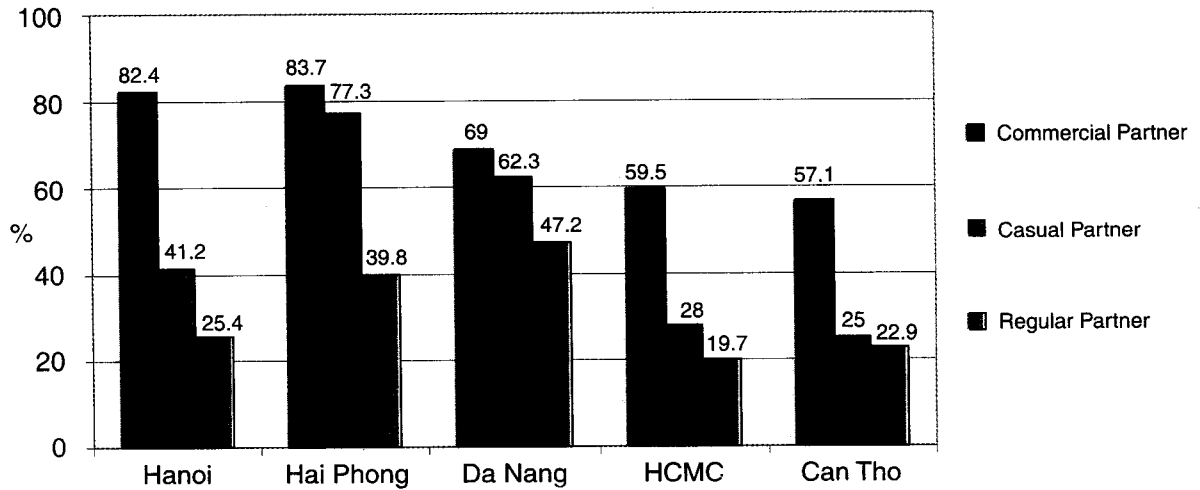
Commercial sex partners among IDUs varied considerably between provinces. In Hanoi, almost one-quarter reported a commercial sex partner in the past 12 months, and 15 percent of the population had four or more commercial sex partners in the past year (Table

16). The mean number of commercial partners in Hanoi in the past 12 months was 1.7. Twenty percent of IDUs in Da Nang had a commercial partner in the past 12 months, with 8 percent having four or more different commercial partners and a mean of 0.8 partners in the past 12 months. The number of commercial sex partners was lower in the other provinces including Hai Phong (15.1%, mean 0.4), HCMC (8.1%, mean 0.2), and Can Tho (5.7%, mean 0.1).

IDUs in Hanoi and Da Nang had more than one sexual partner during the past 12 months, on average (Hanoi - mean of 2.3 sexual partners; and Da Nang - mean of 1.6 sexual partners) (Table 16).

Where over 80 percent of the IDUs in Hanoi and Hai Phong used a condom at last sex with a commercial sex partner, only 69 percent in Da Nang, 60 percent in HCMC and 57 percent in Can Tho used a condom during last intercourse with a sex worker (Figure 7). Condom use at last sex among IDUs with casual partner in Hai Phong was high (77.3%), as it was in Da Nang (62.3%). While Hanoi IDUs had a high frequency of condom use at last sex with a commercial partner (82.4%), condom use with casual partners was a great deal lower (41.2%). One-quarter of the IDUs in HCMC and Can Tho used a condom with their last casual sex partner. Condom use at last sex with regular partners among IDUs in Da Nang reached almost 50 percent, and ranged from 40 percent (Hai Phong) down to 20 percent (HCMC) in the other provinces.

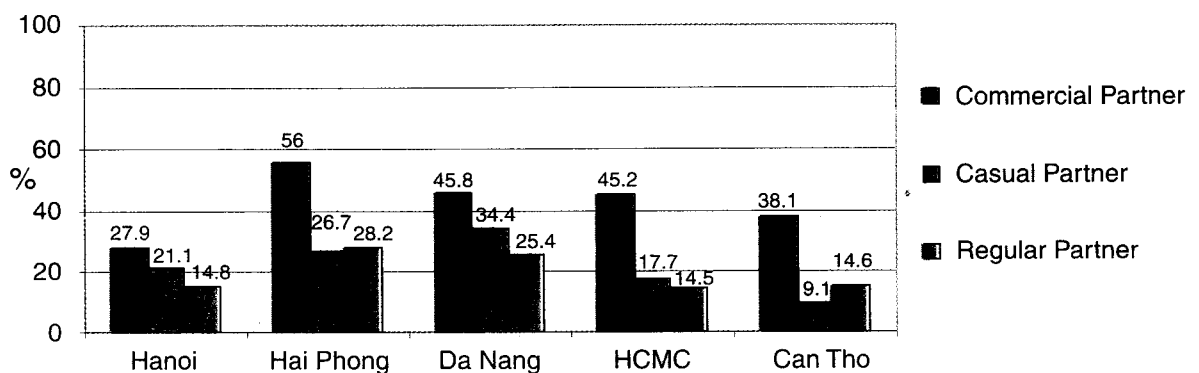
Figure 7: Condom Use at Last Sex among IDUs with Regular, Casual, and Commercial Sex Partners in the Past 12 Months



Consistent condom use with commercial sex partners was lowest among IDUs in Hanoi (27.9%) (Figure 8). Fifty-six percent of the IDUs in Hai Phong reported using a condom every time with all commercial sex partners in the past 12 months, as did 46 percent in Da Nang, 45 percent in HCMC, and 38 percent in Can Tho (Figure 8). IDUs in Can Tho reported consistent condom use with more regular partners (14.6%) than with casual

sex partners (9.1%), and IDUs in Hai Phong also reported slightly higher consistent condom use with regular (28.2%) than with casual (26.7%) partners. One-third of the IDUs in Da Nang used a condom every time with all casual partners, and one-quarter with all regular partners. In HCMC, fewer IDUs with regular partners reported using a condom every time (14.5%) than did those IDUs with casual partners (17.7%).

Figure 8: Consistent Condom Use in the Past 12 Months among IDUs with Regular, Casual, and Commercial Sex Partners in the Past 12 Months.



Long Distance Truck Drivers

Table 17: Age at First Sex, Number of Sex Partners, and Alcohol and Drug Use among LDTDs

First Sex, Sex Partners, Alcohol & Drug Use	Hanoi	Hai Phong	Da Nang	HCMC	Can Tho
Age at First Sex					
<i>Median</i>	23	20	20	18	18
Sex Partners in the Past 12 Months					
▪ Regular					
<i>Percent</i>					
0	19.2	59.2	57.2	85.4	65.9
1	65.8	39.6	41.8	12.7	31.8
2	14.6	1.2	1.0	1.0	1.0
3+	0.4	0	0	1.0	1.3
<i>Mean</i>	1.1	0.4	0.4	0.2	0.4
▪ Casual					
<i>Percent</i>					
0	72.3	93.6	79.7	95.2	96.1
1	22.6	4.6	13.9	1.9	3.1
2	4.7	1.2	4.7	0.7	0.3
3+	0.4	0.6	1.7	2.2	0.6
<i>Mean</i>	0.4	0.1	0.4	0.1	0.1
▪ Commercial					
<i>Percent</i>					
0	67.0	84.9	79.7	91.9	94.3
1	7.6	5.9	5.1	2.9	2.6
2	5.0	2.5	5.8	2.5	2.3
3	4.8	2.5	1.5	1.2	0.3
4+	15.5	4.4	8.0	1.4	0.5
<i>Mean</i>	3.2	0.4	0.8	0.2	0.1
TOTAL					
<i>Mean</i>	4.7	0.9	1.6	0.5	0.6
Alcohol Use Past 4 Weeks					
<i>Percent</i>					
▪ Everyday	55.0	34.8	7.1	20.6	6.3
▪ Once a week	14.0	9.6	31.4	18.5	13.0
▪ Less than once a week	31.0	55.6	61.5	60.9	80.7
Ever Used Drugs					
<i>Percent</i>	8.2	6.9	0.2	7.8	6.0
Number of Respondents	500	500	452	422	463

Table 17 shows the median age at first sex, number and type of sex partners in the 12 months and alcohol and drug use in the past four weeks among long distance truck drivers in the five provinces. The median age at first sex among LDTDs was lowest in Can Tho (20 years old) and HCMC (21 years old) and increased to age 23 years in Hanoi and 24 years in Hai Phong and Da Nang. Twenty to thirty percent of all LDTDs had no regular partners in the past 12 months. A majority of the truck drivers reported only one regular partner, though 15 percent of LDTDs in Hanoi also reported two or more regular partners in the past 12 months. LDTDs in Hai Phong reported 71 percent with no casual sex partners in the past 12 months, of the LDTDs with a casual partner, 5 percent of them had three or more casual partners during that time period. Of the 15 percent of LDTDs in HCMC who had at least one casual partner in the past 12 months, 4 percent reported having three or more.

