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Behavioural surveillance survey & seroprevalence study among sex workers and their clients in small–scale gold mining areas

A study in the districts of Brokopondo and Sipaliwini, Suriname

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Opinions expressed in this report are those of the authors and do not necessarily reflect the views of the Global Fund, NAP, or other institutions the authors are affiliated with. The authors are responsible for all errors in translation and interpretation.

Marieke Heemskerk & Celine Duijves

Social Solutions

Abbreviations and foreign words

ABS	National Bureau of Statistics (*Algemeen Bureau voor de Statistiek*)
AIDS	Acquired Immuno-deficiency Syndrome
ART	Antiretroviral therapy
ARV	Antiretroviral medication
BOG	Bureau for Public Health (*Bureau voor Openbare Gezondheidszorg*)
BSS	Behavioural Surveillance Survey
Cabaret	Brothel, here only used to indicate brothels in the gold mining areas (Br.)
CBB	Civil Registry (*Centraal Bureau Burgerzaken*)
Curatela	Population centre in a mining area where gold miners and service providers live and work (Br.)
Derma	Department of Dermatology
FG	French Guiana
GDP	Gross Domestic Product
GNI	Gross National Income
HIV	Human Immunodeficiency Virus
Garimpeiro	Gold miner (Br.)
Garimpo	Gold mining area (Br.)
Ibid.	*Ibidem* (Latin), meaning: aforementioned, in the same place. The term is used to indicate that a citation comes from the same source as the previous.
MARP	Most At Risk population
MSD	Malaria Service Deliverer
MSM	Men having Sex with Men
MZ	Medical Mission (*Medische Zending*) – Primary Health Care Suriname
NAP	National AIDS Programme
NBCCS	New Beginnings Consulting and Counselling Services
NGO	Non Governmental Organization
NSP	National Strategic Plan on HIV&AIDS
PAHO	Pan American Health Organization
PEP	Post-Exposure Prophylaxis
RGD	Regional Health Service (*Regionale Gezondheidsdienst*)
SRH	Sexual and Reproductive Health
STI	Sexually Transmitted Infection
SW	Sex worker
UNAIDS	Joint United Nations Programme on HIV&AIDS
UNFPA	United Nations Population Fund
UNGASS	United Nations General Assembly Special Session
VCT	Voluntary Counselling and Testing

Summary

Introduction: This report presents the results of a behavioural surveillance survey and seroprevalence study among sex workers and their clients in small-scale gold mining areas in Suriname, South America. The study objectives are to:

- Identify, locate, and map *cabarets*, and other locations where sex workers solicit or have sexual contact with (potential) clients in four important gold mining areas in Suriname: Benzdorp general area (incl. Kabanavo), Brokopondo North lake (mainly around the village of Brownsweg), Brokopondo South lake, and the Nassau mountains.
- Sketch a demographic and socio-economic profile of female and male sex workers and their clients in four major small-scale gold mining areas in Suriname
- Provide a better understanding of sexual practices, sexual risk behaviours, condom use, knowledge of HIV&AIDS, and working conditions among sex workers and their clients in the gold fields, by means of a Behavioural Surveillance Survey.
- Provide an informed estimate of HIV prevalence among different subgroups of sex workers and their clients in the gold fields of Suriname.

Methods: Fieldwork took place in January-February 2012 and focused on sex workers and their clients in twelve gold mining sites in Suriname. Research methods included the administration of a Behavioural Surveillance Survey with 112 sex workers, among whom 107 were women and 5 were men. Another quantitative survey was conducted with 107 clients who were all men. One hundred-and-one sex workers and 93 clients participated in the seroprevalence study. The study had several limitations, such as the impossibility of taking a random sample, travel expenses, the short time span and the sub-optimal time of year during which the research took place.

Results: Surveyed sex workers were on average 29.4 years of age and had their first paid sex experience at the mean age of 23.4. Surveyed clients varied in age between 17 and 76 and were on average 34.1. In terms of educational achievement, just over a quarter of sex workers (27.7%) had only some years of elementary education. Seventeen percent had completed secondary school but not gone beyond, and 16.1 percent had completed college. Clients had received on average less education.

Almost half of the sex workers (45%) and 61.2% of clients had a steady partner, and 32.4% of sex workers reported two or more non-paying partners. 76.7 percent of clients reported that they had had (non-commercial) casual sexual contacts in the past month. Most sex workers were Brazilian (67.6%) or Dominican (17.3%), while clients were mostly Brazilian (61.8%) and Surinamese (36.8%). Almost all female sex workers (95.2%) reported to be strictly servicing men, while 4.8 percent were working with men and women. Four out of five surveyed male sex workers had paid sex with men only and one male sex worker exclusively had paid sex with women.

Given the high price for condoms in the mining areas, both sex workers and clients mostly buy condoms in Paramaribo. In the interior, the main distribution points of free condoms are the Medical Mission/Malaria Programme health workers and the *cabarets*. Outside of the mining area, the most

important sources of free condoms are the Department of Dermatology and “abroad”. The majority of sex workers (64.9%) and clients (75.0%) approved of the quality of the free condoms. Neither clients nor sex workers economize when buying condoms; instead they look at strength, brand and material.

Not everyone uses condoms consistently. Respectively 2.8 percent and 26.9 percent of sex workers had not used condoms the last time they had vaginal or oral sex. All sex workers who had had anal sex with a client reported that they had used a condom the last time they had done so. 87.9 percent of clients had used a condom the last time they had had vaginal sex with a sex worker. In the month prior to the interview, 91.5 percent of sex workers had –reportedly- always used a condom with clients. 75.6 percent of clients reported that they had “always” used condoms during their casual sexual encounters (paid or non-paid). When having sex with a steady partner, 54.2 percent of surveyed sex workers and 19.1 percent of clients had always used condoms in the month before the survey.

Fifty-eight percent of interviewed sex workers and 34.3 percent of clients had experienced a problem with condoms in the month prior to the interview; mostly that it had ripped or broken. The most common reaction to condom failure was to wash or rinse the genital area (58 % of sex workers: 26.9 % of clients). Other reactions include: taking antibiotics, immediately stop sex, consult a doctor as soon as possible, hope or pray, and use vaginal capsules or cream. Some common customs increase the chances of condom failure. Firstly, not everyone knows how to correctly put on a condom: 35.2 percent of clients and 17.0 percent of sex workers had never received information about this. Secondly, 29.3 percent of sex workers and 24.3 percent of clients reported that they use two (or more) condoms on top of one another. Third, 43.6 percent of surveyed sex workers and 57.3 percent of clients reported that they “never” use water-based lubricant. Finally, many female sex workers use genital herbal steam baths or washes once in a while (15%), weekly (15.9%), or daily (33.6%) to make the vagina dry and tight.

More than half of sex workers (52.9%) consumed at least six cans or bottles of alcohol per night, but the use of drugs is moderate. Two sex workers reported that they had exchanged sex for drugs in the past year. The data do not show a relation between alcohol consumption and drugs use on the one hand, and the consistency of condom use on the other hand. The majority of surveyed sex workers (79.5%) had not been a victim of violence in the year preceding the study.

53.7 percent of sex workers and 26.7 percent of clients believed that they were at a risk for HIV infection. The main reasons behind this risk perception were: sex work brings risks; condoms may break; no confidence in the partner; you do not know who is infected; and everyone is at risk. 40.7 percent of sex workers and 64.8 percent of clients opinionated that they were not at risk of HIV infection. They justified their opinion by stating that they always used condoms, selected sexual partners carefully, and were “careful”.

HIV knowledge was measured in different ways. When asked about the best way to prevent the sexual transmission of HIV, 97.2 percent of sex workers and 92.4 percent of clients named “using a condom”, and one sex worker answered “have sex with only one partner”. The results suggest that a considerable share of people continue to believe in popular misconceptions. The most common misconception is that one might contract HIV from a mosquito bite (30.4% of sex workers; 34.3 % of clients). Most

respondents (84.8 % of sex workers, 76.2 % of clients) were able to name at least one HIV transmission mode other than sex. The best-known alternative venues of HIV transmission were: sharing used injection needles, blood-with-blood contact, French (tongue) kissing, and blood transfusion. Many women erroneously believe that one might contract HIV from sharing nail clippers or having a manicure.

36.2 percent of female sex workers in the mining areas use anti-conception other than condoms to prevent pregnancy, mostly oral contraceptives. 10.2 percent of female sex workers had been pregnant the year before the study; most of them had aborted the baby through a registered doctor, an abortion pill, or an unlicensed doctor. Two thirds of sex workers and one third of clients had done an HIV test in the year preceding the interview. HIV is best known among the various STIs that sexually active people are exposed to; respondents had limited knowledge of other STIs. 28.6 percent of sex workers and 7.6 percent of clients had tested for STIs in the year prior to the interview. Only 8.0 percent of sex workers and 12.8 percent of clients in the gold mining areas are insured for medical expenses *in Suriname*. The seroprevalence study found one sex worker (1.0%) and none of the clients HIV+.

People working in the gold mining areas have poor access to HIV&AIDS services. 44.7 percent of respondents did not know where to go for an HIV test in Suriname. The best-known VCT sites are the Department of Dermatology, Medilab, and the hospital. With regard to the provision of HIV information, the most important sources are the home country, the media/internet, and the general practitioner. Yet almost half of sex workers (47.3%) and 69.5% of clients had not received any HIV information in the year prior to the interview. Furthermore, a large share of respondents did not know where in Suriname HIV+ persons might obtain medical or socio-emotional support (50.5% of clients; 41.1 % of sex workers).

Discussion and conclusions: The researchers conclude that, given the mobility of sex workers, mapping of sex work locations merely provides a snapshot. Sex workers move between different mining hot spots; between the mining areas and the capital city; and –to a lesser extent- between the mining areas and local forest villages. Self-reported condom use is high but condoms are often not used correctly and as a result, condom failure is rather high. Better knowledge of correct condom use could largely remedy this problem. The researchers identify several other topic areas where both migrants and Suriname nationals who work in the mining areas urgently need more information and sensitization. These areas include: HIV transmission modes; HIV risk perceptions; what to do after condom failure; and the availability and location of HIV prevention, testing, care, treatment and support services. Main BSS and seroprevalence indicators for the gold mining areas are listed in Table 1.

Recommendations: The researchers recommend that outreach services, including the spread of information and free condom distribution, not only target sex workers but also their clients and the owners of cabarets. HIV awareness sessions should be made attractive to migrants and Suriname nationals in the mining areas, and emphasize: consistent and correct condom use, what can be done after condom failure, and where to go for HIV&AIDS information, HIV testing and counselling, and support for HIV+ people. VCT services must become available in the gold mining areas.

Table 1 BSS Indicators for sex workers and clients

HIV INDICATORS	% (N*)	N_{total}**
Seroprevalence among sex workers (% HIV+)	1% (1)	101
Seroprevalence among clients (% HIV+)	0% (0)	93
Percentage of sex workers who reported condom use the last time they had had vaginal sex with a client (only those having vaginal sex)	97.2% (103)	106
Percentage of sex workers who reported condom use the last time they had had anal sex (only those having anal sex)	100% (11)	11
Percentage of clients who reported condom use the last time they had had vaginal sex with a sex workers (only those having vaginal sex)	87.9% (87)	99
Percentage of sex workers who report that they always used condoms with their clients in the month prior to the interview	91.5% (97)	106
Percentage of clients who report that they always used condoms with casual non-commercial sexual contacts in the month prior to the interview	75.6% (62)	82
Percentage of sex workers who report that they always used condoms with their steady partner in the month prior to the interview	54.2% (39)	72
Percentage of sex workers who both correctly identify ways of preventing the sexual transmission of HIV[1] and who reject (three) major misconceptions about HIV transmission	38.4% (43)	112
Percentage of clients who both correctly identify ways of preventing the sexual transmission of HIV and who reject (three) major misconceptions about HIV transmission	40.4% (42)	104
Percentage of sex workers who have received free condoms in the year prior to the interview	71.4 (80)	112
Percentage of clients who have received free condoms in the year prior to the interview	61.9% (65)	105
Percentage of sex workers who have received HIV&AIDS information in the year prior to the interview	52.7% (59)	112
Percentage of clients who have received HIV&AIDS information in the year prior to the interview	30.5% (32)	105
Percentage of sex workers who do not believe that they are at risk of becoming infected with HIV	40.7% (44)	108
Percentage of clients who do not believe that they are at risk of becoming infected with HIV	64.8% (68)	105

* Numerator; ** Denominator

[1] As correct answers we considered “using a condom” and “abstinence”.

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1. Introduction

1.1 Study aims and objectives

This report presents the results of a behavioural surveillance survey and seroprevalence study among sex workers and their clients in small-scale gold mining areas in Suriname, South America. The study provides baseline data to combat HIV&AIDS in line with the agreement between the Government of the Republic Suriname and the Global Fund to implement the proposal: 'Reducing the spread and impact of HIV&AIDS in Suriname through the expansion of prevention and support.' The goal of this five-year proposal is to strengthen the Ministry's national HIV strategic plan with the aim to 'reduce the further spread and minimize the negative consequences of HIV&AIDS'. One of the objectives of the proposal is 'to promote the adoption of safer sex behaviours through the design and implementation of combined behaviour change interventions'.

The present study analyzes the behaviour, attitudes, values and beliefs regarding safe and unsafe sexual practices among male and female sex workers and their clients in Suriname gold fields. In addition, the study provides seroprevalence data for sex workers and their clients. More specifically, the objectives of this report are to:

1. Identify, locate, and map *cabarets*[2], and other locations where sex workers solicit or have sexual contact with (potential) clients in four important gold mining areas in Suriname: Benzdorp general area (incl. Kabanavo), Brokopondo North lake (mainly around the village of Brownsweg), Brokopondo South lake, and the Nassau mountains.
2. Sketch a demographic and socio-economic profile of female and male sex workers and their clients in four major small-scale gold mining areas in Suriname.
3. Provide a better understanding of sexual practices, sexual risk behaviours, condom use, knowledge on HIV&AIDS, and working conditions among sex workers and their clients in the gold fields, by means of a Behavioural Surveillance Survey.
4. Provide an informed estimate of HIV prevalence among different subgroups of sex workers and their clients in the gold fields of Suriname.

1.2 Background and relevance

Suriname is situated on the Northern shores of the South American continent. The national language in Suriname is Dutch, but many other languages are spoken, including languages spoken by indigenous, tribal, and migrant groups. Since the early 1990s, small-scale gold mining has boomed in Suriname. At present, an estimated 20,000 persons are working as small-scale gold miners (De Ware Tijd, 5 maart 2012). At least a similar number are earning an income in the surrounding service economy as cooks, vendors, shopkeepers, sex workers, and many other professions. Based on our observations in mining areas throughout the country, we estimate that more than ninety percent of sex workers in the gold

[2] Name generally used for brothels in the gold mining areas

mining areas are foreign migrants, primarily Brazilians and Dominicans, and to a lesser extent Guyanese, some Colombians and occasionally people of other nationalities. Suriname women working in the brothels or *cabarets* in the gold mining areas are mostly of Maroon ethnic descent, but some are urban Creoles, Javanese, and Hindustani. There are also male sex workers active in the mining areas but they are less visible (Nieuwendam 2010).

Estimated adult seroprevalence (15-49 years) in Suriname is 1% (Ministry of Health 2010a and 2010b). This figure is higher among most at risk populations (MARPs). MARPs are subgroups of the population whose specific behaviour and/or conditions place them at increased risk of HIV infection. The Ministry of Health has identified various MARPs, including: Men having sex with men (MSM), male and female sex workers, clients of sex workers, prisoners, and gold miners. Suriname has recognized the need and made a commitment to implement intensive surveillance on these MARPs. The present study is a part of these efforts.

In Suriname, as in many other countries of the world, female and male sex workers remain disproportionately affected by HIV. A 2009 BSS and seroprevalence study among sex workers found that their rate of HIV-infection (7.2%) was about seven times the figure for the general Suriname adult population (Heemskerk & Uiterloo 2009). This and other studies have found that various factors reduce the likelihood that a sex worker will use condoms consistently, including: sex with a steady partner, having oral sex, alcohol consumption, drug use, possible allergic reactions to latex, and a need or desire for (more) money (Heemskerk & Duijves 2012; Heemskerk, Duijves, & Uiterloo 2011; Heemskerk & Uiterloo 2009; PAHO et al. 2009). Moreover, sex workers have been found to engage in behaviours that jeopardize the effectiveness of condoms, such as the use of multiple condoms at once. Gender, nationality, age and other social variables mediate both consistent and correct condom use (Heemskerk, Duijves & Uiterloo 2011).

Small-scale gold mining areas are hotspots for commercial sex work because they are characterized by:

- A male-dominated work force (10 men: 1 woman).
- High mobility: gold miners move around between and within mining areas to mine the richest deposit, Many do not have stable (family) relations.
- Extensive geographic spread and relative isolation. Men with families in foreign countries, the village, or the city, may seek the services of a sex worker when they are away from home for some months in a row.
- Macho environment, loneliness and high alcohol consumption.
- A general lack of forms of entertainment in the isolated forest locations where mining takes place.