LDTDs in Can Tho reported the highest percentage having sex with one or more commercial sex partners in the past year (39.1%) (Table 17). About one-third of LDTDs in Hanoi and Hai Phong reported having sex with one or more sex workers in the past year, compared to about one-quarter of LDTDs in Da Nang and HCMC

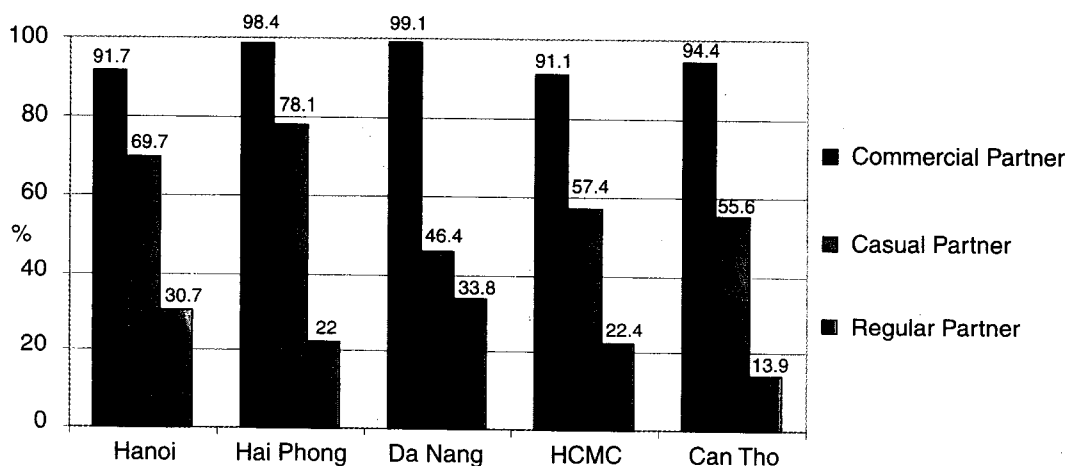
(Table 17). In HCMC 19 percent of LDTDs reported having four or more commercial sex partners in the past years, compared to 16 percent in Hanoi, 14 percent in Hai Phong, 3 percent in Da Nang and 2 percent in Can Tho (Table 17).

LDTDs in HCMC had the highest mean number of commercial sex partners in the past 12 months (5.3 SW partners) followed by Hanoi (3.2).

LDTDs in all five provinces tended to have multiple sex partners, including spouses/girlfriends, casual sex partners, and commercial sex partners combined. LDTDs in HCMC had the highest total mean number sex partners in the past year (6.8 sex partners), followed by Hanoi (4.7), Hai Phong (3.2), Da Nang (2.2), and Can Tho (1.7).

Over half of the LDTDs in Hanoi drank alcohol daily, compared to over one-third in Hai Phong and over one-fifth of LDTDs in HCMC (Table 17). Less than half of the LDTDs reported drinking alcohol once a week or more in Hai Phong, Da Nang, HCMC and Can Tho. Between 6 and 8 percent of the LDTD had ever used drugs in Hanoi, Hai Phong, HCMC and Can Tho, while less than one percent of LDTDs in Da Nang reported having ever used drugs.

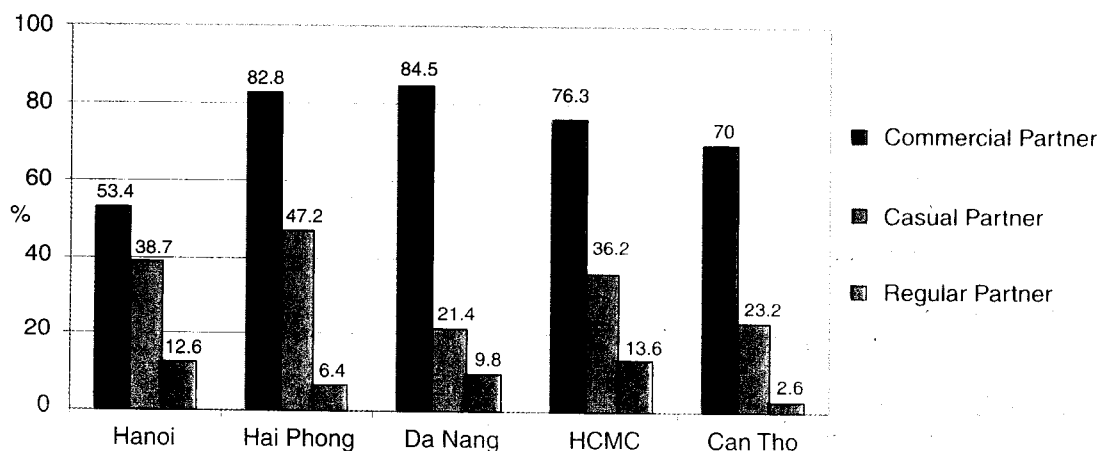
Figure 9: Condom Use at Last Sex among LDTDs with Regular, Casual, and Commercial Sex Partners in the Past 12 Months, by Type of Sex Partner at Last Sex.



Over 90 percent of all LDTDs having sex with a commercial sex partner in the past 12 months reported that they used a condom the last time they had sex with a sex worker, and between one-half and three-fourths of those having sex with a casual partner in the past 12 months reported that they sex used a condom during their last encounter with a casual sex partner (Figure 9). Condom use at last sex with a regular partner is relatively low in all five provinces, ranging from 14 percent in Can Tho up to 34 percent in Da Nang (Figure 9). The fact that only about half of LDTDs used condoms with casual sex partners in Da Nang, HCMC, and Can Tho means that a significant proportion of LDTDs and their casual sex partners could be at substantially increased risk of HIV and other STI infections.

Consistent condom use by LDTDs with all commercial sex partners in the past year is quite low in Hanoi (53.4%), while other provinces report more consistent condom use (82.8% in Hai Phong, 84.5% in Da Nang, 76.3% in HCMC, and 70% in Can Tho) (Figure 10). Less than one-quarter of the LDTDs in Can Tho and Da Nang used a condom every time with a casual partner in the past 12 months, while more than one-third used condoms every time with casual partners in HCMC, Hai Phong and Hanoi. Few LDTDs (between 2 and 10 percent) responded that they used condoms every time with their regular partners in the past 12 months.

Figure 10: Consistent Condom Use in the Past 12 Months among LDTDs with Regular, Casual, and Commercial Sex Partners in the Past 12 Months



Migrant Workers

Table 18: Age at First Sex, Type of Sex Partners in the Last 12 Months, and Alcohol and Drug Use among Migrant Workers in Five Provinces/Cities.