A 2010 survey among 192 sex workers in small-scale gold mining areas in Suriname found that particularly female Maroon sex workers start working at a very young age, the youngest being 13 and 14 years old (Nieuwendam 2010). This study also reported that sex workers are mobile. They travel between gold mining camps; between the camps and the city of Paramaribo; and between the camps and local forest villages. Most sex workers in the above-mentioned study proved to have a fairly decent

education (junior high school or beyond). The majority (59.3%) of sex workers had performed an HIV test in the year prior to the study but nine percent had never before tested for HIV. The study also indicated a need for voluntary testing and counselling (VCT) facilities in the gold mining areas. In the discussion section we will compare some of our results with those from this earlier study.

The study results presented in the following pages provide necessary information for the strengthening and improvement of outreach programmes for sex workers and their clients in Suriname gold mining areas.

1.3 Study outline

In subsequent sections we will proceed as follows.

· ***Chapter 1: Introduction***

This section provides an introduction to and description of the proposed project and explains the purpose and structure of this report.

· ***Chapter 2: Methods, study population and sample***

Chapter 2 presents the methods used for data collection and analysis. This chapter also describes the study population and our sample.

· ***Chapter 3: Study results***

Chapter 3 contains the study results, which are organized according to thematic areas including the demographic and social profile of the study population; working conditions; buying and obtaining condoms; consistency of condom use; correct condom use; condom failure; knowledge of HIV&AIDS; sexual and reproductive health; and access to medical services, particularly those related to HIV&AIDS.

· ***Chapter 4: Analysis of results***

The results are further analyzed and interpreted in Chapter 4. Here we also compare our findings from the gold mining areas to those from Paramaribo.

· ***Chapter 5: Conclusions and Recommendations***

The final chapter 5 contains the conclusions and recommendations.

2. Methods

2.1 Study period and locations

Fieldwork was conducted in January-February 2012 in 12 gold mining sites in Suriname, distributed over four larger mining regions in the districts of Brokopondo and Sipaliwini (Table 2). Figure 1 shows the study locations in the country. This figure also shows the location of Medical Mission health posts in the interior. These health posts serve as free sites as well. A close-up of the four mining regions is presented in Figure 2 to Figure 5.

In addition to the listed locations, the team visited two other gold mining sites in Brokopondo North lake where no cabarets or sex workers were encountered: Gwangoe and Wakibasoe. The local gold miners at Gwangoe reported that this is a place of spiritual significance (local: *kina peesi*), and therefore certain religious rules had to be obeyed, including a prohibition to engage in sex work. It is possible that the women selling drinks and food in this area do occasionally also sell sex, but because of their denial no interviews or HIV tests were conducted in this location.

Data analysis and report writing took place in February 2012.

Table 2. List of fieldwork locations.

District & general region	Name of site	Number of cabarets	Nationality of sex workers
Brokopondo, North lake	Kriki Neygi	3	Guyanese, Brazilian, Dominican
	Koemboekreek	1	Suriname
	Irene vallen	3	Suriname, Guyanese, Brazilian
	Afobaka (boat landing)	1	Dominican, Guyanese, Colombian
Brokopondo, South lake	Gran kreek	2	Brazilian, Dominican
	Tjilipasi	3	Brazilian, Dominican
	Alimoni (boat landing)	1	Brazilian, Guyanese
Sipaliwini, Lawa river region	Antonio do Brinco	2	Brazilian
	Kabanavo	2	Brazilian
	Benzdorp	3	Brazilian, Dominican, Guyanese, Jamaican, Dutch
	Peruano	0	(only clients; Brazilians)
Sipaliwini, Nassau mountains area	Tumatu	3	Brazilian, Dominican
	Nason	3	Brazilian, Dominican

Figure 1. Suriname with the four study regions in the districts of Brokopondo and Sipaliwini. The map also shows the locations of Medical Mission clinics and the hospital of Maripasoela (FG), which offer free Voluntary HIV Counselling and Testing (VCT) services)

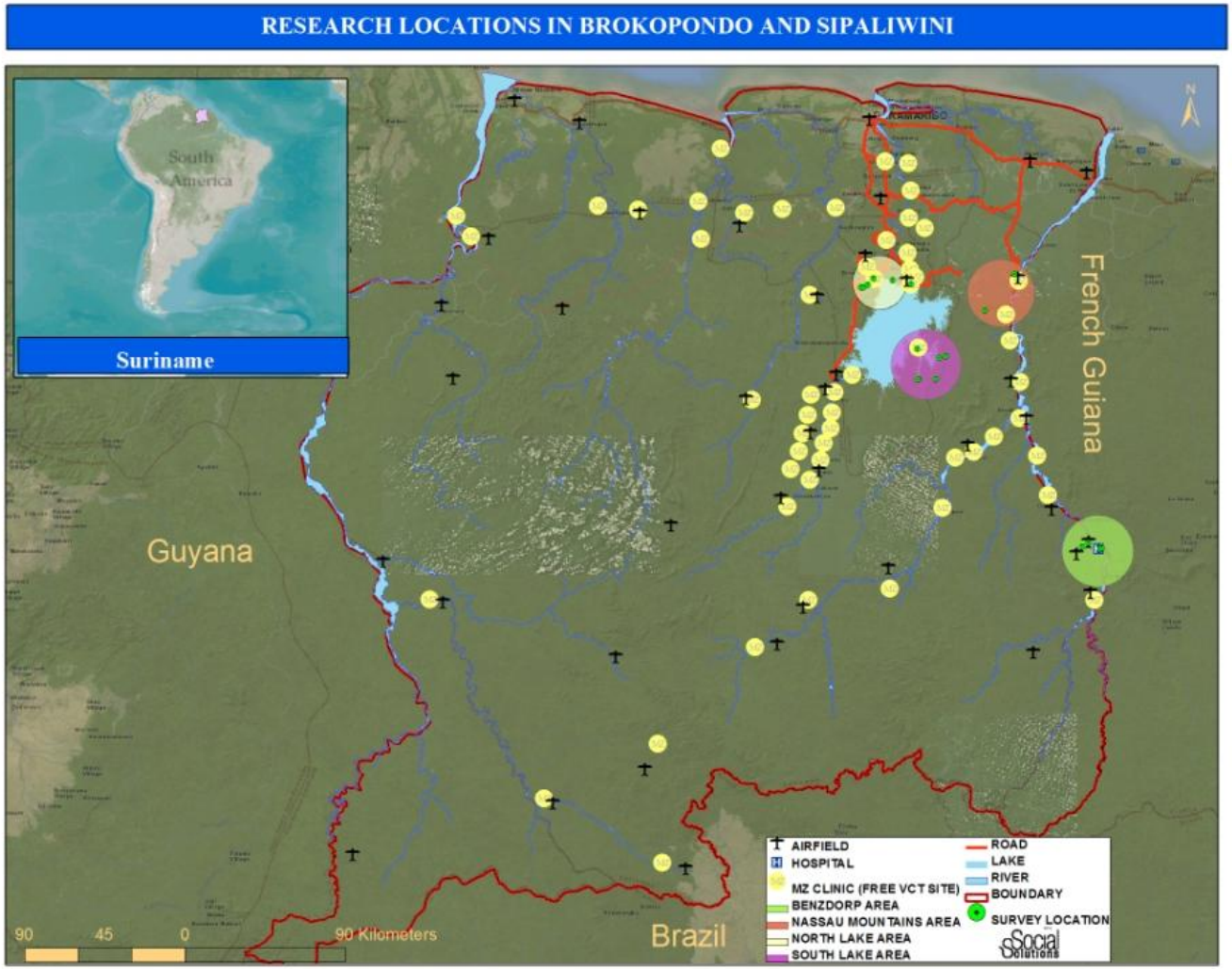


Figure 2. The research locations in the Brokopondo North lake area.

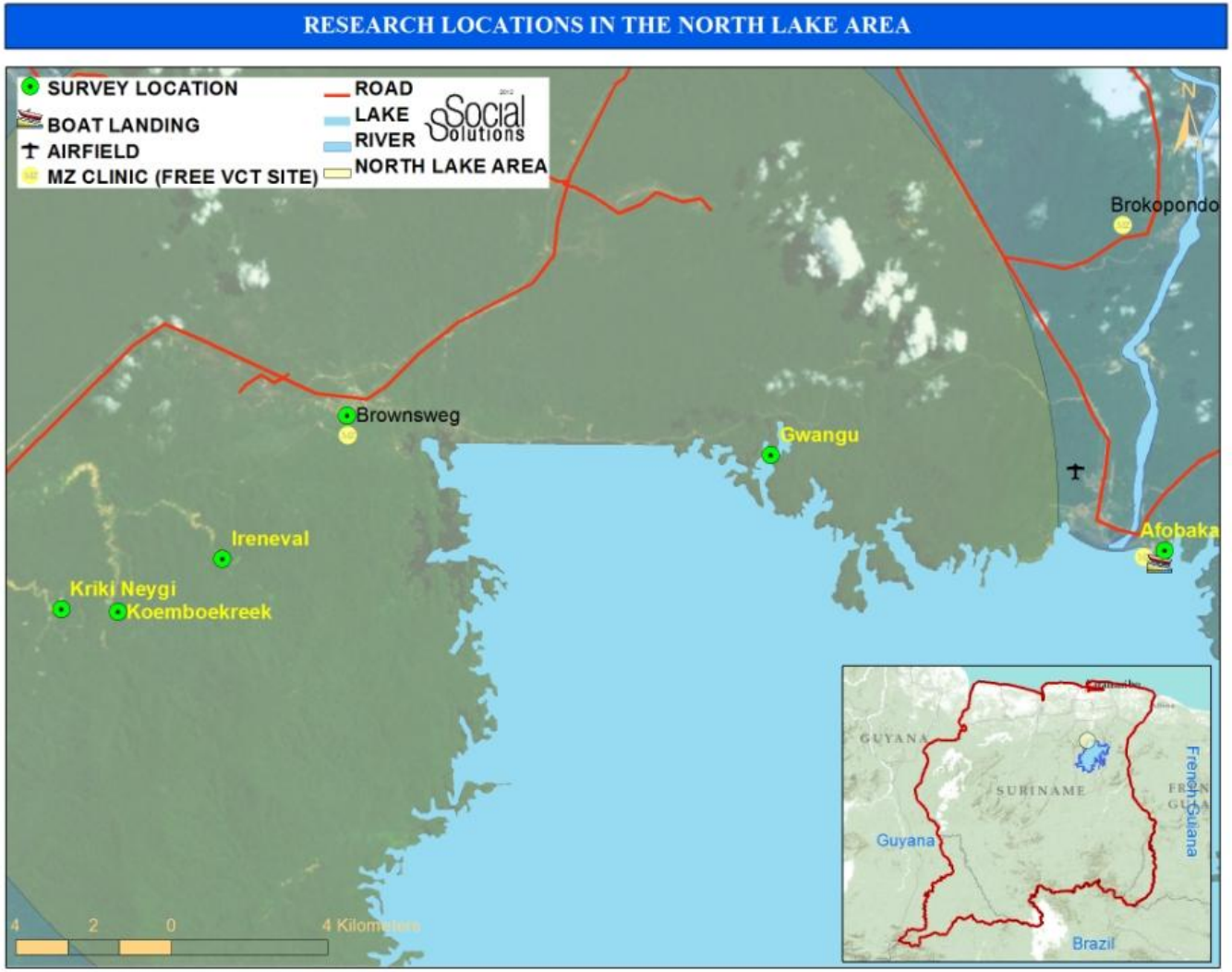


Figure 3. The research locations in the Brokopondo South lake area.

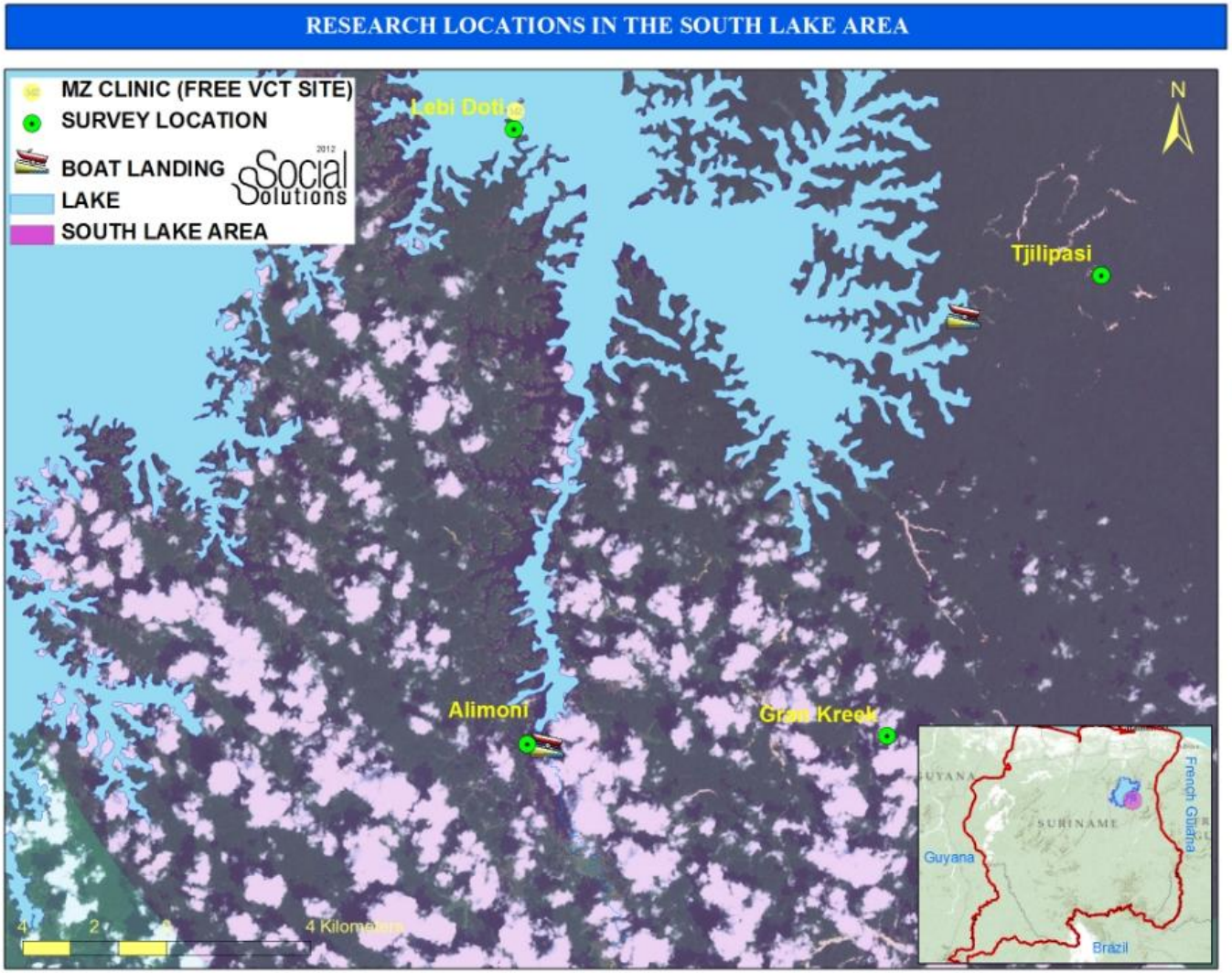


Figure 4. The research locations in the Benzdorp area (Lawa river region).