First Sex, Sex Partners, Alcohol & Drug Use	Hanoi	Hai Phong	Da Nang	HCMC	Can Tho
Age at First Sex					
<i>Median</i>	22	25	24	22	21
Sex Partners in the Past 12 Months					
▪ Regular					
<i>Percent</i>					
0	37.0	22.2	16.1	46.1	31.4
1	58.3	77.0	83.7	50.8	68.0
2	4.1	0.6	0.2	3.0	0.6
3+	0.6	0.2	0	0.2	0
<i>Mean</i>	0.7	1.0	0.8	0.9	0.9
▪ Casual					
<i>Percent</i>					
0	89.7	90.6	91.6	94.1	93.9
1	10.1	7.6	7.7	3.0	4.7
2	0.2	0.8	0.7	1.6	0.8
3+	0	1.0	0	1.4	0.6
<i>Mean</i>	0.2	0.2	0.1	0.2	0.2
▪ Commercial					
<i>Percent</i>					
0	83.8	80.0	86.7	86.9	93.3
1	6.8	8.8	5.6	3.6	3.8
2	3.7	5.1	5.3	1.6	1.0
3	0.4	2.4	1.3	2.6	0.4
4+	5.3	3.7	1.1	5.4	1.6
<i>Mean</i>	0.4	0.7	0.3	0.9	0.4
TOTAL					
<i>Mean</i>	1.3	1.9	1.2	2.0	1.5
Alcohol Consumption in Past 4 Weeks					
<i>Percent</i>					
▪ Everyday	17.0	40.3	13.7	6.3	5.3
▪ Once a week	17.2	3.1	18.1	23.1	29.1
▪ Less than once a week	65.8	56.6	68.2	70.6	65.6
Ever Used Drugs					
<i>Percent</i>	3.1	3.4	1.1	3.6	1.4
Number of Respondents	487	514	453	506	506

The median age at first sex of migrant workers ranges from 21 in Can Tho to 25 in Hai Phong (Table 18). The majority of migrant workers surveyed in the five provinces reported having regular partners (spouses/girlfriends) in the past year, ranging from 54 percent in HCMC to 84 percent in Da Nang. Between 6 percent (HCMC and Can Tho) and 10 percent (Hanoi) of migrant workers reported having one or more casual sex partners in the past year, and between 7 percent (Can Tho) and 20 percent (Hai Phong) reported having one or more commercial sex partner in the past year (Table 18). Around 5 percent of the migrant workers in Hanoi and HCMC and 4 percent in Hai Phong reported having four or more commercial sex partners in the past year. Migrant workers in Hai Phong and HCMC had an average of two sex partners each during the past twelve months.

Three-fourths of the migrant workers reporting having sex with a commercial sex partner in the last 12 months in Hanoi, HCMC and Can Tho reported that they used condoms the last time they had sex with a sex worker, as did over 90 percent of the migrant workers in Hai Phong and Da Nang (Figure 11). Condom use at last sex with a casual partner was low in Can Tho (26.7%), somewhat higher in HCMC (43.3%) and Hanoi (51%), and reached 63 percent in Da Nang and 69 percent in Hai Phong. One-quarter of all migrant workers in Hanoi and Da Nang with a regular partner in the past 12 months reported that they used a condom at last sex with a regular partner, compared to about one-fifth of migrant workers in this category in Hai Phong and less than 10 percent of migrant workers in HCMC and Can Tho (Figure 11).

Figure 11: Condom Use at Last Sex among Migrant Workers with Regular, Casual, and Commercial Sex Partners in the Past 12 Months

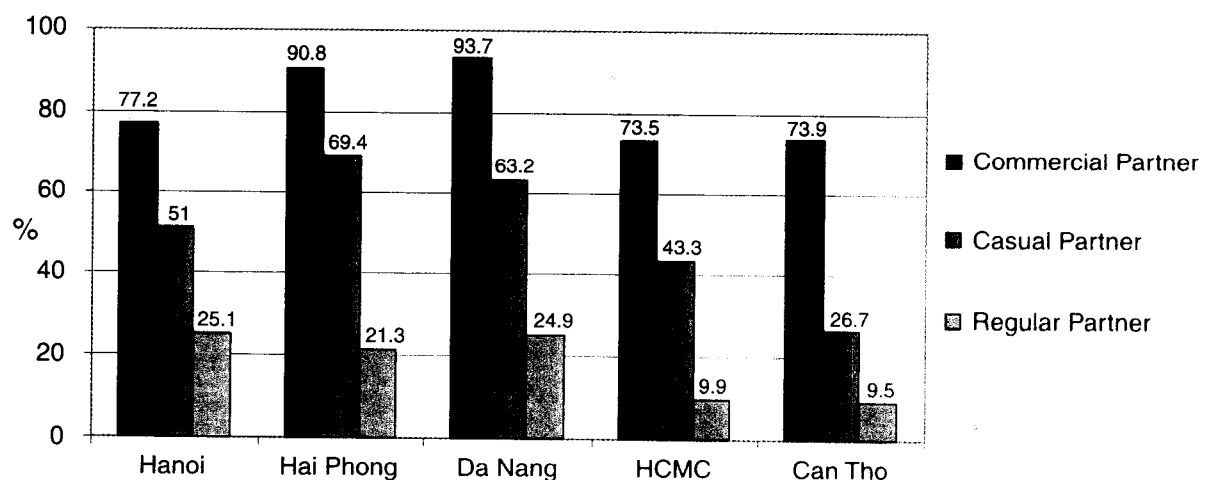
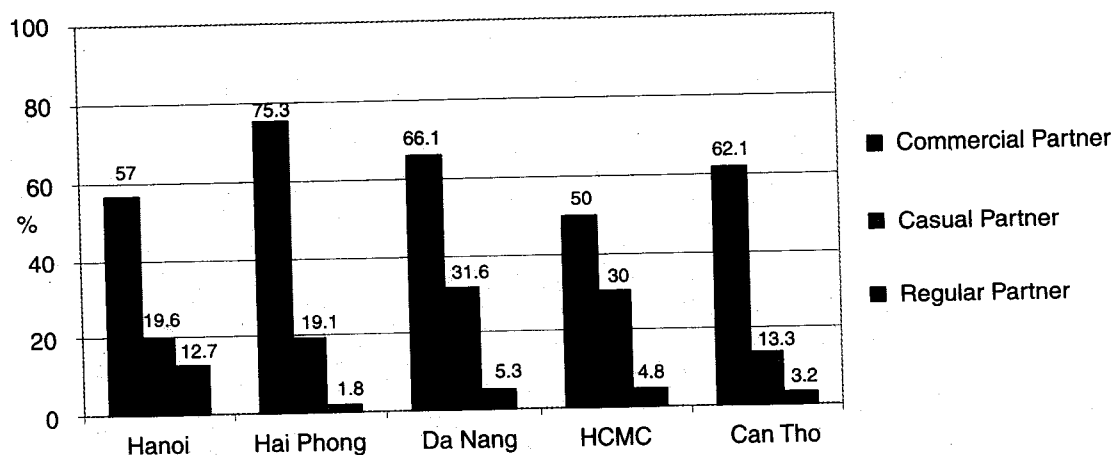


Figure 12: Consistent Condom Use in the Past 12 Months among Migrant Workers with Regular, Casual, and Commercial Sex Partners in the Past 12 Months



Of the migrant workers who had a commercial sex partner in the past 12 months, three-quarters of the respondents in Hai Phong and one-half to two-thirds in HCMC, Hanoi, Can Tho, and Da Nang reported using condoms every time with all commercial sex partners (Figure 12). Consistent condom use with casual sex partners was below one-third in all provinces and reached as low as 13.3% in Can Tho (Figure 12). Only migrant workers in Hanoi (12.7%) reported more than 5 percent of their population using a condom every time with regular partners in the past 12 months (Figure 12).

LDTDs populations in all five provinces reported a higher percentage with a commercial sex partner in the past 12 months than did migrant workers or IDUs. Fewer LDTDs reported having sex with a commercial sex partner in Da Nang (22.8%) than in the other provinces (27.2% in HCMC, 33% in Hanoi, 35.1% in Hai Phong, and 39.1% in Can Tho) (Figure 13). Where Can Tho had the most truck drivers with a commercial partner in the past year among the five provinces, it also reported the fewest commercial sex partners among the migrant groups in the five provinces (6.7%) and among the IDUs (5.7%) (Figure 13).

Figure 13: Percent of Male Populations with a Commercial Sex Partner in the Past 12 Months

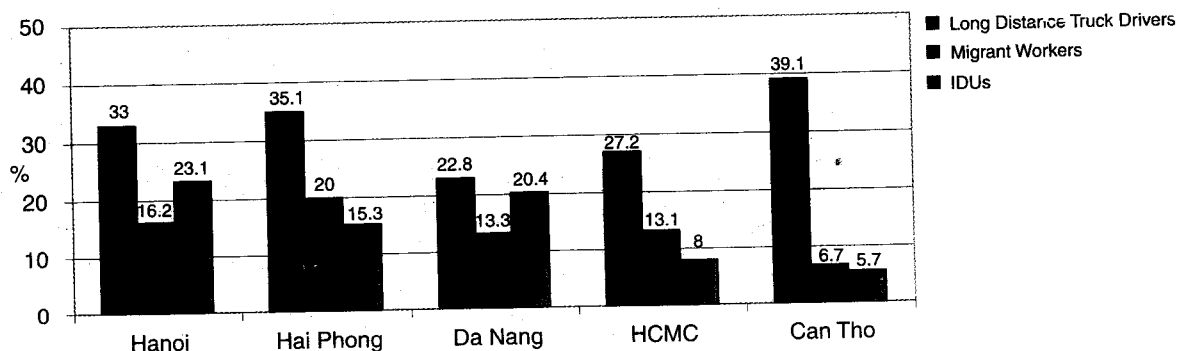
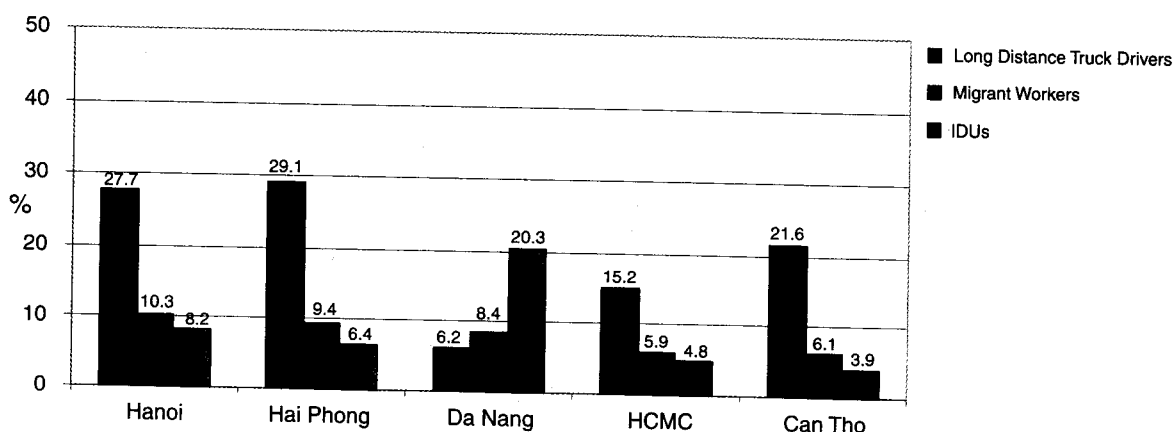


Figure 14: Percent of Male Populations with a Casual Sex Partner in the Past 12 Months



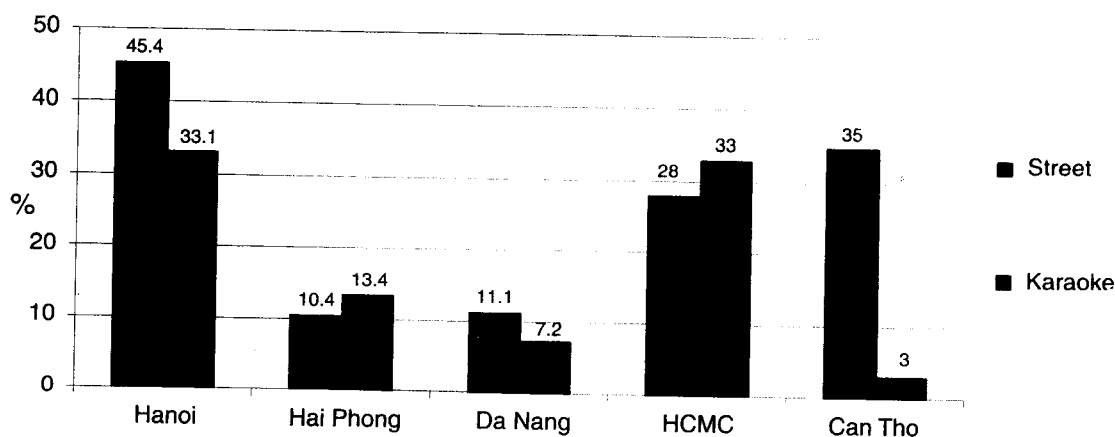
LDTDs in four provinces reported the relatively high rates of casual sex partners among the male groups (29.1% in Hai Phong, 27.7% in Hanoi, 21.6% in Can Tho and 15.2% in HCMC), the exception being Da Nang where only 6.2% of the LDTDs and but a relatively high 20.3% of the IDUs had casual sex partners in the past 12 months (Figure 14). Except for IDUs in Da Nang, only between 4 percent and 10 percent of migrant workers and IDUs in the five provinces reported having casual sex partners in the past 12 months (Figure 14).

3.3. SEXUALLY TRANSMITTED DISEASES

Reported sexually transmitted disease symptoms were genital warts, ulcers and unusual genital discharge. Almost one-half

of the SSWs and one-third of the KSWs in Hanoi reported that they had had STD symptoms in the past year, the highest reported levels among all five provinces (Figure 15). SSWs in HCMC reported fewer STD symptoms (28%) than the KSWs did (33%) (Figure 15). This was also true in Hai Phong where 10 percent of the SSWs and 13 percent of the KSWs reported STD symptoms. Significantly more SSWs in Can Tho reported having an STD symptom in the past 12 months than did the KSWs (35 percent of SSWs compared to only 3 percent of KSWs) (Figure 15). In Da Nang, 11 of the SSWs and 7 percent of the KSWs reported having possible STD symptoms in the past 12 months.

Figure 15: Percent of Street-based and Karaoke-based Sex Workers reporting STD Symptoms in the Past 12 Months



s.LDTDs and migrant workers in Hanoi had the highest reported STD symptoms of all male groups (7.3% and 5.7%), followed by LDTDs in Hai Phong (5.6%), IDUs in Da Nang (5.3%), and LDTDs in HCMC (4.8%)

(Table 19). Less than 2 percent of each of the three male population groups in Can Tho reported having any STD symptoms in the past 12 months (Table 19), the lowest reported level for all three groups combined.

Table 19: Percent of LDTDs, Migrants, and IDUs Reporting STD Symptoms in the Past 12 Months

Reported STD Symptoms	Hanoi %	Hai Phong %	Da Nang %	HCMC %	Can Tho %
Long Distance Truck Drivers	7.3	5.6	1.3	4.8	1.7
Migrant Workers	5.7	1.1	3.7	1.6	2.0
IDUs	1.6	3.8	5.3	3.7	1.8

3.4. HIV KNOWLEDGE AND BELIEFS

Table 20: Percent of KSWs and SSWs with Correct Knowledge about Prevention of HIV Transmission.

Knowledge and Beliefs (Percent Saying)	Hanoi %	Hai Phong %	Da Nang %	HCMC %	Can Tho %
KSWs					
To Reduce HIV Risk:					
▪ Consistent condom use	93.7	96.4	99.1	91.8	92.6
Not a Risk for Transmission:					
▪ Sharing food	52.9	71.9	62.6	61.0	48.5
▪ Touching infected person	59.0	70.6	71.7	63.2	56.9
SSWs					
To Reduce Risk:					
▪ Consistent condom use	94.1	88.5	98.5	96.2	75.6
Not a Risk for Transmission:					
▪ Sharing food	53.6	43.6	56.4	74.5	66.5
▪ Touching infected person	50.4	53.9	61.9	70.4	67.1

Sex workers were asked a series of prompted questions to measure their knowledge of means of prevention of sexual transmission of HIV, and to gauge their beliefs about means of non-sexual transmission of HIV. KSWs reported high knowledge about the need for consistent condom use as a method for reducing the risk of acquiring or transmitting HIV. In most provinces, slightly more KSWs knew HIV could not be transmitted by touching an infected person (56.9% in Can Tho to 71.7% in Da Nang) than were knowledgeable that sharing food was not a transmission route (48.5% in Can Tho to 71.9% in Hai Phong) (Table 20).