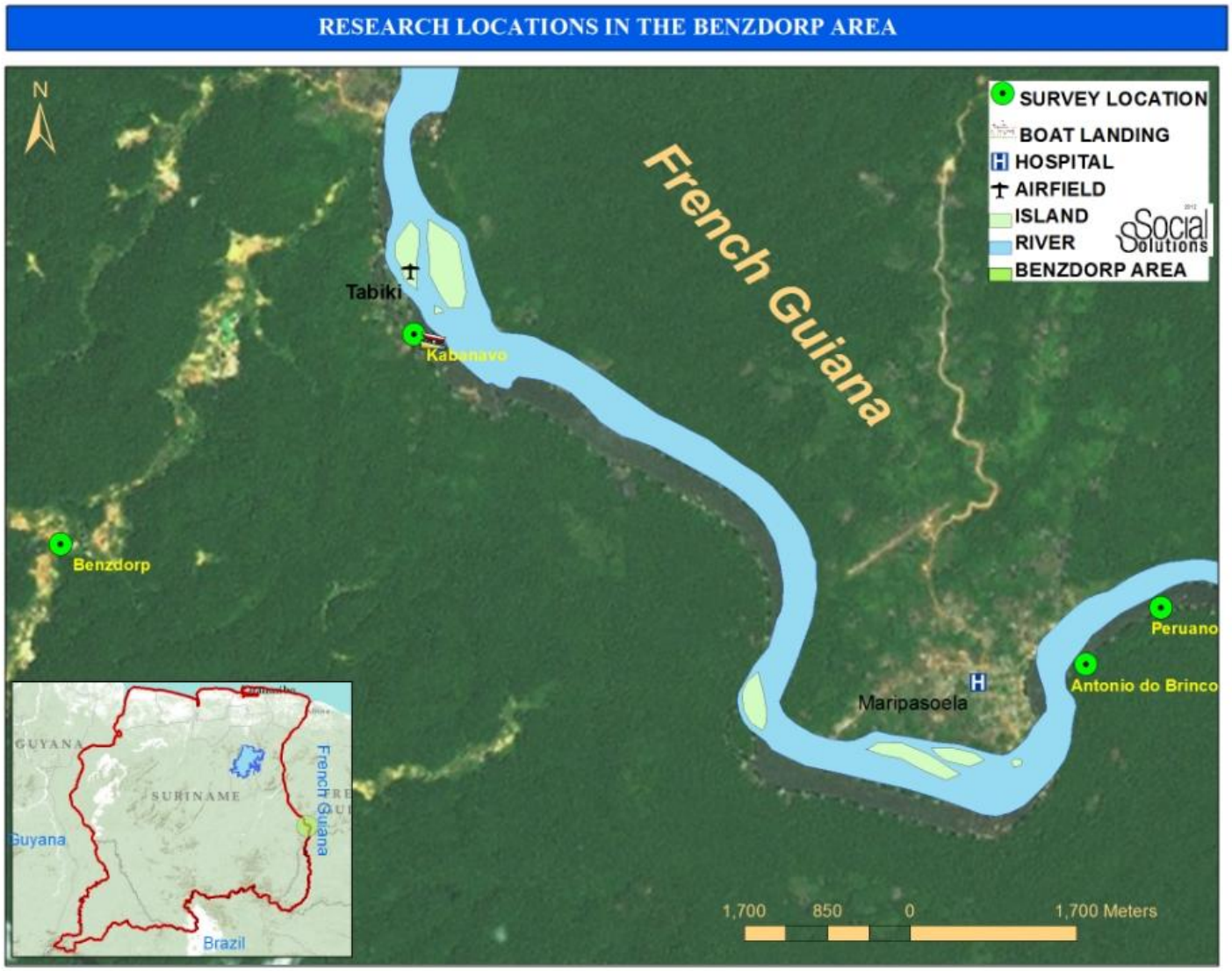
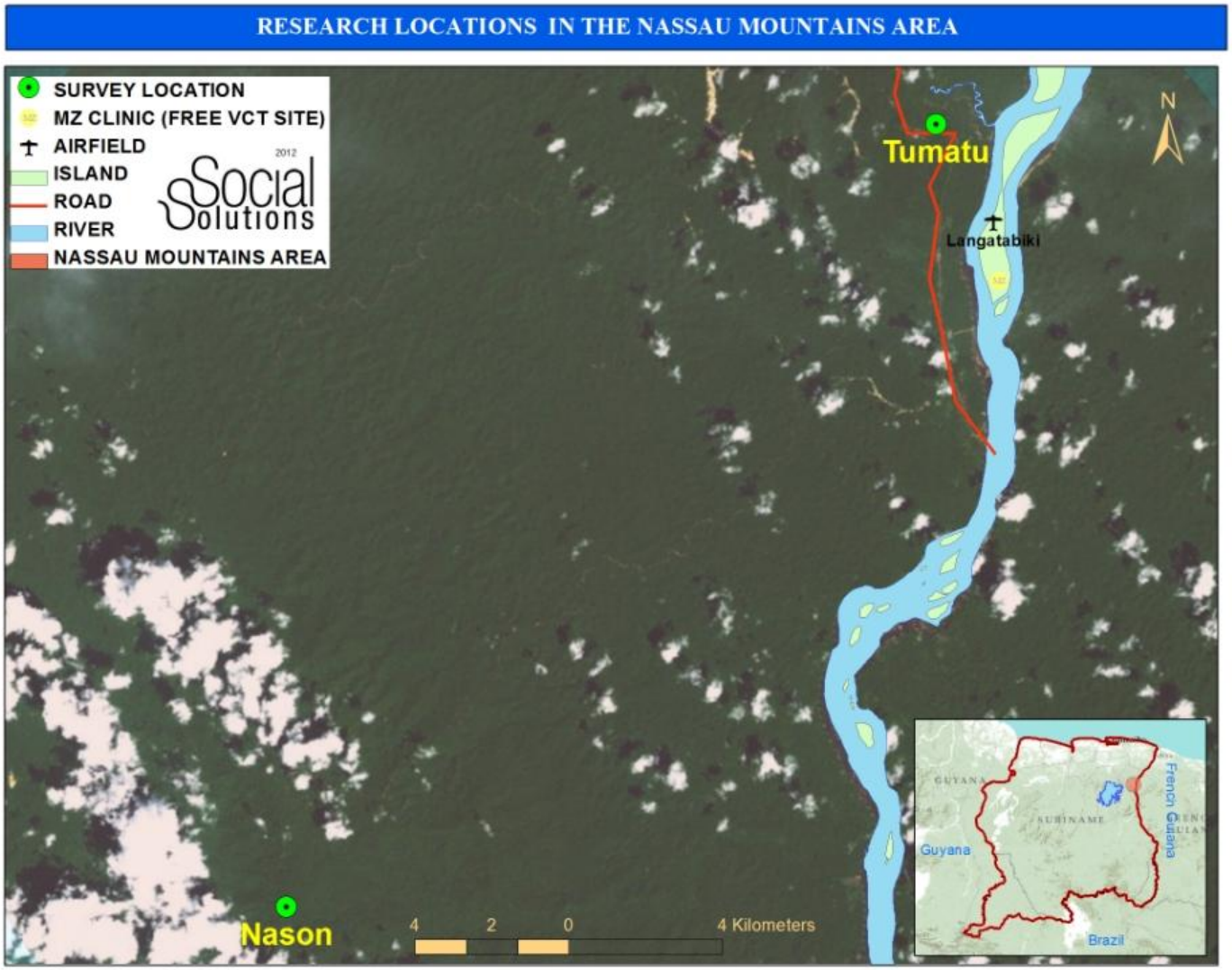


Figure 5. The research locations in the Sipaliwini, Nassau mountains area.



2.2 Study population

The study population consisted of all sex workers who were working in one of the visited gold mining areas during the study period, as well as the clients of these sex workers. We define as a sex worker any man or woman who is involved in sexual acts against prior agreed payment in cash or kind with someone the person has no further partner relationship with. Because this study is concerned with HIV&AIDS, we only included sex workers who have direct physical (oral, vaginal, or anal) sexual contact with their clients. Go-go and lap dancers, and people who are paid to engage in live sexual performance, such as peep shows, web cam sex and phone sex were excluded from this study.

The total number of sex workers in Suriname is not known, but has been estimated at 2000 individuals (Heemskerk and Uiterloo 2009). The number of sex workers active in small-scale gold mining areas is even less known, but based on our observations in the various mining areas of Suriname we estimate that they may total about 1000 and 2000 persons. They are both foreigners and local women -and a few men- of different ethnic and cultural backgrounds. While there are many sex workers who work exclusively in the mining areas and others who only work in the city, there is a considerable group of sex workers who travel between the mining areas and clubs and streets in the city. Therefore the sex workers in the mining areas are not a population that can be strictly separated from the sex workers who work in Paramaribo.

During the research period of the BSS and seroprevalence study in the gold mining areas, the researchers conducted a similar concurrent study in Paramaribo city. If the same sex workers were encountered both in the mining areas and in the city, they were only included in one of the studies. Thus, even though there is an overlap in the study populations, there is no overlap in the samples of the two studies.

2.3 Sampling strategy and sample

Taking a random sample of sex workers is impossible as sex workers and their working locations are not registered; their work is typically informal; and some sex workers may be inclined to hide their job.

In the small-scale gold mining areas the research team was confronted with additional challenges. The places where sex workers stay are dispersed throughout the country's interior, difficult to access, and often expensive to reach. Hence a limited number of mining sites were selected for research. Selection criteria included: number of sex workers suspected to be present in the area, travel expense and time, and ease of access. The possible number of sex workers was estimated based on information from persons who were working in or had recently visited the particular area.

In the various selected mining areas (see 2.1), the research team solicited the participation of all sex workers in all *cabarets* that were present. In addition, the surveyors walked around in the various population enclaves where gold miners and gold mining service providers live and work

together (*curatela*). In these *curatelas* the surveyors also conducted interviews with women who had other types of professions (e.g. saleswoman, hairdresser), and who occasionally sold sex for gold or money. Clients were encountered and approached both in the *cabarets* and in other locations in the *curatela* and the mining fields. In many instances, men and women in the gold fields proactively approached the researchers to ask for an HIV-test once a VCT site was established at a specific cabaret. The researchers made an effort to interview all men who came for HIV testing, and who indicated that they did frequent the *cabarets.*

Figure 6. Surveyor and respondent during an interview in the Brokopondo South lake area.

A total of 112 sex workers and 107 clients were surveyed(Table 3). Eighty-five (75.9%) of the surveyed sex workers and sixty-four (59.8%) clients also conducted an HIV test. In addition, fifteen sex workers and twenty-nine clients performed only the HIV test and did not do the interview. The largest share of sex workers in the sample was comprised of women (96.9%, N_{total}= 127); only five male sex workers were interviewed in the gold mining areas. All surveyed clients were men.

Table 3. Numbers of sex workers and clients that were tested and/or surveyed in the various research locations

Location	Sex workers			Clients		
	Survey and test	Only survey	Only test	Survey and test	Only survey	Only test
Brokopondo North lake	16	6	0	5	1	1
Brokopondo South lake	28	3	1	8	17	4
Sipaliwini, Benzdorp/ Lawa region	22	7	9	32	16	20
Sipaliwini, Nassau mountains area	19	11	5	19	9	4
Total	85	27	15	64	43	29

Most persons who participated in the survey and/or the seroprevalence study were working in gold mining sites in the district of Sipaliwini at the time of the study (Table 3). Almost two-thirds of all surveys (61.6%; N_{total}=219) and HIV-tests (67.4%; N_{total}=193) were performed in this district. Most gold miners and mining service providers, including sex workers, were encountered in the various mining sites in the Benzdorp general area along the Lawa river. The research team conducted interviews with 77 persons and HIV-tested 83 persons in this ancient mining area.

Figure 7. Surveyor during an interview in a cabaret in Kabanavo, Benzdorp general area

2.4 Survey

A draft survey form for interviews with sex workers was designed based on the 2009 Behavioural Surveillance Survey (BSS), with input from the National AIDS Programme. This survey contained questions about general demographics, the consistency of condom use, correct ways of condom use, exposure to STIs, knowledge of HIV&AIDS, and knowledge and use of health services.

The draft survey for sex workers was tested with five sex workers in the gold mining area of Kriki Neygi, among who were one Brazilian, two Dominicans, and two Guyanese women. Based on the test, the survey questions were adjusted, some questions were deleted and others were added. One question that was deleted was linked to common HIV indicators. The question "Do you believe that having sex with only one faithful, uninfected partner reduces the risk of HIV transmission" was removed because this question does not make sense in the context of people who make a living by having sex with multiple partners. Moreover, the sex workers who participated in the test interviews argued that there is no way of knowing whether a partner is truly loyal to you, nor whether he/she is uninfected.

Another change to an HIV indicator question concerned the question: "Do you believe that using condoms reduces the risk of HIV transmission?" Asked like this, the question does not measure active knowledge of HIV prevention and hence we changed this question into the open question: ""What is the best way of preventing the sexual transmission of HIV when you are having sex?"

The survey form for clients of sex workers partly contained the same questions as the survey for sex workers. Questions that were not applicable to clients were deleted and some new questions were added. New questions asked about, for example, the client's involvement in stable and casual sexual relationships. After the National AIDS programme had provided its input and approved the questionnaire, the questionnaire was tested with three clients in the Kriki Neygi gold mining area. The survey form was adjusted based on the results of the pilot surveys.

The final survey forms are attached as Annexes 1 (sex workers) and 2 (clients). Each survey participant received a US$ 5- mobile phone recharge card as compensation for his or her time, and another US$ 5- mobile phone recharge card if he or she also did the HIV test. Study participants who either participated in the survey or only did the test received just one US$ 5- mobile phone recharge card.

2.5 Seroprevalence study

To provide an informed estimate of HIV prevalence among different subgroups of sex workers and their clients in the gold fields of Suriname we conducted HIV tests in our study locations. Because we were conducting a specific research project outside of the regular national testing procedures, the National AIDS Programme did not request that the research team followed the standard VCT procedures. Our approach differed from the regular VCT procedures in that we:

(a) Did not ask all questions from the VCT form as most were already asked in the interview,

(b) Did not perform full-length counselling because it would draw too much attention to the positive cases. Instead an HIV+ person was referred to the Department of Dermatology when her colleagues were not around

(c) Did not leave a copy of the testing forms with NAP, SMLA, or any other organization. Instead the results were considered research data and were only given to NAP as an aggregated dataset.

Certified VCT health workers from the Suriname Department of Dermatology tested sex workers and clients of sex workers at alternative test sites, mostly in a room of a cabaret.

2.6 Protection of Human Subjects and Ethical Review

Research procedures adhered to professional ethical standards for anthropological and health research. Prior to conducting a survey interview, the interviewee was approached in an unobtrusive manner. The surveyor introduced him or herself and explained the purpose of the research. It was also explained to the interviewee that participation in the research was voluntary and anonymous, and that the person would be compensated for his or her time with a mobile phone recharge card.

Names of study participants have not been recorded. The answers have been processed using a coding system that guarantees respondent anonymity. Information provided by the sex workers and their clients to the survey team has been treated confidentially and is not revealed in a way that can be linked to their person. All data have been presented in an aggregated manner.

2.7 Data analysis

Survey data were entered in the statistical software package SPSS. The data were cleaned and cross-checked during the analysis. Summary statistics and multivariate statistics have been used to present the data. In the data representation, the denominators for the various results are reported as N_{total}.

2.8 Research team

The research team was headed by two anthropologists. The lead researchers jointly designed the work plan and had final responsibility for execution of the research. Together the researchers are fluent in Dutch, English, Spanish, Portuguese, and Sranantongo.

During the field research, the lead researchers relied on the assistance of survey assistants, who were selected on the basis of their previous experiences with similar survey work; their language skills; and/or their familiarity with the research localities. The survey assistants formed sub-groups

to visit the various survey sites, based on their knowledge of these locations and their language skills. A data entry assistant was hired for entry of the survey data. A GIS mapping specialist composed the maps of research sites (Figure 1 through Figure 5).

2.9 Limitations and assumptions

The BSS and seroprevalence study were conducted under certain limitations

- **Sampling.** It was not possible to take a random sample of sex workers in the mining areas. Sex workers are not registered and they are mobile; moving both within Suriname between mining areas and the city, and between Suriname and other countries. Furthermore, many sex workers work irregularly, based on needs of money, holidays and other circumstances. Because sex workers were interviewed 'upon encounter' in target locations, the results cannot be extrapolated to the population at large.
- **Travel expenses to and within mining areas**. Travel to and within the mining areas is extremely expensive, as are lodging and food. For example, a trip to Gran Kreek costs about US$ 500 per person for travel and lodging for 2 days. Hence it was impossible to visit sex workers in all small-scale gold mining areas and the team had to select a limited number of locations. By selecting sites dispersed throughout the interior, we are confident that our selection is representative of the research population at large.
- **Time for data collection and analysis**. The study was originally planned to begin in November, but because of administrative hold-ups and a lack of HIV-testing materials, the consultant could only start in mid-January. As a result, the team had only about seven weeks in total to complete the project. Given the extensive travel required for the work, this time window was very tight. We tried to resolve this problem by entering the field with large teams (up to 10 persons), so that the work went relatively fast.
- **Research period**. The fieldwork could only get started in January 2012, when new HIV-testing materials had entered the country. Unfortunately, January is a slack month for gold mining and for sex work. In December, everyone works hard to earn additional money for the holidays, and there are many parties where money is spent. In January people have little extra money in their pockets to spend on commercial sex. Moreover, many foreign sex workers -who represent the majority of sex workers in Suriname- have gone to their home country, only to return by mid-February or after carnival. As a result, the team had to make more field trips than originally planned in order to interview and test (nearly) the required number of sex workers and clients.

In collecting data and interpreting the results, we rely on various assumptions.

- **Representativeness.** The researchers assume that by targeting sex workers of different subgroups, the study provides a fairly accurate representation of the sex workers' population, their habits, their opinions and their attitudes.
- **Reliability**. We also assume that interviewees answered to the questions to their best ability and in a truthful manner.

Figure 8. Travel by boat and ATV to remote mining areas

3. Results

3.1 Demographic and social profile

The sample included sex workers and clients from a wide age range. The youngest sex worker interviewed was 14 years of age, and the oldest was 51. The 14-year old woman was the only under-age sex worker in the sample; all others were at least 18 years old. Interviewed sex workers were on average 29.4 years old; the median age was 29 (N_{total}=112). The large majority of sex workers in our sample (95.5%) were women. Five male sex workers were interviewed in the mining areas.