While the vast majority of the SSWs named consistent condom use as a prevention method, only three-fourths of the SSWs in Can Tho knew that they could lessen their chances of contracting HIV by consistently using condoms, compared to between 88 percent and 98 percent giving this response in the other four provinces. Between 44 percent (Hai Phong) and 74 percent (HCMC) of the SSW did not consider sharing food an HIV risk and between 50 percent (Hanoi) to 70 percent (HCMC) knew they would not get HIV simply from touching a person with the virus.

Table 21: Percent of IDUs with Correct Knowledge about Prevention of HIV Transmission.

Knowledge and Beliefs (Percent Saying)	Hanoi %	Hai Phong %	Da Nang %	HCMC %	Can Tho %
IDU					
To Reduce HIV Risk:					
▪ % who mention at least two of three safe sex methods* of prevention	48.6	59.6	68.5	48.8	62.9
▪ Not sharing injecting equipment	96.9	98.8	96.6	94.0	99.5
Not a Risk for Transmission:					
▪ Sharing food	59.5	80.8	42.0	54.0	85.3
▪ Touching infected person	55.9	85.9	58.7	59.6	86.9

* Three methods include using condoms consistently, remaining faithful to one faithful, uninfected partner, and reducing number of sexual partners

Between one-half and two-thirds of the IDUs were able to mention at least two of the three main safe sexual behaviors to reduce HIV transmission risk. Between 94 and 99 percent of the IDUs in all five provinces knew that not sharing injection equipment was a way of reducing their risk of becoming infected with HIV (Table 21). However, this population had lower knowledge of sexual transmission risk reduction. One-half to two-thirds of the IDUs could name consistent condoms use, having sex only with one mutually faithful and uninfected partner, and reducing their

number of sexual partners as methods as ways to decrease their likelihood of acquiring HIV through sex.

Misconceptions about non-sexual transmission routes were highest among IDUs in Hanoi, Da Nang and HCMC. In these provinces, less than two-thirds of the IDUs knew that sharing food and touching a person with HIV would not in fact give them the virus. In HCMC and Hai Phong 81 percent to 87 percent knew that these two situations would not put them in danger of acquiring HIV.

Table 22: Percent of LDTDs and Migrant Workers with Correct Knowledge about Prevention of HIV Transmission

Knowledge and Beliefs (Percent Saying)	Hanoi %	Hai Phong %	Da Nang %	HCMC %	Can Tho %
LDTDs					
To Reduce HIV Risk:					
▪ % who mention at least two of three safe sex methods* of prevention	69.8	88.0	70.4	71.1	80.8
Not a Risk for Transmission:					
▪ Sharing food	57.0	67.2	73.2	65.2	54.6
▪ Touching infected person	56.6	72.9	80.3	65.6	57.0
Migrant Workers					
To Reduce HIV Risk:					
▪ % who mention at least two of three prevention methods*	57.1	69.3	69.5	56.3	61.5
Not a Risk for Transmission:					
▪ Sharing food	71.2	56.5	58.1	55.3	44.5
▪ Touching infected person	69.1	73.6	66.7	61.7	37.0

* Three methods include using condoms consistently, remaining faithful to one faithful, uninfected partner, and reducing number of sexual partners.

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About 70 percent of the LDTDs in Hanoi, Da Nang and HCMC named at least two of three safe sexual behaviors for reducing HIV transmission risks: i.e., using condoms consistently, remaining faithful to one faithful, uninfected partner, and reducing the number of sexual partners as ways a person can lessen their chances of acquiring HIV (Table 22). For the most part, migrant workers had less knowledge of these prevention methods than did the LDTDs. Around 57 percent of the migrant workers in Hanoi and HCMC, 62 percent in Can Tho and 70 percent in Hai Phong and Da Nang could name all three prevention methods.

Over one-half to three-fourths of the all LDTDs and most migrant workers knew that sharing food and touching someone with HIV would not give them the virus (Table 22). Migrant workers in Can Tho had the highest percentage with some misconceptions about non-sexual transmission methods, with more than half of this population incorrectly assuming that they could get HIV in these ways.

3.5. HIV TESTING: OVERALL TESTING AND VOLUNTARY TESTING

The BSS asked individual respondents in each target group if they had ever had an HIV test, and if so, whether the test was required or given to them on a voluntary basis, and whether they knew the results of the HIV test. There were wide variations between the different target groups and between the different provinces in the percent that had ever been tested for HIV and in the percent that were required to have an HIV test and the percent that voluntarily requested an HIV test.

Overall HIV testing among KSWs ranged

from a low of 19 percent among KSWs in Hai Phong to a very high 92 percent in Can Tho. Can Tho systematically tests establishment-based sex workers every three to six months as part of its HIV/AIDS prevention activities. About half of the street-based sex workers had ever been tested for HIV in the five provinces (from 44 percent of SSWs in Hanoi to 56 percent in Da Nang. Between about one-third and two-thirds of IDUs had ever received an HIV tests (lowest in HCMC at 37 percent of IDUs tested to a high of 64 percent in Can Tho). Overall testing of long distance truck-drivers ranged from a low of 6 percent in Can Tho to a high of 24 percent of LDTDs in Hai Phong. Among migrant groups, only 2 percent of the construction workers in Hanoi, and 2 percent of the stevedores/porters in Can Tho had ever had an HIV test, compared to a high of 13 percent of seafarers in Hai Phong having been tested.

Voluntary HIV testing was not widespread among any one population or province, although testing was highest among the sex worker and IDU groups, when compared to LDTDs and migrant workers (Table 23). As a whole, migrant workers were the least likely to have requested an HIV test, ranging between 0.6 percent (Can Tho) and 7.4 percent in Hai Phong.

3.6. EXPOSURE TO HIV/AIDS PREVENTION INTERVENTIONS

To better understand the extent to which the BSS target populations were receiving HIV/AIDS prevention information and interventions, the respondents were asked whether they had ever obtained condoms, written materials, peer education and needles or syringes from HIV/AIDS prevention programs to help them reduce their risk of acquiring HIV.

Table 23: Percent of All BSS Populations Surveyed Who Have Received a Voluntary HIV Test and total Percent of Populations Tested (Voluntary and Mandatory)

HIV Testing	Hanoi		Hai Phong		Da Nang		HCMC		Can Tho	
	Voluntary Tested %	Total tested %	Voluntary Tested %	Total tested %	Voluntary Tested %	Total tested %	Voluntary Tested %	Total tested %	Voluntary Tested %	Total tested %
KSWs	11.6	22.9	6.7	18.4	10.0	26.5	17.5	29.4	56.7	92.2
SSWs	11.5	44.4	34.6	54.5	47.7	53.9	41.7	52.2	27.3	49.4
IDUs	17.6	48.7	32.9	51.2	39.7	50.5	15.3	36.8	36.5	63.1
LDTDs	5.8	7.0	19.8	23.4	4.9	9.5	13.3	18.1	3.9	5.6
Migrants	1.6	1.9	7.4	12.7	5.1	6.6	3.6	8.1	0.6	2.0

Table 24 below shows that a similar percentage of KSWs and SSWs in Hanoi had ever received some form of HIV information or intervention; between one-third and one-half had been given condoms, written material and/or peer education about HIV. Few KSWs or SSWs in Hai Phong reported ever having received condoms to prevent HIV (4.9% and 5.6%), though almost half of the KSWs in Hai Phong had received peer education. Condom distribution was high among SSWs in Da Nang (82%), but few KSWs in Da Nang reported getting condoms (10.5%). Most SSWs in HCMC had received condoms (87%) and/or written material (75%), while many of the KSWs in HCMC had received peer education (52.5%). Eleven percent of the SSWs in HCMC had gotten condoms or syringes to protect them from HIV. Sex workers in the other provinces were far less likely to receive sterile injecting equipment than this group. Peer education among sex workers was most prevalent in Can Tho province, where 91 percent of the KSWs and 68 percent of the SSWs stated that they had

spoken with a peer educator at some time, though far fewer SSWs and KSWs had received any condoms or written materials about HIV.