All surveyed clients were men. They varied in age between 17 and 76, with a mean age of 34.1 (N_{total}=107).

Among the sex workers, the mean age of having paid sex for the first time was 23.4 years (N_{total}=108). We found a wide range of ages for first commercial sexual activity though. The earliest paid sexual experience reportedly took place at an age of 10. On the other hand, six people reported to have had their first paid sex experience when they were already in their forties; the oldest being 47 when she started sex work. Surinamese sex workers were the youngest when they had paid sex for the first time, with a mean age of 18.4 years old (N_{total}=7)[3], Dominicans were on average the oldest with a mean age of 29.1 (N_{total}=21)[4]. 91.8 percent of sex workers reported that they had used a condom during their first commercial sexual experience (N_{total}=110).

When looking at educational achievement, we found that two sex workers (1.8%) had not attended school at all (N_{total}=112; Figure 9). Just over a quarter of sex workers (27.7%) had attended some years of elementary education but not completed, and 15.2% of sex workers had completed elementary school but not gone beyond that. 11.6 percent of sex workers had entered secondary school (junior high school) but failed to complete it and 17 percent of sex workers completed this type of school. 16.1 percent of sex workers had obtained a college degree and 3.6 percent had attended university.

On average, men working in the gold mining areas, who were clients of sex workers, had received less education than the sex workers. 7.5 percent of clients reported that they had never attended school, and over a third had started but not completed elementary school (N_{total}=106). Only one out of every five clients had either completed secondary school or gone beyond. Just one person had gone to university (0.9%; N_{total}=106). Clients were more likely than sex workers to have attended some form of technical or vocational training (resp. 5.6% versus 0%).

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[3] Excluding the Surinamese sex worker with a Dutch nationality who was 16 when she had her first paid sex experience.

[4] The one Colombian case was excluded. This woman was 35 years of age when she was paid to have sex for the first time.

Figure 9. Level of education among sex workers in the gold mining areas (N_{total}=112)

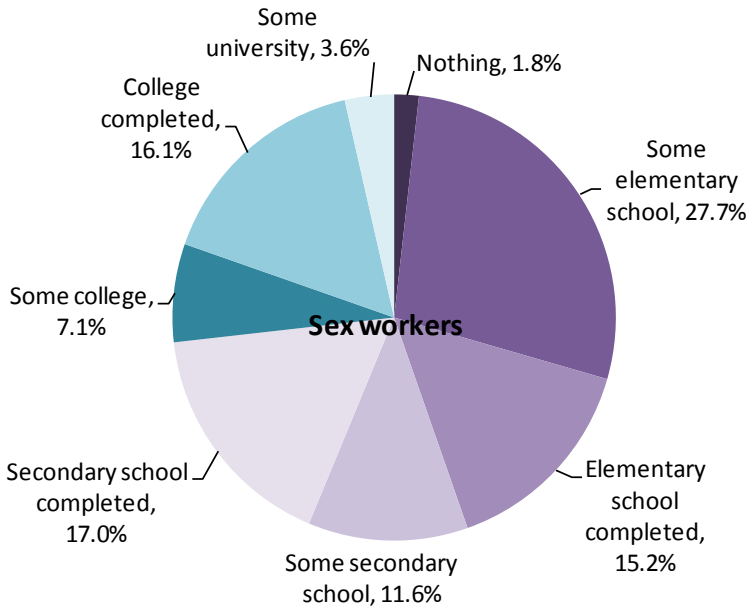
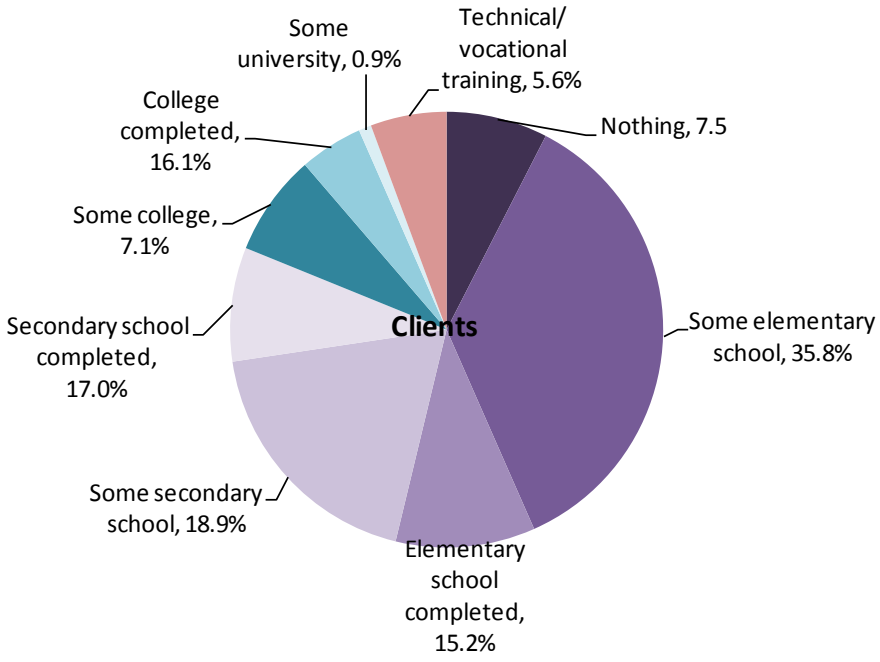


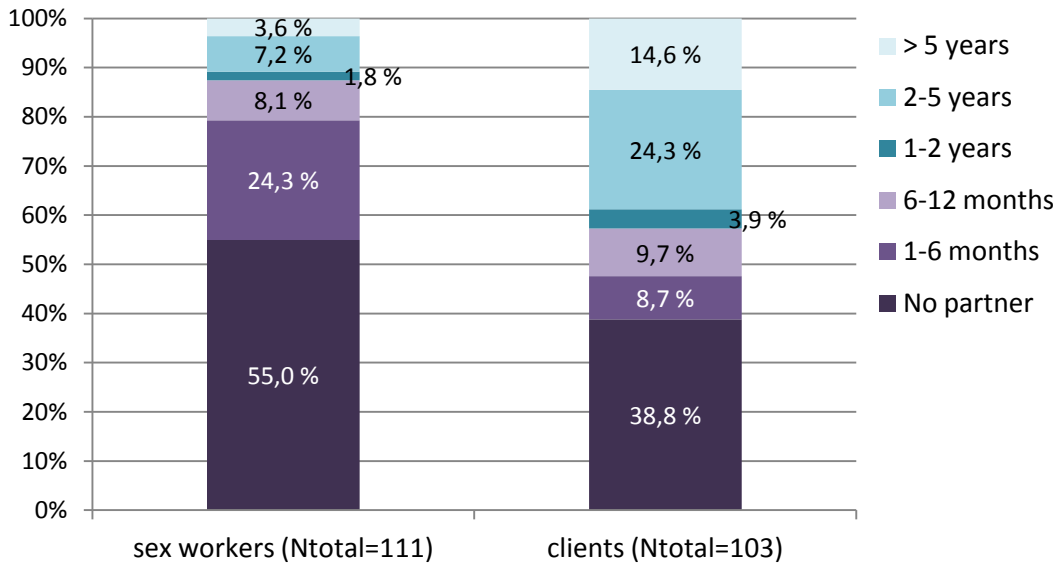
Figure 10. Level of education among clients of sex workers in the gold mining areas (N_{total}=106)



Forty-five percent of the sex workers (N_{total}=111) and 61.2 percent of clients (N_{total}=103) had a steady partner. For one quarter of sex workers (24.3%) this relationship was rather young (1-6 months) but others had been in a stable relationship for more than two years (10.8%) (Figure 11).

In addition, 20.6 percent of sex workers reported that they had non-paid sexual contact with at least one casual partner (N_{total}=107). In total, nearly one third of sex workers (32.4%; N_{total}=105) reported that they had two or more non-paying partners.

Figure 11. Percentage of sex workers and clients in a partnership relation, with the duration of the relation



Clients were more likely than sex workers to be involved in a longer-term relation. Almost one quarter of clients had been in a steady relationship for the past 2 to 5 years, and another 14.6 percent had been involved with a steady partner for more than five years (Figure 11). Relatively fewer clients reported that they had been in a relationship for less than half a year (8.7%; N_{total}=103) (Figure 11). Clients were also asked whether they had casual sexual relations with individuals other than their steady partner. Three quarters of surveyed clients confirmed that they had had non-commercial casual sexual contact in the six months prior to the study (76.7%; N_{total}=103). Of those persons (N_{total}=79), 62.0 percent reported that in the past half year, they had had non-paid casual sex with just one other person. The remaining men reported multiple casual sexual relations in the half year prior to the study. 8.7 percent of clients reported that they had had casual sexual encounters with five or more people in the past six months.

Most sex workers support one or more children and/or family members (84.3%, N_{total}=102). The average number of dependents was 2.3. On average, Brazilian women supported the smallest number of dependents with their wages (mean=1.83) while Suriname sex workers reported the largest number of dependent children and other relatives (mean=3.86). Clients were not asked about the number of persons they were supporting with their wages.

The majority (64.6%) of study participants, both among sex workers and among clients, were Brazilians (N_{total}=263; *Table 4*). The second largest group of study participants were of Surinamese origin (21.7%; N_{total}=263), mainly because of the relatively large number of clients who were Surinamese (36.8% of clients; N_{total}=136). Only 5.5 percent of sex workers were of Surinamese nationality. Among sex workers, Dominicans formed the second most represented nationality (17.3% of sex workers; N_{total}=127), and Guyanese women were the third largest national group (7.9%; N_{total}=127). None of the surveyed clients were Guyanese.

Table 4. Nationality of surveyed and/or tested sex workers and clients

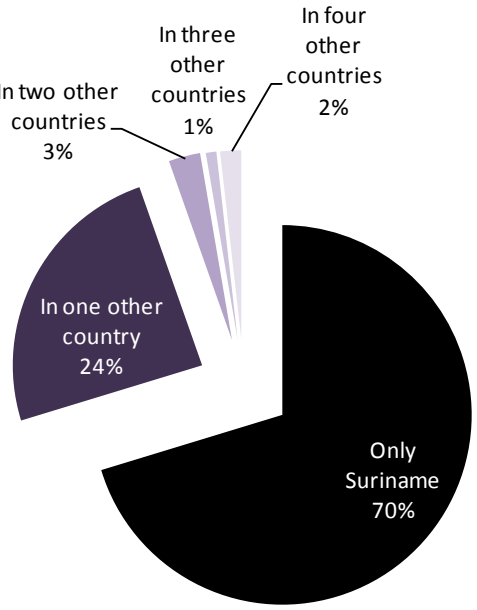
	Sex workers (N_{total}=127)		Clients (N_{total}=136)		Total	
	N	%	N	%	N	%
Brazil	86	67.6%	84	61.8%	170	64.6%
Suriname	7	5.5%	50	36.8%	57	21.7%
Dominican Republic	22	17.3%	0	0%	22	8.4%
Guyana	9	7.1%	0	0%	10	3.8%
Colombia	1	0.8%	0	0%	1	0.4%
Dutch	1	0.8%	1	0.7%	2	0.8%
French	0	0%	1	0.7%	1	0.4%
Jamaican	1	0%	0	0%	1	0.4%
Total	127	100%	136	100%	263	100.0%

3.2 Working conditions

95.2 percent of female sex workers reported to be strictly servicing men, while 4.8 percent reported working with men and women (N_{total}=105). Informal conversations with sex workers suggest that women who service both women and men typically work with couples. We have not heard about female sex workers who provide sexual services to (lesbian or bi-sexual) women by themselves. Of the five male sex workers who participated in an interview, four out of five reported to have paid sex with men only. One man reported to have paid sex only with women.

Most of the sex workers, 70.3 percent (N_{total}=111), had no experience with commercial sex work beyond Suriname's borders, not even in their home country (Figure 12). 66.7 percent of the Guyanese (N=9) and 35.2 percent of the Brazilians (N_{total}=71) had been working in one or more other countries outside Suriname. None of the Dominican or Surinamese sex workers had worked as a sex worker in a country outside Suriname (resp. N_{total}=21 and N_{total}=7). Sex workers who had working experience outside Suriname mostly had been active in the Caribbean region (Barbados, Antigua, Bahamas, Guyana, French Guiana) but some had also worked as a sex worker in Europe (Netherlands, Spain, Germany, France) and/or Latin America (Venezuela, Brazil).

Figure 12. Percentage of sex workers who work only in Suriname as compared to those who work in more countries



3.3 Obtaining condoms

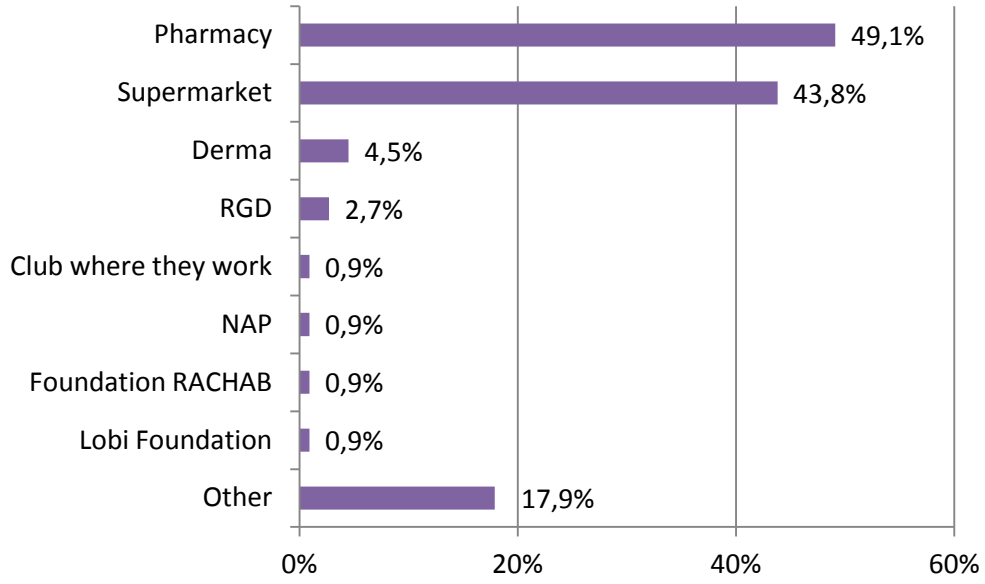
Sex workers in the gold mining areas obtain condoms from different localities. Most sex workers brought condoms from Paramaribo where they bought them at a pharmacy (49.5%) or the (Chinese) supermarket (44.1%), or where they got free condoms from the Department of Dermatology, popularly known as Derma (4.5%)(N_{total}=111). Sex workers who obtained condoms in the interior, most often received them from health workers related to the Medical Mission/Malaria Programme[5] (9.8%). In addition, many women who worked in cabarets in the interior or in clubs in Paramaribo got or bought condoms in the establishment where they worked (19.7%). Other sources where sex workers obtained condoms were mostly places that distribute condoms for free.

Many clients conveyed that when they visit a cabaret, the sex worker typically supplies the condoms. This information is consistent with comments from sex workers, who typically refuse to use condoms supplied by clients. Clients were asked specifically whether they bought condoms in the mining areas. 28.4 percent of clients reported that they did not buy condoms in the mining areas. Condoms in the mining areas are very expensive (about US$ 5 for three pieces), and hence

[5] The Medical Mission and Malaria Programme have joined forces. Because field staff are employed for both organizations this is for some respondents a representative of MZ, while the other sex worker identify this person as an employee of the malaria programme. Others have called both organizations as a provider of condoms.

bringing them from Paramaribo, or a foreign country is more economical. Clients who do buy condoms in the gold mining area (*garimpo*), buy them in a (Chinese) supermarket (38.2%) or in any store (13.7%) in the gold mining areas (N_{total}=103).

Figure 13. Places where sex workers usually obtain or buy condoms (N_{total}=111)



Sex workers and clients were also specifically asked about the receipt of free condoms in the year preceding the interview. In analyzing their answers, we did not distinguish between persons who pro-actively obtained free condoms and those received the condoms through outreach activities. 71.4 percent of all sex workers in the mining areas had received free condoms. Just over a quarter of these sex workers (28.8%) received condoms from the Medical Mission (MZ) and/or Malaria Programme in the year preceding the interview. The Department of Dermatology and employers were other frequently named suppliers (21.3% and 20.0%). Ten sex workers reported getting their condoms from a foreign country (12.5%)(N_{total}= 80)(Table 5).

There are no organizations that have a primary focus on condom supply or outreach in the gold mining areas. The Medical Mission is active in 57 communities in the Interior of Suriname. This organisation aims to provide essential primary health care in these rural areas. In all posts free condoms are available. There is no active outreach in the mining areas and some mining areas are far removed from the medical posts. Travel expenses and travel time are often a hindrance. It is too expensive and time consuming to visit an MZ clinic for the sole purpose of obtaining condoms. The Malaria Programme is active in the supply of free condoms as an additional service. In Afobaka and in some other areas this is done by an MZ employee. Because the recipients of free condoms referred to the particular health worker as the source of free condoms we combined the Medical Mission and Malaria Programme as one source of free condoms.

Table 5. Number and percentage of sex workers who received free condoms from specific places, institutions, and people in the year prior to the interview (N_{total}=80)

Source of free condoms	Frequency	Percentage
Medical Mission/Malaria Programme	23	28.8%
Department of Dermatology	17	21.3%
Employer	16	20.0%
Foreign country	10	12.5%
Undefined organization	7	9.3%
RGD	1	1.3%
NAP[6]	1	1.3%
Rachab Foundation	1	1.3%

64.7 percent of sex workers who reported having received free condoms from Derma were located in the Nason area. Most of the condoms provided by Medical Mission/Malaria Programme were received in Brokopondo South lake and the Benzdorp area. It is probable that some sex workers received their condoms in Paramaribo because of their mobility.

Figure 14. Brazilian condoms are sold in the mining service centre of Alimonie for 0.5 g of gold (~85 Euro) for a 3-pack, and for 2 deci (Euro 7.50) per piece in Tumatu.

[6] NBCCS performs outreach services for NAP and Lobi. Because this company often does not come forward as NBCCS in its outreach work, it was not mentioned by migrants.

Almost two thirds of all clients had received free condoms from an outreach programme, or in a club/cabaret or clinic in the last 12 months. Of these clients, most of them received free condoms from the Medical Misson/Malaria Programme (43.1%) or from an organisation abroad (16.9%) which is usually French Guiana or Brazil (N_{total}= 65)(Table 6).

Table 6. Number and percentage of clients who received free condoms from specific places, institutions, and people in the year prior to the interview (N_{total}= 65)

Source of free condoms	Frequency	Percentage
Medical Mission/Malaria Programme	28	43.1%
Foreign country	11	16.9%
RGD	5	7.7%
Lobi Foundation	3	4.6%
Department of Dermatology	3	4.6%
NAP	1	1.5%

Two-thirds of the sex workers (64.9%) appreciated these free condoms. Those who were not overly positive complained that the free condoms were too dry (5.4%), too thin (1.4%), too tight (1.4%), or had an unpleasant odor (17.6%), 8.1 percent of the sex workers named other opinions such as poor quality in general (N_{total}=74). Clients were even more positive about the free condoms. Seventy-five percent rated the condoms as fine. Others were less satisfied and felt that the free condoms were too thin (9.4%) or too thick (3.1%), or had another reason not to like the free condoms (7.8%)(N_{total}=64)(Table 7).

Table 7. Opinions of sex workers and clients (number and percentage) about the free condoms they had received from an outreach programme, medical facility, or employer (N_{total}= resp. 74 and 64)

	Sex workers (N=74)		**Clients (N=64)**	
	Frequency	**Percentage**	**Frequency**	**Percentage**
Fine	48	64.9%	48	75.0%
Unpleasant odor	13	17.6%	1	1.6%
Other opinion	6	8.1%	5	7.8%
Too dry	4	5.4%	1	1.5%
Too thin	1	1.3%	6	9.4%
Too tight	1	1.3%	1	1.6%
Too thick	0	0%	2	3.1%

In selecting what condoms to buy, various criteria come into play. More than a third of the sex workers said that strength is a main characteristic they look for in a condom (36.6%; N_{total}=112). Among the clients this percentage is lower; 25.7 percent (N_{total}=105). The brand name -mentioned by 34.8 percent (N_{total}=112) of sex workers and 16.2 percent (N_{total}=105) of the clients - and the material -named by 17.0 percent (N_{total}=112) and 19.0 percent (N_{total}=105), are indirectly related to

condom strength. Price and the habit of buying a certain type of condom were barely mentioned by sex workers as an important consideration when acquiring condoms (8.0% and 6.3%). For clients the price was an important factor, 18.1 percent mentioned this as something that they take into consideration when buying condoms. They typically added that they would be buying the most expensive kind, assuming that price is a reflection of quality. In addition, four sex workers and seven clients named quality in general (3.6% and 6.7%) and 5.4 percent of sex workers and 4.8 percent of the clients specifically checked the expiration date (N_{total}=112 and N_{total}=105).

3.4 Consistency of condom use

Many people use condoms, but few people use condoms consistently. Sex workers and clients were asked whether they had used a condom the last time they had had different forms of sex, with different types of partners. Of the 106 sex workers who sold vaginal sex, three women reported that they had not used a condom the last time they had been paid to have vaginal sex (2.8%). All three were Brazilian women.

Seven of the 26 sex workers who had offered oral sex to clients had not used a condom the last time they had done so (26.9%) All were Brazilian. Two out of the four male sex workers who had oral sex, had not used a condom the last time they had oral sex with a client. Eleven sex workers reported that they had anal sex with clients and responded to the question about their condom use. All reported that they had used condoms the last time they had anal sex with a client (Table 8).

Table 8. Percentages of sex workers and clients who report condom use during their latest vaginal, oral, or anal sexual contact with, respectively, a client or a sex worker

	Used condom during last commercial sexual contact		
	Vaginal sex	Oral sex	Anal sex
Sex workers (N=112)	97.2% (N_{total}=106)	73.1% (N_{total}=26)	100% (N_{total}=11)
Clients (N=107)	87.9% (N_{total}=99)	Not asked	90% (N_{total}=20)

Among clients, condom use appears less consistent. Ninety-nine clients reported that they had had vaginal sex with a sex worker and answered the question about condom use. In this group, 12.1 percent reported they had not used a condom the last time they had paid for vaginal sex. Two out of the 20 clients who had paid for anal sex and responded to the question about condom use, admitted that they had not used a condom the last time they had had anal sex with a sex worker.

One client reported that in the six months prior to the interview, he had had sex with another man. He did not report whether or not he had used a condom.

Sex workers also were asked if, in the past month, they had always used condoms with clients. When it comes to having sex with clients, 91.5 percent of sex workers reported that they had always used a condom in the month prior to the interview (N_{total}=106). Seven persons said they

"almost always" used condoms with clients and two persons had done so only "sometimes". Two of the five male sex workers in the sample reported that they had "almost always" used condoms with clients; the remaining three had done so "always".

Clients were asked whether they had consistently used condoms with casual partners whom they had not paid for sex in the month preceding the survey. Three-quarters of clients responded that they had "always" used condoms during their casual sexual encounters (Table 9). On the other hand, 9.8 percent of clients had "never" used condoms with casual sexual partners (excl. steady partner).

Table 9. Answer to the question: "Have you consistently used condoms when having sex with clients (sex workers) or casual sexual contacts (clients) during the month prior to this interview?"

Used condoms for sex with clients	*Always*	*Almost always*	*Some-times*	*Never*
Sex workers (N_{total}=106)	91.5%	6.6%	1.9%	0%

Used condoms for sex with casual sexual contacts	*Always*	*Almost always*	*Some-times*	*Never*
Clients (N_{total}=82)	75.6%	4.9%	9.8%	9.8%

When having sex with a steady partner, condom use is less consistent. 31.9 percent of surveyed sex workers with at least one steady or non-paying partner responded that they never used condoms with their non-paying sexual partner(s) in the month before the survey (N_{total}=72). Just over half of sex workers reported that in the past month[7], they had always used condoms with their steady partner (54.2%; N_{total}=72)(Table 10).

Table 10. Answer to the question: "Have you consistently used condoms with your steady partner(s) during the month prior to this interview?"

Used condoms for sex with steady partner(s)	*Always*	*Almost always*	*Sometimes*	*Never*	*Don't know*
Female (N_{total}=72)*	54.2%	2.8%	9.7%	31.9%	1.4%
Clients (N_{total}=68)	19.1%	1.5%	14.7%	64.7%	0%

The data suggest that clients (all men) are less inclined than sex workers (mostly women) to "always" use condoms when having sex with a steady partner (respectively 19.1% versus 54.2%;

[7] Several foreign sex workers had a husband or boyfriend in their home country whom they had not seen in the month prior to the interview. In those cases, we asked about condom use during sexual contact in the most recent month that they had been with their steady partner

Table 10). Conversely, clients are more likely than sex workers to "never" use condoms with their steady partner (respectively 64.7% versus 31.9%).

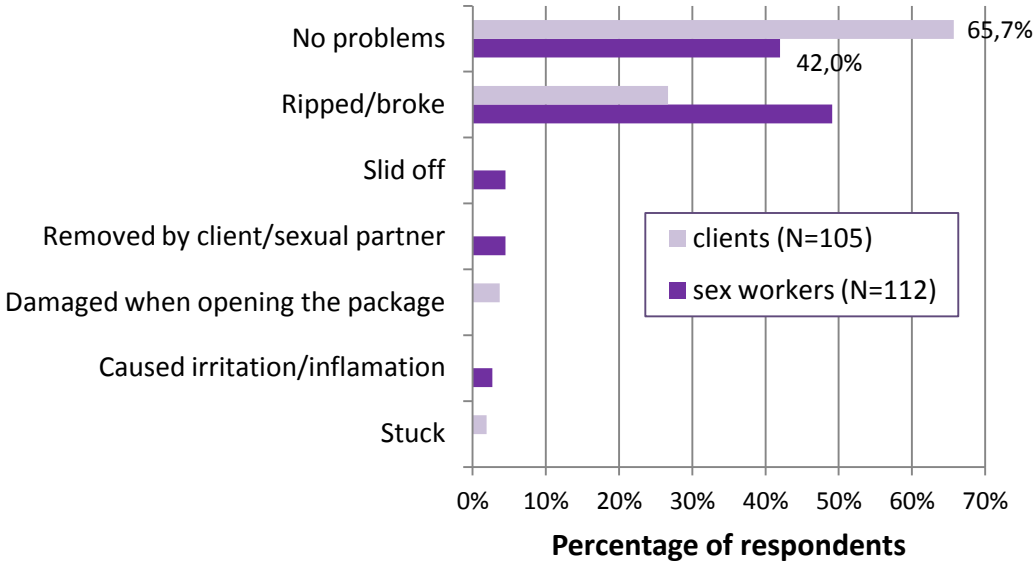
3.5 Condom failure

Using a condom reduces the chances of HIV transmission, but condoms can fail. Fifty-eight percent of sex workers (N_{total}=112) and 34.3 percent of clients (N_{total}=105) in our sample had experienced a problem with condoms in the month prior to the interview (Table 11**Error! Reference source not found.**)[8]. The most common problem that sex workers were confronted with was that the condom had ripped or broken, which had occurred to 49.1 percent of surveyed sex workers and 26.7 percent of clients in the month prior to the interview. Less common problems were that the condom had slid off (4.5% of sex workers), had been damaged when opening the package (3.7% of clients), or had caused irritation or itchiness (2.7% of sex workers). Five sex workers reported that the condom had been secretly removed or broken by the client (4.5%; N_{total}=112)

Different reactions and strategies follow condom failure (Table 12). The majority of respondents – 58 percent of sex workers (N_{total}=112) and 26.9 percent of clients (N_{total}=104)- would immediately wash or rinse the genital area. Within this group, some women reported that they washed with special feminine washes such as *lemisol* or *lactacyd*. Eight female sex workers (7.1%) applied a vaginal capsule or cream after condom failure. They did or could not provide much detail about the kind of medication or cream they were using though. Those who did provide a name or function mostly referred to vaginal creams or suppositories with antifungal and/or antibacterial substances, which are commonly used against dermatophytes and vaginal yeast infections. In addition, five female sex workers used home remedies to clean the vagina: two women washed with tooth paste; one took a vaginal douche with water and vinegar; one woman bathed a couple of times with salt and one woman douched with Pepsi cola after condom breakage.

[8] It is possible that respondents misunderstood that the question was focused on condom failure in the month preceding the interview.

Table 11. Percentages of sex workers and clients who had experienced specific problems with condoms in the month prior to the survey



A relatively common strategy among particularly Guyanese and Dominican women is to take antibiotics (11.6 % of sex workers; 1.9% of clients). In addition, one woman mentioned she would take ibuprofen, an anti-inflammatory drug, to decrease the chances of infection. The largest share of clients -38.5%- would replace the condom and continue; 21.4 percent of sex workers would do the same. 9.6 percent of clients and 5.4 percent of sex workers reported that they immediately stopped having sex after a condom failure incident.

Six sex workers and one client said they had used Post Exposure Prophylaxis (PEP) after condom failure, popularly referred to as the “morning after pill against HIV”. PEP, which has to be started within 72 hours after exposure, does not prevent HIV but it helps decrease the likelihood of HIV infection from the exposure. It also is not “a pill”, but a 28-day long expensive treatment regime, which can have severe side effects. In Suriname, as in many other places, PEP is only offered in clinical settings to persons who had professional exposure (e.g. nurses with needle stick injuries). Because of the limited availability and rare use of PEP, we suspect that at least some of the persons who reported use of the “morning after pill against HIV” were confusing it with something else.

Only two sex workers said that they had taken a morning after pill against pregnancy after condom failure. This is surprising because many women do not use any contraceptives other than the condom (see section 3.9), and a morning after pill would be more effective than any of the home remedies or over-the-counter medications to reduce the chance of pregnancy. These and other responses are listed in Table 12.

.

Table 12. Reactions and actions following condom failure

	Clients (N=104)		Sex workers (N=112)	
Wash/rinse	28	26.9%	65	58%
Replace the condom	40	38.5%	24	21.4%
Immediately stop having sex	10	9.6%	6	5.4%
Take antibiotics	2	1.9%	13	11.6%
Never happened so can't tell	7	6.7%	5	4.5%
To doctor as soon as possible	2	1.9%	7	6.3%
Just hope and/or pray	5	4.8%	4	3.6%
Vaginal capsules/cream	0	0.0%	8	7.1%
Take Post-Exposure Prophylaxis	1	1.0%	6	5.4%
Take HIV test after 2-3 months	1	1.0%	4	3.6%
Continue	5	4.8%	0	0%
Take HIV test as soon as possible	1	1.0%	4	3.6%
Morning after pill against pregnancy	0	0.0%	2	1.8%
Flip out/cry	0	0.0%	2	1.8%
Wipe off (wet toilet paper wipes)	0	0.0%	2	1.8%
Wash with tooth paste	0	0.0%	2	1.8%
Vaginal douche with water and vinegar	0	0.0%	1	0.9%
Condom had slid off; she took it out	0	0.0%	1	0.9%
Vaginal douche with Pepsi cola	0	0.0%	1	0.9%
Don't know	2	1.9%	0	0.0%

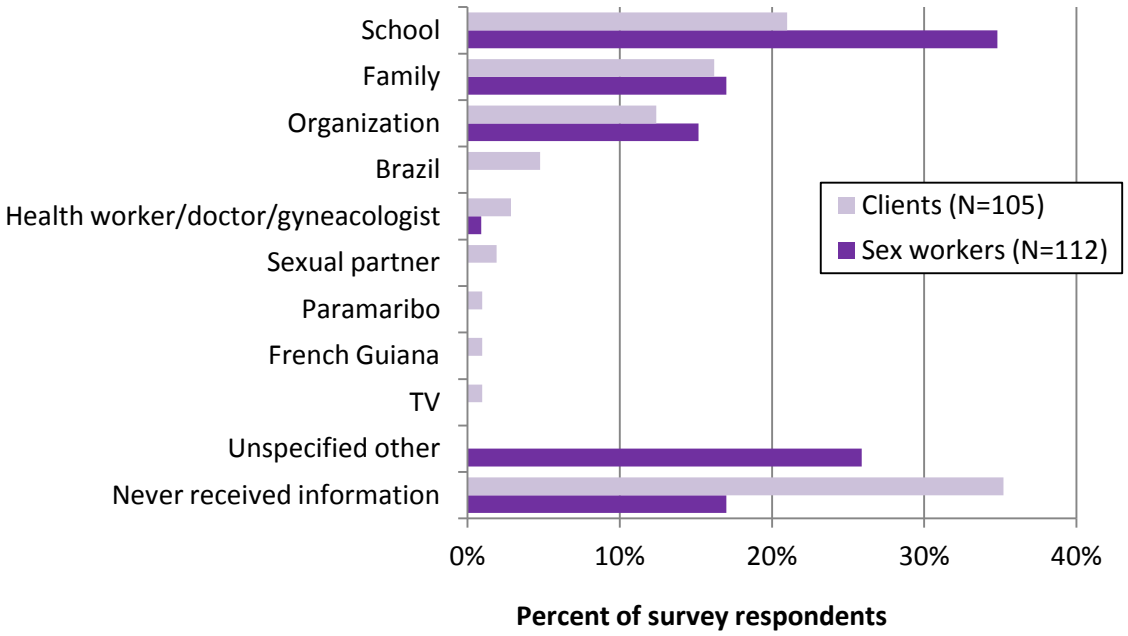
3.6 Conscious condom use

Condoms not only must be used consistently, they must be used correctly to be effective and protective. Incorrect use can lead to condom slippage or breakage, thus diminishing the protective effect. In earlier studies among sex workers in Paramaribo, it was found that various behaviours of sex workers and their clients increase the chances of condom failure, including:

- Failure to put on the condom correctly.
- Using two condoms on top of one another.
- Not using water-based lubricant.
- Using genital herbal washes or steam baths to make the vagina tight and dry.