IDU groups in Hanoi, Hai Phong and Da Nang had the highest percentage that had received needles and syringes (52.5%, 40.6%, 32.6%, respectively). About seventy percent of the IDUs in Hai Phong had also received written information and peer education about the HIV/AIDS, and 74 percent in Hanoi had received written information. Almost 40 percent of the IDUs in HCMC had contact with a peer educator, but 15 percent or less had received any other form of intervention. While only 2 percent of IDUs in Can Tho had ever received new injecting equipment as a means of HIV intervention, 82 percent reported they had received some form of peer education and 38 percent said they had received written material on HIV. Condom distribution was not a common HIV intervention among IDUs in HCMC and Can Tho.

Table 24: Percent of Respondents Receiving HIV/AIDS Information and Interventions

HIV/AIDS Information and Interventions	Hanoi %	Hai Phong %	Da Nang %	HCMC %	Can Tho %
KSWs					
Condom	34.4	4.9	10.5	35.5	40.6
Written Material	51.3	23.1	18.9	39.0	41.9
Peer Education	47.5	43.3	44.5	52.5	91.4
Needles or Syringes	3.5	1.2	0	2.8	1.0
SSWs					
Condom	31.9	5.6	82.0	87.0	37.5
Written Material	47.7	9.0	45.5	75.0	19.9
Peer Education	61.8	14.1	46.7	37	67.6
Needles or Syringes	3.2	1.3	0.6	11.0	1.7
IDUs					
Condom	19.8	33.8	23.2	4.5	6.5
Written Material	74.0	71.2	39.1	15.5	37.5
Peer Education	31.8	70.4	39.4	39.2	82.5
Needles or Syringes	52.5	40.6	32.6	11.0	2.1
LDTDs					
Condom	9.6	14.3	36.4	20.9	18.6
Written Material	43.8	38.7	62.1	31.3	48.9
Peer Education	42.8	33.6	33.9	50.7	68.0
Needles or Syringes	0.8	2.1	0.4	1.2	3.9
Migrants					
Condom	12.0	6.1	8.8	9.1	3.0
Written Material	33.2	16.8	7.1	20.9	2.2
Peer Education	57.7	42.9	4.6	31.4	32.0
Needles or Syringes	1.6	0.2	0.2	0.6	0

LDTDs in all five provinces had received some form of peer education on HIV/AIDS, 68 percent in Can Tho, 51 percent in HCMC, 43 percent in Hanoi, and 34 percent in Da Nang and in Hai Phong. However, only those LDTDs interviewed in Da Nang reported at least the same percentage having been given condoms (36.4%) as having received peer education (33.9%). Condom distribution was far less in the other provinces.

Twelve percent or fewer of the migrant workers interviewed had ever received condoms as a method of HIV/AIDS outreach.

One-third to one-half of the migrant workers in Hanoi (construction workers), Hai Phong (seafarers/fishermen), HCMC (construction workers) and Can Tho (porters/stevedores) had received peer education, though less than 5 percent in Da Nang (seafarers/fisherman) had. Some written materials had been distributed to those migrants working in Hanoi, Hai Phong and HCMC, but very few of the migrant workers in Da Nang or Can Tho had received a HIV education in the form of a pamphlet or brochure. There was virtually no reported needle or syringe distribution among migrant workers.

IV. SUMMARY AND CONCLUSIONS

This report is the English summary of the results of the first round of the HIV/AIDS Behavioral Surveillance Surveys (BSS) for Vietnam. The fieldwork for BSS Round I was conducted from June to November 2000, and preliminary results were disseminated in a workshop in March 2001. As mentioned in the introduction, the basic objectives of the BSS are to: (1) Provide a description of the basic socio-demographic characteristics of these groups; (2) Identify risk behaviours necessitating interventions among sub-populations; (3) Identify priorities for planning prevention programs and for appropriately distributing limited resources; (4) Establish a baseline for monitoring trends and patterns in risk behavior; (5) Provide information to explain changes in HIV prevalence; (6) Provide key information for advocacy and policy making; and (7) Provide information to measure program impact.

Round I of the BSS serves as a baseline to benchmark levels of different risk behaviors in the various target groups included in the survey. The total sample size for all five study population in all five populations is 10,192, including 2,302 karaoke-based sex workers, 1300 street-based sex workers, 1,787 male injecting drug users, 2,337 long-distance truck drivers, and 2,466 male migrant workers. The BSS Round I provides us, in many instances for the first time, with fairly representative population-based data on the socio-demographic characteristics of sex workers, IDUs, long-distance truck drivers and various types of migrant workers (seafarers/fisherman; construction workers; and porters/stevedores) in the five provinces included in the survey. Together with the HIV/AIDS behavioral risk information, this

information on the socio-demographic background of these groups will be helpful for developing relevant and targeted information and interventions to specific audiences and risk-groups.

Round II of the BSS fieldwork will be completed in November-December 2001 and will allow us to examine behavioral changes over the past year. The BSS data also complements the HIV sentinel surveillance data on seroprevalence for some of the same target groups (e.g., sex workers and IDUs). BSS questions on exposure to HIV/AIDS prevention and care interventions allows us to assess the effectiveness of ongoing interventions, the reach of behavioral change communication efforts, and the association and possible impact these interventions activities have had on HIV/AIDS knowledge and risk behaviors over time.

A summary of the major findings of the BSS Round I are provided below followed by a brief discussion and some main conclusions based on the BSS Round I results.

Summary of Main Findings

Sex Workers

The life circumstances and background socio-demographics, and levels of HIV/AIDS risk behaviors were quite different for SSWs compared to KSWs and also varied substantially across the five provinces for the two types of sex workers. In general, the SSWs' life circumstances and HIV-risk situations were worse than for KSWs. SSWs tended to be older, less educated, much more likely to be divorced/widowed/ separated

(and probably have more children), were less mobile, were more likely to have used drugs, were more likely to have had STD symptoms in the past year, and had more sexual partners on average than the KSWs in most of the five provinces included in the study.

KSWs tended to have higher education levels than SSWs, with more than half of them having attended secondary school. The percent of currently married KSWs and SSW ranged from 3 to 7 percent and was higher in the south. The mean number of clients in the last day worked ranged from 0.3 in Da Nang and Can Tho to 3.1 in Hai Phong for KSWs, and from 1.6 in Da Nang to 3 in Hai Phong for SSWs. In the past week, sex workers in Hai Phong reported the highest mean number of clients, 22.5 among KSWs and 17 among SSWs. In other provinces, SSWs had higher mean numbers of clients than KSWs, with a mean of 15 clients in both HCMC and Can Tho, 10 in Hanoi and 8 in Da Nang.

Knowledge of condom as a method for HIV prevention was high in both KSWs and SSWs (ranging from 89 percent to 100 percent), except among KSWs in HCMC where condom knowledge was 72 percent.

Although knowledge of condoms as a means of HIV prevention was very high among sex workers, the prevalence and consistency of condom use between sex workers and their sexual partners was lower and varied considerably according to type of sex worker (KSW or SSW) and by type of sexual partner (one-time client; regular client; non-paying partner/spouse/steady boyfriend). Reported condom use during the last sexual encounter with one-time clients was extremely high, with upwards of 90 percent of both KSWs and SSWs reporting condom use during last

sex with a new client. Consistent condom use with new clients was considerably lower, ranging from only 32 percent in Hanoi to 79 percent in Hai Phong among KSWs and from a low of 56 percent in HCMC to a high of 82 percent in Da Nang among SSWs. Reported condom use at last sex with regular clients and non-clients was much lower than condom use with one-time or new clients.

Reported drug use was higher among SSWs than KSWs, especially in the south. Among KSWs, the percent ever using drugs in Hanoi was 17.6 and in HCMC, 9.3%. In Can Tho, Hai Phong and Da Nang, very few KSWs reported ever using drugs. However, among SSWs the percent of drug users was substantially higher than for KSWs at 44 percent, 19 percent, and 20 percent in Hanoi, Hai Phong and HCMC respectively. In Da Nang and Can Tho the percent of SSWs using drugs was also very low. Injecting drug use was reported to be fairly high among SSWs in Hanoi (22 percent) and in HCMC (16 percent).

Reported STD symptoms in the past 12 months among sex workers were highest in Hanoi and HCMC: 31 percent and 33 percent among KSWs, respectively; and 46 percent and 27 percent among SSWs, respectively.