Survey participants were asked whether they had ever received information about how to properly put on a condom. 35.2 percent of clients (N_{total}=105) and 17.0 percent of sex workers (N_{total}=112) said they had never received any information about how to correctly put on a condom (Figure 15).

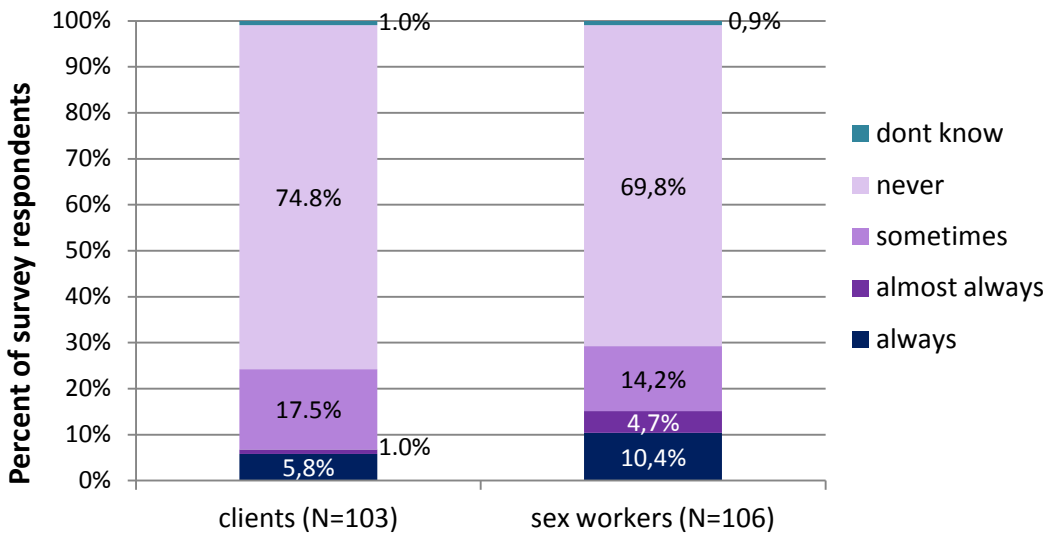
Figure 15. Places from where sex workers and their clients have received information about how to properly put on a condom



The majority of sex workers know that they should not use two condoms on top of one another.

69.8 percent of sex workers (N_{total}=106) and 74.8 percent of clients (N_{total}=103) reported that they "never" had sex with two condoms placed on top of one another (Figure 16). Sex workers were more likely than their clients to "always" or "almost always" use two condoms at a time; these responses were given by 15.1 percent of sex workers (N_{total}=106) versus 6.8 percent of clients (N_{total}=103).

Figure 16. Percentages of respondents who "never", "sometimes", "almost every time", or "always" use two condoms on top of one another (N_{total}=225).

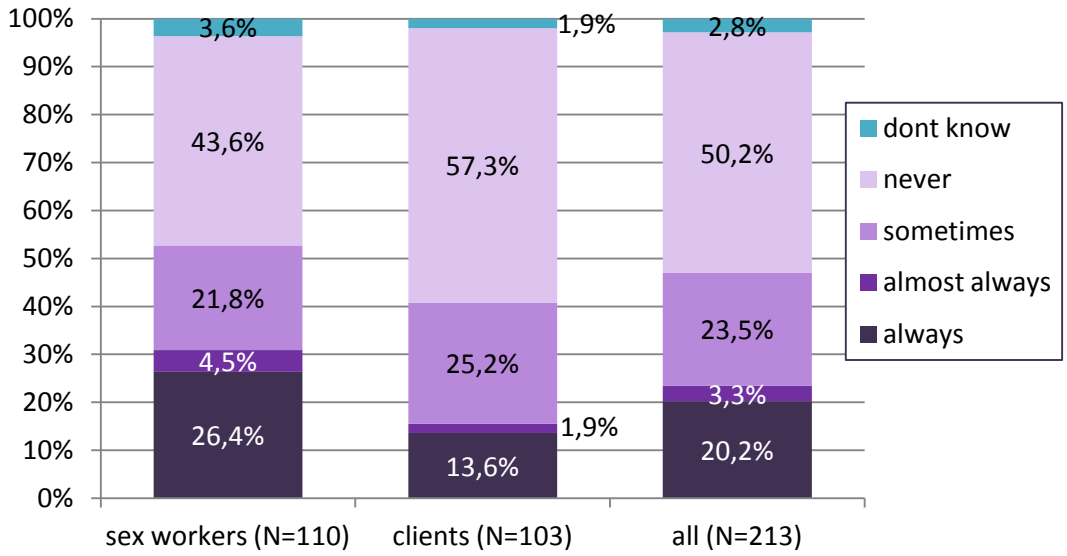


The number of sex workers from countries other than Brazil and the Dominican Republic are too small to establish significant statistical relations between nationality and the propensity to use two condoms at a time. Nevertheless, like in the city, data from the mining areas suggest that sex workers from the Dominican Republic and Guyana are relatively more likely than others to place two condoms on top of one another; only 55 percent of Dominicans (N_{total}=20) and 62.5 percent of sex workers from Guyana (N_{total}=8) never used two condoms at once, versus 74 percent of others (N_{total}=77)

Water-based lubricant[9] is not commonly used among sex workers in the mining areas; 43.6 percent of surveyed sex workers reported that they "never" used it, 21.8 percent used it only "sometimes" and another 3.6 percent said that they did not know (N_{total}=110). Less than a third of sex workers reported that they used water-based lubricant "always" or "almost always" (30.9%; N_{total}=110)(Figure 17). Clients of sex workers are even less likely to use lubricant or gel. A majority (57.3%) of clients reported that they "never" used water-based lubricant, one quarter (25.2%) reportedly do so just "sometimes", and 1.9 percent of client respondents did not know (N_{total}=103). Some sex workers reported that if they use lubricant they do not feel it if the condom breaks, and hence they prefer not to use it. Clients often said that they would not proactively use lubricant but left it to their sexual partner to decide whether or not she wanted to do so.

[9] This includes both cases where the person uses a separate lubricant and where the person uses condoms that already have lubricant

Figure 17. Percentages of sex workers, clients, and all respondents who "never", "sometimes", "almost every time", or "always" use water-based lubricant when they are having sex (N_{total}=213).



An additional factor that might interfere with the safety of condom use is the use of genital herbal steam baths to make the vagina dry and tight. In Suriname, these washes are particularly popular among Creole and Maroon women. Studies in African countries and Suriname have demonstrated that “dry sex” damages the vaginal mucous membrane, which may cause small ruptures and infections in the vagina (Van Andel et al. 2008). The use of genital herbal steam baths also increases the risk of condom rupture.

Female sex workers were asked whether they used genital herbal steam baths to become dry and tight. In an urban study among sex workers we found that the use of such herbal genital washes is culturally determined, with Suriname women being most likely and Guyanese and Dominican women least likely to use these washes (Heemskerk, Duijves & Uiterloo 2012). Even though the number of surveyed sex worker from countries other than Brazil and the Dominican Republic was too small for a meaningful statistical comparison, the data do suggest a similar pattern for sex workers in the gold mining areas. Out of the seven surveyed Suriname sex workers, three had vaginal steam baths at least weekly, and another three did so once in a while – regardless of ethnic background[10]. Only one Suriname woman reported that she never took vaginal steam baths to become tight and dry (Table 13). Also among the Brazilian women, a minority (17.9%) reported that they never used genital herbal washes to become tight and dry, while almost half of the female sex workers from this country did so daily (47.8%; N_{total}=107). By contrast, almost three quarters of Dominican women (71.4%; N_{total}=21) and 77.8 percent of Guyanese women (N_{total}=9)

[10] The seven surveyed Suriname women self-reported belonging to the following ethnic groups: Maroon (3), Javanese (2), Creole (1), and Hindustani (1).

said that they never used herbs to make the vagina dry and tight. Women who used vaginal steam baths once in a while did so typically just after their menstruation.

Table 13. Percentages of female sex workers who use herbal washes or steam baths to make the vagina tight and dry, by nationality (N_{total}=107). Percentages refer to the total per national group.

Nationality	Daily	Weekly	Once in a while	Never	Total
Brazilian	32 (47.8%)	13 (19.4%)	10 (14.9%)	12 (17.9%)	67 (100%)
Dominican	3 (14.3%)	1 (4.8%)	2 (9.5%)	15 (71.4%)	21 (100%)
Suriname	1 (14.3%)	2 (28.6%)	3 (42.9%)	1 (14.3%)	7 (100%)
Guyanese	0	1 (10%)	1 (10%)	7 (70%)	9 (100%)
Dutch	0	0	0	1 (100%)	1 (100%)
Colombian	0	0	0	1 (100%)	1 (100%)
Jamaican	0	0	0	1 (100%)	1 (100%)
Total	**36 (33.6%)**	**17 (15.9%)**	**16 (15%)**	**38 (35.5%)**	**107 (100%)**

3.7 External factors interfering with condom use: alcohol, drugs, violence

Sex workers in the mining areas consume a considerable amount of alcohol. More than half of surveyed sex workers reported that they drank more than six cans or bottles of alcohol in an evening (52.9%; N_{total}=104)(Figure 18). They usually drank beer, but occasionally also stronger liquor. Given that the sex workers in the mining areas often work six or seven nights a week, their alcohol consumption exceeds the recommended maximum intake of alcoholic beverages set by international health organizations. 14.4 percent of sex workers said that they did not use any alcohol at all. Clients were not asked about their alcohol consumption. Nevertheless, observations in the cabarets in the evening and early morning hours suggest that their alcohol consumption is considerable.

The data do not show a relation between alcohol consumption and the consistency of condom use.

Figure 18. Alcohol consumption during working hours among sex workers, number of cans or bottles per working night/day (N=104).

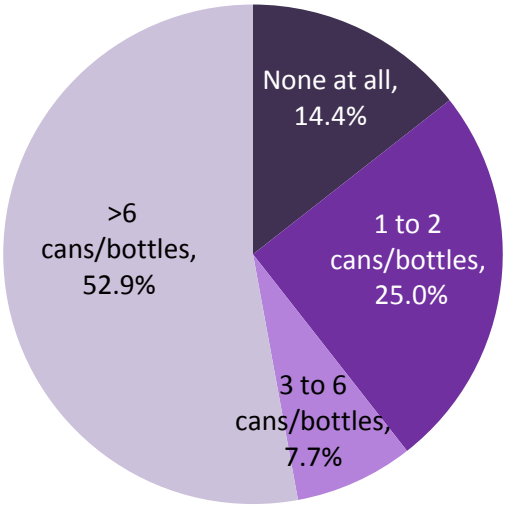
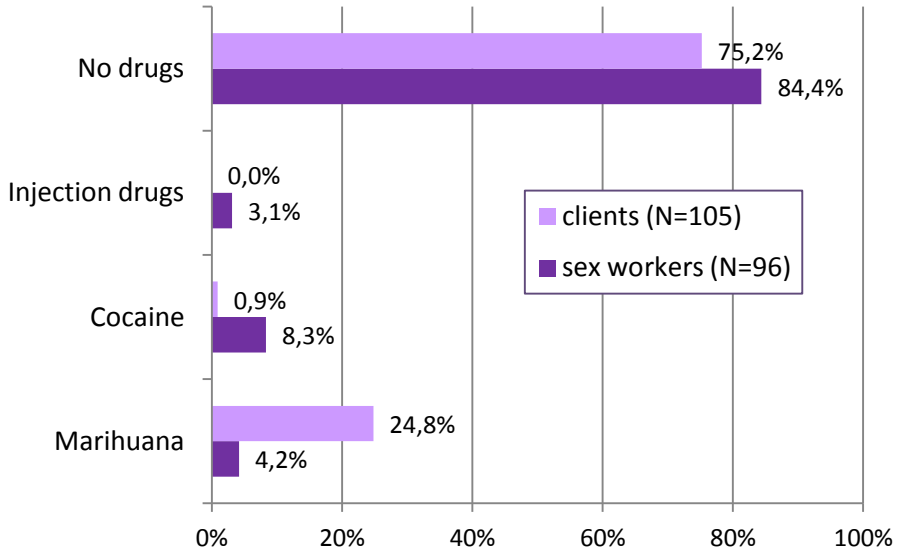


Figure 19. Percentages of sex workers and clients who use certain drugs



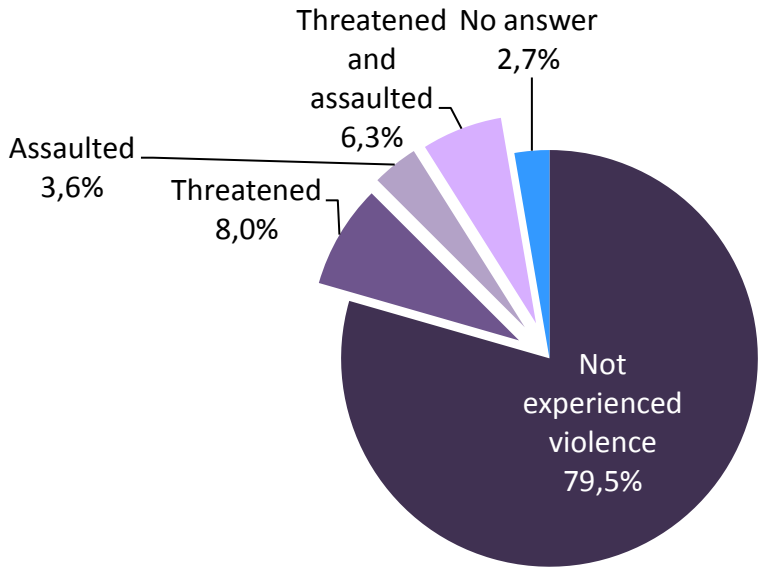
Drugs use is much more moderate. Among the sex workers who reported the current use of drugs, eight used cocaine, four smoked marihuana/hashish and one injected drugs (N_{total}=96; Figure 19). Clients were more likely than sex workers to smoke marihuana or hashish; 24.8 percent of clients (N_{total}=105) versus 4.2 percent of sex workers (N_{total}=96) used soft drugs. On the other hand, sex workers were more likely than clients to use cocaine (resp. 8.3% and 0.9%) or to use no drugs at all (resp. 84.4% versus 75.2%)($N_{sex\ workers}$=96; $N_{clients}$=105). The one sex worker who had used injection drugs reported that she had not used a clean needle the last time she had done so.

The data do not show any relation between drugs use and sexual behaviour. Among clients, data comparisons on the basis of drug use do not reveal any indication that those who use marihuana or cocaine are more inclined than others to have unsafe sex. Similarly, among sex workers, those who use any form of drugs do not appear to be more or less likely than others to use condoms.

Two sex workers reported that they had exchanged sex for drugs in the past year, and one client said he had done so[11]. This group is particularly vulnerable because they may be easily enticed to compromise safe sex if their first priority is to satisfy a drug addiction.

Violence may be another factor affecting condom use. Sex workers who are or feel threatened or even assaulted may give in to the demand of an aggressive client to have sex without a condom. The majority of surveyed sex workers (79.5%) had not experienced acts of violence in the year preceding the study (N_{total}=112). Others had been less lucky. Eight percent of sex workers had been threatened; 3.6 percent had been assaulted, and 6.3 percent had experienced both in the year prior to the interview (Figure 20).

Figure 20. Percentages of sex workers who had experienced violence in the year prior to the interview (N_{total}=112)



[11] It is not clear whether this man had given drugs to buy sex, or received drugs to have sex. We suspect that the former is the case.

3.8 HIV&AIDS risk perception

Perceptions of the risk of exposure to HIV&AIDS likely play a role in decisions about condom use. When we asked whether sex workers and clients believed themselves to be at a risk for HIV infection, 53.7 percent of sex workers (N_{total}=108) and only 26.7 percent of clients answered affirmatively (N_{total}=105). Among sex workers, the main reasons behind feeling at risk for HIV infection were that (1) sex work is a risky job, (2) condoms may break, and (3) your partner can bring it to you. These reasons were mentioned by, respectively 22.4%, 22.4% and 8.6% of sex workers among those who believed themselves to be at risk (N_{total}=58).

Figure 21. Number and percentage of sex workers and clients who believe that they are at risk of becoming infected with HIV.