Conclusions: Sex Workers (KSWs and SSWs)

Efforts to approach sex workers for HIV preventive interventions may face some difficulties due to their socio-demographic characteristics. The relatively high proportion of drug use among sex workers in Hanoi and HCMC highlights the need for also implementing intervention activities for safe injec-

tion among KSWs and SSWs who are also IDUs. The high average number of clients of KSWs and SSWs in Hai Phong, which is a tourist area as well as one with mobile populations (truck drivers, seafarers/fishermen, porters/stevedores/longshoremen), and the inconsistent condom use with clients indicates that behavior change interventions for this group should be intensified. In fact, the BSS results indicate that consistency of condom use between sex workers and their one-time clients, regular clients and non-paying partners needs to be improved in all five provinces. In brief, a comprehensive program for HIV prevention among sex workers should be developed and implemented in Vietnam. A peer education program, similar to that in place for the SSWs in some provinces, should be developed for the KSWs. For HIV/AIDS prevention interventions for sex workers to be successful on a large scale, BCC materials and media, peer education, condom supply, harm reduction efforts for sex workers who are also IDUs, and efforts to carry these prevention messages and encourage condom use among the clients of sex workers are all needed.

Study Limitations: KSWs/SSWs

- Because sex work is illegal in Vietnam, the women involved were often tentative about collaborating with the study teams. Investigators spent a great deal of time gaining support from the key informants and respondents.
- Police and social evils campaigns against sex work resulted in a number of mapped clusters closing down.
- Although questions on ever use of drugs was asked of both KSWs and SSWs in all five provinces, only the question-

naires in Hanoi and HCMC included specific questions on the sex workers injecting drug use experience.

- Often the street-based sex workers worked at night and were unavailable during the day for interviews, while karaoke-based sex workers sometimes lost money when they left their customers to participate in the interviews. The study team remained conscious that their participation meant lost wages and offered some remuneration.

IDUs

The mean age of all the IDU respondents in the five provinces combined was about 28 years old and approximately three-fourths had attended at least secondary school. The percent of IDU respondents who were currently married ranged from only 6 percent in HCMC (where only younger IDUs were recruited) to a high of 35 percent of IDUs in Hanoi. Heroin and opium were the two main drugs used. A large proportion of the IDU respondents reported injecting at least 2-3 times per day (e.g., 41 percent in Hanoi, 58 percent in Can Tho and 80 percent in HCMC), with lower injecting frequency in Hai Phong and Da Nang (26 percent and only 7 percent, respectively). The percent that reported ever having shared in the past six months ranged from a high of 44 percent in HCMC to a low of 8 percent needle sharing in Can Tho. The mean overall number of sexual partners of IDUs in the past year ranged from a high of 2.3 partners in Hanoi down to a low of only 0.5 in HCMC.

Almost two-thirds of IDUs in Da Nang and half of the IDUs in Hanoi and Hai Phong reported having one or more sexual partners

in the past 12 months (including wives/girlfriends, casual sex partners, and sex workers). However, only 23 percent of IDUs in HCMC and 41 percent in Can Tho reported to have been sexually active in the past year. The percent who had had commercial partners in the past year ranged from a high of 23 percent in Hanoi, 20 percent in Da Nang down to a low of 6 percent in Can Tho. The percent that had had casual sex in the past year ranged from a low of 4 percent in Can Tho to a high of 20 percent in Da Nang. Reported consistency of condom use during the past 12 months last sex with a regular, casual, and commercial partner was very low across the five provinces, ranging from only 28 percent consistent condom use with commercial sex partners in Hanoi to a high of 56 percent consistent condom use with sex workers in Hai Phong. In all five provinces, the consistency of condom use by IDUs with their casual and regular partners was substantially lower still.

Conclusions: IDUs

Because a substantial level of needle sharing was reported among IDUs in most of the five provinces; because many IDUs in the survey reported injecting two or more times per day; and because many IDUs reported being sexually active in the past year (with their regular sex partners and/or with sex workers), the need for expanded harm reduction interventions, including peer education, needle exchange, and condom promotion among IDUs is quite evident from these data. These intensified intervention efforts will not only help to keep the HIV infection rates among IDUs as low as possible, but will also help to prevent the further transmission of virus from HIV+ IDUs to other IDUs and to the sexual partners of the HIV+ IDUs.

A case in point is Hanoi, where the HSS indicates for the year 2000 that 10 percent of the sex workers tested and 18 percent of the IDUs tested were HIV positive. The fact that one-fourth of IDUs in Hanoi had sex with sex workers in the past year and that only 28 percent of those IDUs who had sex with sex workers in that city used condoms consistently, and the fact that 22 percent of SSWs and 6 percent of KSWs in Hanoi injected drugs themselves in the past six months: these are sharp warning signs of the prospects of HIV being transmitted from IDUs to sex workers, and from sex workers to other non-IDU male clients and possibly on to the general population.

Despite the known high HIV infection rates among IDUs, consistent condom use among IDUs was low for all partner types especially regular partners. Sharing needles and sexual risk behaviors among IDUs in Vietnam are cause for serious concern. The data suggest that some risk reducing behaviors may already have occurred, especially with regard to needle sharing. However, more research should be conducted to verify these findings. Approximately one-third of IDUs are still reporting needle sharing. Given the high prevalence of HIV in the IDU community, interventions should be aggressively pursued to reduce this. Action is also needed to increase condom use between IDUs (especially HIV-infected IDUs) and their sexual partners.

Study Limitations: IDUs

- A list of registered IDUs and injecting areas was not readily available in every province and mapping of IDU clusters was time-consuming.

- It was sometimes difficult to find private places in which to interview IDUs. In some cases sites such as police stations were offered for interviewing but were not used because it was thought that they could compromise the confidentiality and honesty of the interview.
- New injection drug users were often reluctant to define themselves as IDUs and fearful of being interviewed.
- In HCMC, only IDUs under 30 years old were included in the IDU sample.

Long Distance Truck Drivers

The majority of all LDTDs surveyed were in their 30s, had secondary schooling, and about two-thirds of them were currently married. Many LDTDs reported traveling away from their families for one or more continuous months in the past year (from a high of 47 percent in HCMC to a low of only 6 percent in Can Tho).

Less than 10 percent of the LDTDs in each of the five provinces reported having ever used drugs. Alcohol consumption was highest in Hanoi where more than half of the LDTDs (55%) said they drank alcohol daily.

Many LDTDs were sexually active in a variety of sexual relationships. The average number of sexual partners LDTDs had in the past 12 months ranged from a mean of 2 partner each in Da Nang and Can Tho, to 3 in Hai Phong to 5 in Hanoi, up to an average of 7 partners each in HCMC. Between two-thirds and three-fourths of the LDTDs had at least one regular partner in the past 12 months. More than one-quarter of the LDTDs in Hai Phong reported having one or more casual sex partners in the past 12

months, and LDTDs in Can Tho reported the highest percentage having one or more commercial sex partners in the past 12 months (39%), followed by Hai Phong (35%), Hanoi (33%), HCMC (27%) and Da Nang (23%). Fourteen percent to 19 percent of the LDTD in Hai Phong, Hanoi, and HCMC had four or more commercial sex partners in the past 12 months.

Between a half and 84 percent of the LDTDs reported consistent condom use with their sex worker partners, and between one-fifth and less than one-half of LDTDs reported consistent condom use with their casual partners in the past 12 months.

Between one percent (Da Nang) and seven percent (Hanoi) of LDTDs reported having an STD symptom in the past 12 months.

Conclusions: LDTDs

Among the male populations surveyed, LDTDs were the most likely to have at least one commercial sex partner in the past 12 months, and multiple commercial partners were common in Hanoi, Hai Phong, and HCMC. Most of the LDTDs were currently married but spent long periods of time away from their homes, and many had multiple sex partners during the past year. Few of the LDTDs had been reached by HIV interventions that included condom distribution, even though the LDTDs reported high levels of peer education. Because of their relatively high level of sexual activity, multiple sexual partners including casual and commercial as well as regular, and because of their inconsistent condom use

in all types of sexual relationships, behavioral change interventions that include more accessible condom distribution and that promote consistent condom use should be a priority activity for this occupational group.

Study Limitations: LDTDs

- Sometimes female interviewers were used which was found to be a less effective way of reaching the LDTDs than using all male interviewers.

Migrant Workers

Migrant workers surveyed in the BSS Round I were of different occupational groups in the five provinces (i.e., construction workers in Hanoi and HCMC; seafarers in Hai Phong and Da Nang; and porters/stevedores in Can Tho).

The mean age of seafarers in Hai Phong and Da Nang was 36-37 years, compared to a mean age of only 29 years among construction workers in Hanoi and HCMC and among porter/stevedores in Can Tho. This age difference helps explain why over three-fourths of seafarers were married compared to only 59 percent and 42 percent of construction workers in Hanoi and HCMC, respectively. The porters/stevedores in Can Tho had the lowest level of education (65% with five years of schooling or less), while seafarers in Hai Phong and Da Nang had the highest education levels (64% and 30% with 10 years of schooling or more) among the migrant workers surveyed.

Migration for work was most common among construction workers in Hanoi and

HCMC and seafarers in Hai Phong; 99 percent of the respondents in Hanoi, 96 percent in HCMC and 93 percent in Hai Phong had lived in the cities for less than one year.

The prevalence of drug use was relatively low, ranging from 1 percent in Da Nang to 4 percent in HCMC. The median age of first sex ranged from 21 in Can Tho to 25 in Hai Phong. Daily alcohol consumption ranged from a low of only 5 percent of stevedores in Can Tho to a high of 40 percent among seafarers in Hai Phong.

Seafarers in Da Nang and Hai Phong were the most likely to have at least one regular sex partner in the past 12 months (84% and 78%). Ten percent or fewer of all migrant populations reported having a casual sex partner in the past 12 months. The percent of migrant workers with at least one commercial sex partner in the past 12 months ranged from a high of 16 percent in Hanoi down to a low of 7 percent in Can Tho. Five percent of construction workers in Hanoi and HCMC had four or more commercial sex partners in the past 12 months. Seafarers in Hai Phong and construction workers in HCMC had the highest total mean number of sexual partners in the past year, average two sexual partners each in each group in the two provinces.

The use of condoms during last sex with casual sexual partners was relatively low: 27 percent in Can Tho, 43 percent in HCMC, 51 percent in Hanoi, 63 percent in Da Nang and 69 percent in Hai Phong. Use of condoms during last sex with a commercial sex worker was lower in HCMC (74%), Can Tho (74%), and Hanoi (77%) and substantially higher in Da Nang (94%) and Hai Phong (91%). However, consistency of con-

dom use was lower between migrant workers and sex workers, ranging from 50 percent in HCMC to 75 percent in Hai Phong. Self-reported STD symptoms in the past 12 months were highest in Hanoi (6%) and Da Nang (4%) and 2 percent or less in HCMC, Can Tho and Hai Phong.

Between 3 percent and 12 percent of the migrant workers in the groups from the five provinces were exposed to interventions that promoted condoms, although between 31 and 58 percent of the migrants in the groups from Hanoi, Hai Phong HCMC, and Can Tho were exposed to HIV/AIDS prevention information through peer education.

Conclusions: Migrant Workers

Migrant workers, in particular construction workers and seafarers, live in urban areas often far from their families. Some migrant workers in each of the five provinces reported at least some level of engaging in sex with commercial sex partners. Condom use between migrant workers and commercial, casual and regular sex partners was not consistent. Thus, as the reported prevalence of HIV in sex workers rises, the migrant workers are increasingly vulnerable not only to becoming infected themselves, but also bringing the virus home to their wives and/or other regular and casual partners. Interventions targeting increased condom use among migrant workers should be implemented and should compliment the already strong peer education programs that exist in some of the provinces.

Study Limitations: Migrant Workers

- The study team found that the male migrant workers were often not easily

accessible for interviews. Interviews often had to be conducted after normal working hours and in the evenings or weekends.

General Recommendations

Although mostly descriptive baseline information, the results and findings of the BSS I do support a number of recommendations for HIV/AIDS prevention and care and further analysis, dissemination and utilization of BSS results. Some key recommendations include the following:

- There is a need to conduct more HIV/AIDS prevention education activities in the general community, including men and youth, and the spouses/girlfriends of those men with high-risk behavior such IDUs and men who have multiple sex partners and inconsistent condom use. Both mass media and interpersonal communication approaches should be used. This recommendation is supported by the BSS finding that shows that spouses, girlfriends/boyfriends and other sexual partners of sex workers, IDUs, truck drivers and migrant workers engaged in high-risk behavior are also at risk of HIV/STI infection due to a lack of condom use or inconsistent use of condoms with those engaged in different high-risk behaviors;
- There must be continued efforts to prioritize, strengthen and scale-up behavioral change intervention programs for high-risk populations. These programs should include expanded harm reduction efforts for IDUs (including sex workers who inject drugs), such as needle exchange and greater accessibility

of disposable needles, and increased condom accessibility for sex workers, their clients and IDUs, and promotion of more consistent condom use between high-risk individuals and all of their sexual partners, through condom social marketing and health promotion messages, life skills training, and supporting successful strategies for prevention of injecting drug abuse and for rehabilitation of IDUs to get them off injectable drugs; Although not specifically addressed in the BSS, successful drug rehabilitation programs and vocational training for sex workers and IDUs, and increased care and support and HIV/AIDS education efforts for PLWHAs and their families would further support the above-mentioned HIV/AIDS prevention efforts;

- Voluntary HIV counseling and testing (VCT) centers need to be made fully operational and more effective, ensuring that those who are voluntarily tested (especially IDUs) are, in fact, informed of the results and properly counseled in a confidential manner, that they are provided essential HIV/AIDS prevention information, and if necessary, are checked and treated for STDs and referred for care and support if found to have HIV or AIDS; and
- The available BSS behavioral data should be further analyzed in-depth, with secondary data analysis examining important interrelationships and statistical associations between key variables, including the inter-relationships between behavioral risk information and socio-demographic and program intervention exposure variables.
- The BSS data and key findings need to

be even more thoroughly disseminated and utilized by policy and program people at both the national and provincial levels in Vietnam.

Lessons Learned for the Second Round of BSS: 2001

The lessons learned and general experience of the “pilot” Round I of the Vietnam BSS conducted in five provinces have resulted in a number of modifications, refinements and recommendations for BSS Round II being conducted from August-November 2001, including the following:

- Further standardization of the mapping and sampling procedures and the questionnaires for all five provinces — based on the results, feedback and experience from BSS Round I: e.g., for the BSS Round II questionnaires for KSWs and SSWs in all five provinces will include questions on injecting drug use experience — the same as those asked in Hanoi and HCMC in Round I; and the IDU sample for HCMC will include the same age range of IDUs as the other four provinces rather than confining the sample to IDUs under 30 years old as was done in HCMC in Round I;
- More clearly defined sex partner categories;
- More clearly defined the concept of sharing needles, syringes and injecting equipment;
- Time the fieldwork of BSS Round II to be similar to the timing of fieldwork in BSS Round I to avoid seasonal variations in behavior (e.g., due to Tet holidays, summer vacations, seasonal variations in migra-

tions, mobility and work and recreation patterns);

- Standardization of time indicators for number of sex partners, past sexual behavior, and needle and syringe sharing, by adding additional questions focusing on behaviors in the past day, week and month rather than only on behaviors in the past six months or year;
- Further standardizing the key indicators and analysis plans for the BSS final reports;
- Conducting qualitative research to clarify information and to help explain quantitative study findings from the BSS Round I surveys. Additional social research would be conducted during mapping for the BSS Round II;
- Included in the BSS II report will be comparisons of BSS Round II results and

indicators with comparable baseline results and indicators from BSS Round I to assess whether any changes in risk behaviors over the one-year period between the two BSS rounds can be detected in the various study populations interviewed in the five provinces;

- Efforts will be made to closely coordinate with other donor organizations and implementing agencies that will be supporting and/or conducting HIV/AIDS BSS-type surveys in additional provinces (e.g., WHO in Quang Ninh; CDC in Nha Trang; ADB in An Giang, Kien Giang, etc.) to ensure comparable and high quality survey results in all provinces participating in the HIV/AIDS behavioral surveillance effort for Vietnam.

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