Do you believe you run a risk of becoming infected with HIV?	Sex workers		Clients		Total	
	N	%	N	%	N	%
Yes	58	53.7%	28	26.7%	86	40.4%
No	44	40.7%	68	64.8%	112	52.6%
Don't know	6	5.4%	9	8.6%	15	7.0%
N_{total}	108	100%	105	100%	213	100%

Among clients, the top three reasons for believing that one runs a risk of becoming infected with HIV were that (1) you cannot know who is infected; (2) partner can bring it to you; and (3) the person does not always use a condom. These concerns were named by, respectively, 17.9%, 14.3%, and 10.7% of clients, among those who believed themselves to be at risk (N_{total}=28)(Figure 21).

40.7 percent of sex workers responded that, in their perspective, they were not at risk of contracting HIV and 5.6 percent said they did not know (N_{total}=108). Among clients, 64.8 percent said they did not believe that they were running any risk of becoming infected with HIV, and another 8.6 percent said they did not know (N_{total}=105). The main reason to believe that one does not run a risk of becoming infected with HIV is that the person always uses a condom, which was named by 28 sex workers (63.6%; N_{total}=44) and 28 clients (41.2%; N_{total}=68) (Figure 23).

Answers to other questions, however, suggest that this risk assessment is not consistent with actual behaviour. Among the sex workers who believe that they are not at risk because of their consistent condom use, four individuals also reported that they had not used a condom the last time they had oral sex with a client. Furthermore, three sex workers in this group reported that they "never" used condoms with their steady partner(s) and two others did so only "sometimes".

Among clients we observe similar discrepancies between risk perception and actual behaviour. Among the 28 clients who reported that they did not feel at risk because they always used condoms, ten also admitted that they "never" used condoms with their steady partner, and one declared that he "never" used condoms with casual sexual contacts.

Another argument to justify low risk assessment, mentioned by five sex workers (4.6%; N_{total}=108) and 12 clients (11.4%; N_{total}=105) among those believing not to be at risk, is that the person selects

his or her clients carefully (Figure 23). This response suggests that there are still individuals who believe that one can observe the presence of HIV infection.

Figure 22. Reasons named for feeling at risk of HIV infection

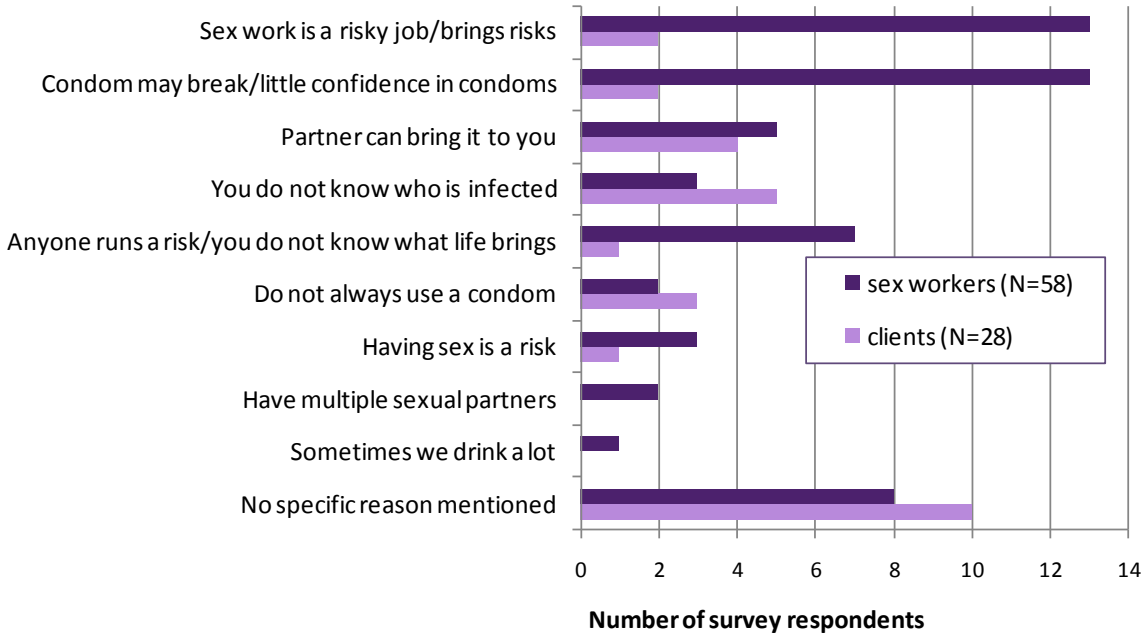
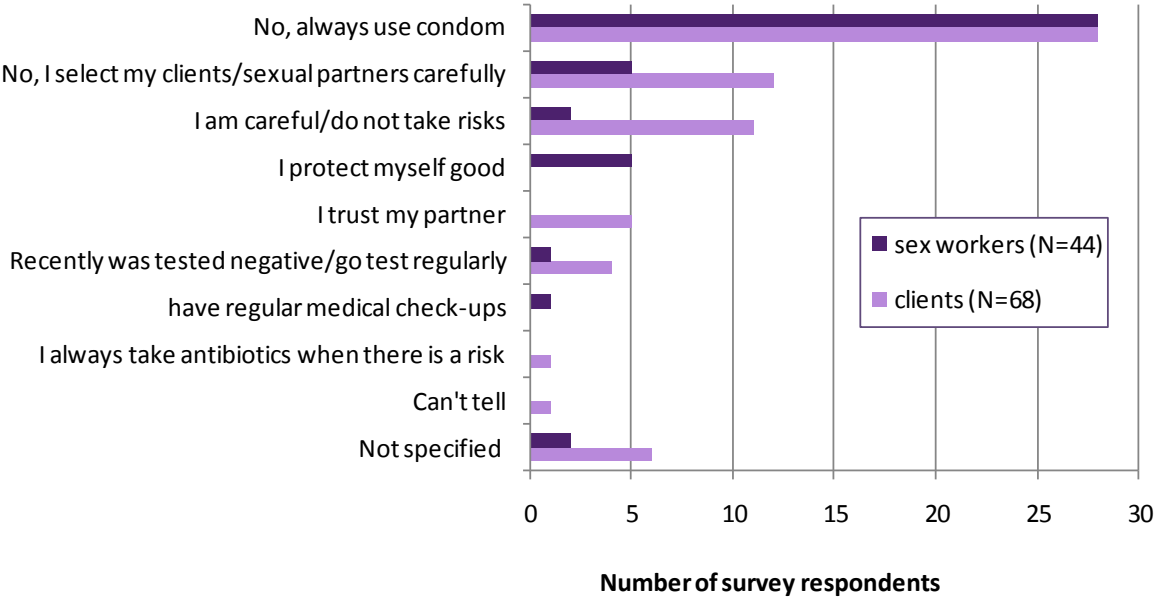


Figure 23. Reasons named by sex workers and their clients for not being at risk for HIV infection



3.9 Knowledge of HIV&AIDS and other STIs

The survey included several questions to assess general knowledge of HIV&AIDS transmission and prevention. First, sex workers and clients were asked: "What is the best way to prevent the sexual transmission of HIV when you are having sex?" In response, 97.2 percent of surveyed sex workers (N_{total}=110) and 92.4 percent of clients (N_{total}=105) named "using a condom" as the best way to prevent the sexual transmission of HIV when you are having sex. One sex worker answered "to have sex with only one partner". The remaining 1.8 percent of sex workers and 7.6 percent of clients said they did not know.

When asked about other things one could do to reduce the risk of HIV infection when having sex, survey respondents named, among others: abstinence/no sex, monogamy/stick with one partner, be careful/protect yourself, do the HIV test (together with your partner), no oral sex, avoid blood contact and no kissing.

Survey respondents also were presented with four statements to which they were asked to respond with "agree" or "disagree" (Table 14: Table 15). The results suggest that a considerable share of people continue to believe in certain misconceptions. The most common misconception is that one might contract HIV from a mosquito bite. About one third of sex workers (30.4%; N_{total}=112) and clients (34.3%; N_{total}=105) believed that a mosquito can transmit HIV. The second most common misconception is that one can become infected with HIV by using the restroom after an infected person. Again one third of sex workers (33.9%; N_{total}=112) and more than a quarter of clients (27.9%; N_{total}=104) believed that this is the case.

*Table 14. Percentages of **sex workers** who reject the most common misconceptions about HIV transmission*

Sex workers **Do you agree or disagree?**	**Correct answer**	**% Correct answer**	**% Don't know**	**N_{total}**
One can get HIV from a mosquito bite	Disagree	58.0%	11.6%	112
You run a risk of being infected with HIV if you share a meal with someone who is infected	Disagree	76.8	3.6%	112
You run a risk of being infected with HIV if you use the toilet after a person who is HIV+	Disagree	61.6%	4.5%	112
A healthy-looking person can have HIV	Agree	92.9%	4.5%	112

Third among the most common misconceptions about the spread of HIV&AIDS is that one might become infected by sharing a meal with an HIV+ person (e.g. sharing the same spoon/plate). 19.6 percent of sex workers (N_{total}=112) and 22.1 percent of clients (N_{total}=104) agreed with this statement. The largest share of sex workers (92.9%; N_{total}=112) and clients (84.5%; N_{total}=103) were aware that a healthy looking person can be HIV+.

*Table 15. Percentages of **clients** who reject the most common misconceptions about HIV transmission*

Clients **Do you agree or disagree?**	**Correct answer**	**% Correct answer**	**% Don't know**	**N_{total}**
One can get HIV from a mosquito bite	Disagree	54.3%	11.4%	105
You run a risk of being infected with HIV if you share a meal with someone who is infected	Disagree	72.1%	5.8%	104
You run a risk of being infected with HIV if you use the toilet after a person who is HIV+	Disagree	67.3%	4.8%	104
A healthy-looking person can have HIV	Agree	84.5%	2.9%	103

An internationally used HIV&AIDS indicator is the percentage of people from most-at-risk populations who both correctly identify ways of preventing the transmission of HIV and reject major misconceptions about HIV transmission (UNAIDS 2009). In the present study this indicator is calculated as the percentage of survey respondents who correctly identify the condom or monogamy as the most effective way to prevent the sexual transmission of HIV and who reject the three most common misconceptions about HIV, namely that HIV may be transmitted by (a) a mosquito, (b) sharing a meal, and (c) using the restroom.

The results demonstrate that far less than half of sex workers (38.4%; N_{total}=112) and clients (40.4%; N_{total}=104) have optimal knowledge of HIV transmission. The data do not show much difference between sex workers and their clients with regard to their knowledge about HIV transmission (Table 16).

Table 16. Percentages of sex workers and clients who both correctly identify the condom or monogamy as the most effective ways to prevent the sexual transmission of HIV and who reject three major misconceptions about HIV

	Sex workers		**Clients**	
	N(%)	N_{total}	N(%)	N_{total}
Named using a condom or monogamy as the most effective ways to prevent the sexual transmission of HIV	107 (95.5%)	112	97 (92.4%)	105
Rejected three major misconceptions	45 (40.2%)	112	46 (44.2%)	104
Correctly identified ways of preventing the transmission of HIV and rejected three major misconceptions about HIV transmission	43 **(38.4%)**	112	42 **(40.4%)**	104

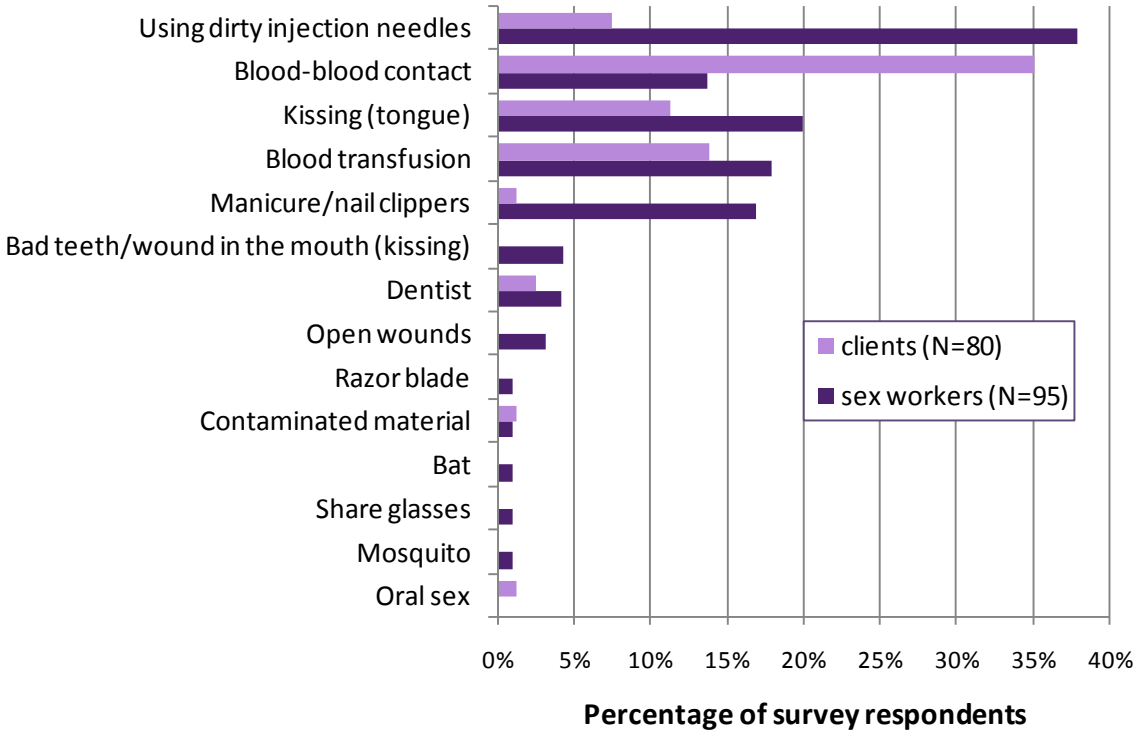
In order to further test knowledge of HIV&AIDS, we asked the open question: “Do you know ways to be infected with HIV other than sexual transmission?”

84.8 percent of sex workers (N_{total}=112) and 76.2 percent of clients (N_{total}=105) named at least one additional form of HIV transmission. The most well-known venues of HIV transmission apart from sex are sharing used injection (drugs) needles and blood-with-blood contact. Needle sharing was mentioned by 37.9 percent of sex workers (N_{total}=95) and 7.5 percent of clients (N_{total}=80) among those who named at least one other form of HIV transmission (Figure 24). Blood-blood contact was identified as a possible mode of transmission by 13.7 percent of sex workers and 35.0 percent of clients.

“Tongue” or “French” kissing with an infected person, which was mentioned by 28 respondents in total, incorporates a very small risk of HIV transmission because of possible blood contact. It is not possible to contract HIV from a closed-mouth kiss. Blood transfusion, named by 17.9 percent of sex workers (N_{total}=95) and 13.8 percent of clients (N_{total}=80) continues to pose a risk –albeit small-, particularly in developing countries.

A considerable share of sex workers believed that one might become infected through a manicure or by sharing nail clippers (16.8%; N_{total}=95). This is remarkable because it is very unlikely that one becomes HIV-infected by doing nails. The data suggest that this idea is particularly common in Brazil; Fifteen out of the 17 persons (incl. one client) who named manicure as a possible mode of transmission for HIV were Brazilian and the remaining two were Dominican. None of the Suriname, Guyanese, or other nationality respondents referred to sharing nail clippers as a possible way to become HIV-infected.

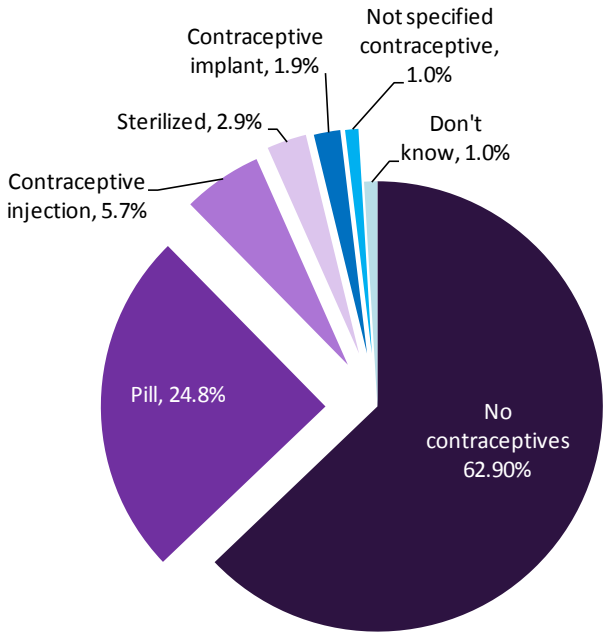
Figure 24. Percentages of sex workers and clients who name specific modes of HIV transmission other than sex, among those who mention at least one possible mode of transmission.



3.10 Sexual and reproductive health

36.2 percent of sex workers in the mining areas (N_{total}=105) used some form of anti-conception other than condoms to prevent pregnancy. Oral contraceptives were most popular (24.8% of all female sex workers), followed by contraceptive injections (5.7%), sterilization (2.9%), and contraceptive implants (1.9%) (N_{total}= 105).

Figure 25. Contraceptive methods other than the condom used by female sex workers (N_{total}=105)



Given the finding that almost two-thirds of female sex workers (62.9%) did not use contraceptives other than the condom, it is not surprising that some among them get pregnant. Eleven of the 108 female sex workers (10.2%) had been pregnant the year before the study. Eight sex workers did not answer this question and one said she did not know. Among those women who had been pregnant in the 12 months prior to the interview (N_{total}=11), four (36.4%) had given birth to a child. More women, however, had aborted the baby; through a registered doctor (2 persons), an abortion pill (2 persons), or an unlicensed doctor (3 persons).

61.7 percent of sex workers (N_{total}=107) and 32.7 percent of clients (N_{total}=101) had done an HIV test in the year preceding the interview. Among the 66 sex workers who had taken the test, only one person had not obtained the test result (1.5%). Four among 32 clients who had conducted the HIV test reported that they had not obtained their results afterwards (12.5%).

Of the various STIs that sexually active people are exposed to, HIV&AIDS is the best-known. When asked about STIs other than HIV, many persons appeared unfamiliar with the concept and few persons had even been tested for a possible infection. We asked clients to name two examples of STIs – other than HIV. Only half (52.4%) of the interviewed clients were able to give an example of an STI, and not more than eight persons (7.6%) could name two (N_{total}=105). The most mentioned STIs were: gonorrhoea, locally known as “droipi” (mentioned by 45 persons, 42.9%) and herpes (17 persons, 16.2%). In addition, one person referred to hepatitis B.

28.6 percent of sex workers (N_{total}=112) and 7.6 percent of clients (N_{total}=105) had tested for STIs in the year prior to the interview (Table 17). Seven surveyed sex workers (7.2%; N_{total}=97) had experienced an STI in the year preceding the interview. One of them had been infected with gonorrhoea and two women reported vaginal discharge. The other sex workers did not know

exactly what infection they had had. Of the five clients who had experienced an STI in the past year (5.0%; N_{total}=101), two could not tell what infection it had been. Of the remaining three, two had had gonorrhoea and one had had syphilis.

For 45 respondents it was more than a year ago that they had suffered from an STI. Fifteen sex workers and six clients had not answered this question, suggesting that either they were ashamed to talk about it, or that they were not sure about whether they had had an STI.

Table 17. Number and percentage of sex workers and clients who have suffered from an STI

	clients (N=101)		sex workers (N=97)	
	N	%	N	%
In the past year	5	5.0%	7	7.2%
More than a year ago	29	28.7%	16	16.5%
Never	67	66.3%	71	73.2%
Don't know	0	0.0%	3	3.1%

3.11 Seroprevalence

One hundred-and-one sex workers and 93 clients did the HIV test. One sex worker (1.0%) was HIV+, and none of the clients were HIV+. The sex worker who tested HIV+ was a woman of Surinamese nationality.

Figure 26. Gold miners' village (curatela) with VCT site established in a cabaret room (see blue structure in the photograph on the left)

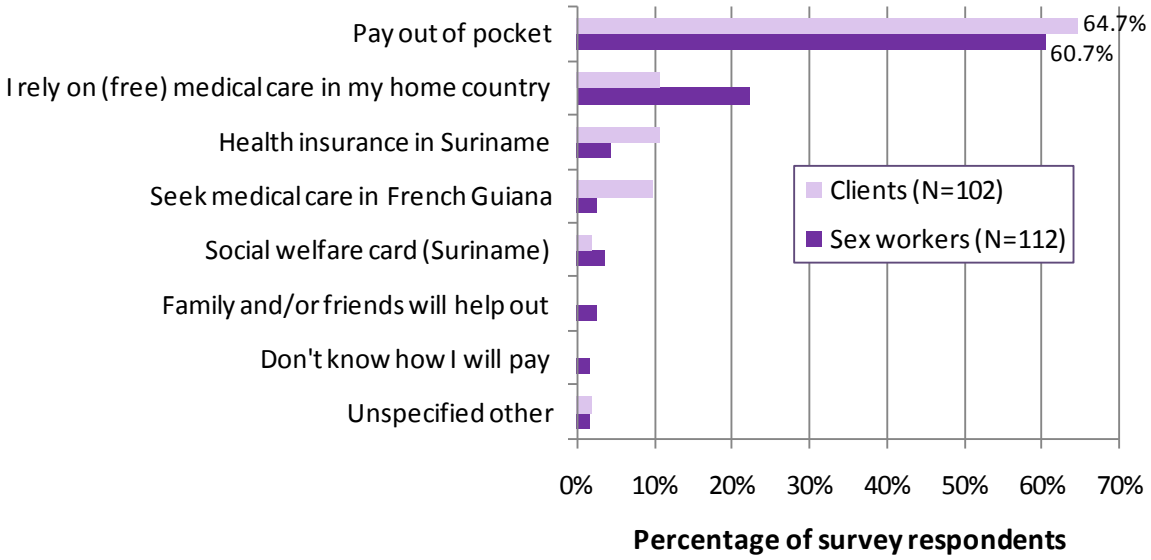
3.12 Access to information and services

Sex workers were asked how they would cover their medical expenses if they were to fall ill. The data show that most sex workers and clients in the gold mining areas are not insured (

Figure 27). Among the sex workers (N_{total}=112); only 8.0 percent were insured for medical expenses in Suriname, either through private insurance, a state insurance plan, or through a Ministry of Social Affairs card (*sociale zaken kaart*). This card is extended to the poor (*minvermogenden*) and very poor (*onvermogenden*) and provides access to social welfare services including a basic state health insurance package. All holders of a social welfare card were of Surinamese nationality. Foreigners who were insured through private health insurance often explained that they had obtained this insurance as part of the requirements for legal residency in the country.

In addition, 2.7 percent of sex workers (N_{total}=112) and 9.8 percent of clients (N_{total}=102) reported that they would go to French Guiana for care since health services are free in this neighbouring country. In some mining areas, going to French Guiana means just traversing the river, and in the Benzdorp area the French health posts are more accessible than those on the Suriname side of the border. Hence particularly in this area, seeking health care in French Guiana is a logical choice.

Figure 27. How do sex workers and clients cover their medical expenses when they are ill, displaying percentages of respondents



Overall, however, the majority of survey respondents in the gold mining areas pay out of pocket for their medical costs when they fall ill; 60.7 percent of sex workers (N_{total}=112) and 64.7 percent of clients (N_{total}=102) said that they themselves have to pay (Figure 27). 22.3 percent of sex workers and 10.8 percent of clients reported that they have health coverage in their home country, and hence in the case of a serious illness they would return home. If they need medical treatment or medication in Suriname, however, they pay out of pocket.

Sex workers and clients were asked whether they knew where to go for an HIV test in Suriname. The answers are displayed in Table 18. The most striking observation is that almost half of respondents did not know where to go for an HIV test in Suriname (44.7 % of total). Consistent with findings from the 2012 Behavioural Surveillance Survey in Paramaribo, the Department of Dermatology ("Derma"), is the best known VCT site in Suriname. This place was named as an HIV-test location by 23.2% of sex workers (N_{total}=112) and 27.6% of clients (N_{total}=105). Medilab is the second best known VCT site, and is particularly popular among Brazilians who often refer to this location as "Brahma". These locations arre followed by the hospital –mentioned by 8.0 percent of sex workers and 5.7 percent of clients- and the Lobi Foundation –mentioned by 6.3 percent of sex workers and 7.5 percent of clients.

Table 18. Number and percentages of sex workers and clients who identified specific organizations and locations as a place where one can do an HIV test

	Sex workers (N_{total}=112)		Clients (N_{total}=105)	
	N	%	N	%
Don't know	46	41.1%	51	48.6%
Department of Dermatology	26	23.2%	29	27.6%
Medilab	15	13.4%	4	3.8%
Hospital	9	8%	6	5.7%
Lobi Foundation	7	6.30%	8	7.5%
General practitioner	6	5.4%	2	1.9%
Regional Health Department (RGD)	4	3.60%	3	2.9%
Health control/Mylab/Prikpunt	4	3.6%	2	1.9%
Foundation Rachab (Maxi Linder)	2	1.8%	0	0.0%
Forgot the name but know where it is	2	1.8%	1	1.0%
BOG	0	0%	1	1.0%
Medical Mission (MZ)	0	0%	1	1.0%
Blood bank	0	0%	1	1.0%

In addition to being the best known VCT site, the Department of Dermatology is the most important organization with respect to reaching people in the mining areas with HIV information. Still, only a small proportion of respondents received information from this state health facility: 7.1 percent of sex workers (N_{total}=112) and 1.9 percent of clients (N_{total}=105). More important sources of HIV&AIDS information were outreach organizations and health facilities in the home countries, and the various media including internet (Table 19).

Table 19. Number and percentage of sex workers and clients who have been reached by different sources of HIV&AIDS information in the 12 months preceding the interview

	Sex workers (N=112)		Clients (N=105)	
	N	%	N	%
Not received information in past year	53	47.3%	73	69.5%
Home country	21	18.8%	1	1.0%
Media/internet	11	9.8%	7	6.7%
Department of Dermatology	8	7.1%	2	1.9%
General practitioner	4	3.6%	5	4.8%
French Guiana	3	2.7%	4	3.8%
Malaria Programme/MZ	3	2.7%	0	0.0%
Family/friends	2	1.8%	2	1.9%
Organization in Paramaribo (does not remember the name)	2	1.8%	1	1.0%
Lobi Foundation	0	0.0%	3	2.9%
Non specified other source of information	2	1.8%	0	0.0%
National AIDS Programme	1	0.9%	1	1.0%
Hospital/Health post	1	0.9%	1	1.0%
Medilab	1	0.9%	2	1.9%
Regional Health Department (RGD)	1	0.9%	0	0.0%
Foundation Rachab (Maxi linder)	1	0.9%	0	0.0%
Posters	1	0.9%	0	0.0%
In the street	1	0.9%	0	0.0%
Club (Paramaribo)	1	0.9%	0	0.0%
Books	0	0.0%	1	1.0%

As compared to sex workers in Paramaribo (Heemskerk, Duijves & Uiterloo 2012), sex workers and clients in the small-scale gold mining areas are less informed about the location of VCT sites and less likely to have received HIV information in Suriname. The relative isolation of both the gold mining areas and the Brazilian migrant community likely contribute to the poor knowledge about HIV&AIDS services among people working in the gold mining areas.

Finally, the consultant queried sex workers and clients about their knowledge of the availability of support services for HIV-positive people in Suriname. Respondents were asked where they would bring an HIV-positive friend for medical or emotional support. Again, we find that a large share of respondents are uninformed about the availability of HIV services; 50.5 percent of clients (N_{total}=105) and 41.1 percent of sex workers (N_{total}=112) said they would not know where to go (Table 20).

Table 20. Number and percentage of sex workers and clients who named a specific institution as a place where HIV positive people may obtain medical or social support

Where would you bring HIV+ friend for medical/emotional support?	Clients (N=105)		Sex workers (N=112)	
Don't know	53	50.5%	46	41.1%
Department of Dermatology	13	12.1%	8	7.1%
General practitioner	11	10.5%	36	32.1%
Lobi Foundation	7	6.5%	4	3.6%
Regional Health Department (RGD)	5	4.8%	4	3.6%
NAP	2	1.9%	1	0.9%
Medilab	2	1.9%	1	0.9%
French Guiana	2	1.9%	1	0.9%
Hospital	1	1.0%	6	5.4%
Traditional Healer	1	1.0%	0	0.0%
I myself would give personal/moral support	0	0.0%	5	4.5%
Unspecified other location	0	0.0%	3	2.7%
Rachab Foundation (Maxi Linder)	0	0.0%	2	1.8%
Mamio Namen	0	0.0%	2	1.8%

Respondents who named a specific location most often referred to a general practitioner (10.5% of clients; 32.1% of sex workers) or the Department of Dermatology (12.1% of clients; 7.1% of sex workers. These sites were followed by Stg Lobi, the Regional Health Department clinics, and the hospital. In addition, five sex workers responded that they themselves would provide moral support to an HIV+ friend. All other locations were named by three or less persons in total.

4. Discussion and conclusions

The objectives of this study were to;

1. Identify, locate, and map *cabarets*[12], and other locations where sex workers solicit or have sexual contact with (potential) clients in four important gold mining areas in Suriname: Benzdorp general area (incl. Kabanavo), Brokopondo North lake (mainly around the village of Brownsweg), Brokopondo South lake, and the Nassau mountains.
2. Sketch a demographic and socio-economic profile of female and male sex workers and their clients in four major small-scale gold mining areas in Suriname.
3. Provide a better understanding of sexual practices, sexual risk behaviour, condom use, knowledge on HIV&AIDS, and working conditions among sex workers and their clients in the gold fields, by means of a Behavioural Surveillance Survey.
4. Provide an informed estimate of HIV prevalence among different subgroups of sex workers and their clients in the gold fields of Suriname.

We discuss these points below.

4.1 Location of sex workers in the gold mining areas

Any map of the presence of sex workers in gold mining areas is a short-term representation of reality. Like gold miners, cabaret owners and sex workers catering to gold miners are very mobile. They follow the discovery of new deposits and the establishment of new population centres. In addition, regulatory efforts by state mining company Grassalco (e.g. in Maripaston), interference by village authorities (e.g. Manlobi) and cultural rules (e.g. Gwangoe) either give leeway to the establishment of new cabarets or may force them to close down.

Other than clubs in the capital city, which may exist for years to decades, clubs or cabarets in the mining areas typically have a relatively short life-span. For example, when the team visited the Kriki Neygi mining area in November, four cabarets were present with in total about 20 women of four different nationalities. When the team returned in January, we only encountered two Guyanese sex workers in one cabaret. All other cabarets had closed down and the women had moved on to more vibrant locations. In the mining hotspot Maripaston, there used to be a couple of cabarets but as a result of a change in concession ownership almost all have gone.

There are exceptions. The Benzdorp mining area has been a rich and attractive area for small-scale gold miners for the past three decades, and for the same amount of time sex workers have solicited clients in that area. Nevertheless, even in this location there are signs that the easily extractable gold is running out and that gold miners are leaving the area for new hotspots. Sex workers are following in their footsteps.

[12] Name generally used for brothels in the gold mining areas

Like an earlier study among sex workers in the mining areas (Nieuwendam 2010), we find that there are different types of movements of sex workers. They move between different mining areas; between the mining areas and the capital city; and –to a lesser extent- between the mining areas and local forest villages. The latter is only applicable to local Maroon women.

Maps with the locations where sex workers were surveyed were presented in Figure 1 to Figure 5. Table 2 listed the 13 visited mine sites in four larger mining regions with the number of (active) cabarets and the nationality of the sex workers at the location. The mining area of Gwangoe, on the edge of the lake, was also visited but no cabarets were encountered in this location. The people present at this site explained that the place is of great cultural significance and hence certain taboos (kina) have to be adhered to. Among these sacred rules is a prohibition of sex work at the site.

Figure 28. (Abandoned) cabaret in the Kriki Neygi mining area (left), and a look in the rooms of a still active cabaret in the same area.

4.2 HIV prevalence

In order to research HIV-prevalence the consultant tested 101 sex workers and 93 clients. One sex worker (1.0%) was HIV+, and none of the clients were HIV+. This finding is in contrast with the popular perception in Paramaribo that due to the high presence of sex work in the mining areas, HIV is rampant in these places. The sex worker who tested HIV+ was a woman of Surinamese nationality. Because only one person tested HIV+, no further statistical analyses have been performed to compare HIV-positive and negative people.

4.3 Demographic and social profile

Sex workers in the gold mining areas are mostly women, but there also are a small number of men who are selling sex. Men represented 4.5 percent of our sample of sex workers, which appears to be fairly representative of the population of sex workers in the mining area at large. In contrast to male sex workers in the city, who solicit clients at specific public places (e.g. Kerkplein, Wulfingstraat), male sex workers in the gold mining areas do not work from fixed locations. They typically have other jobs in the mining area (e.g. hairdresser) and sell sex on the side.

The great majority of the sex workers in the small-scale gold mining areas are Brazilians, followed by Dominicans, Guyanese, and Suriname nationals. In addition, there are smaller numbers of sex workers from other nationalities, including Dutch, Jamaican, and Colombian. Clients are primarily Brazilians and Surinamese, reflecting the composition of the gold miners' population in general.

We encountered wide age ranges among sex workers (14-51 years) and clients (17-76 years). Only one under-age sex worker was part of the research sample. Even though it is possible that some women were hiding their true age, the data and our observations also suggest that it is not very common to find under-18 sex workers in the mining areas. Our findings are in contrast with those presented in the 2010 study among sex workers in the mining areas, which reports that CSW of ages 15 to 17 are common in the gold mining camps. It is likely that the number of young Suriname sex workers in mining areas increases during school holidays, but based on our findings we do not believe that legal minors compose a significant proportion of the sex workers' population in the Suriname mining areas.

Sex workers in the sample had, on average, enjoyed more years of formal education than surveyed clients. One out of five sex workers has even completed college or gone beyond. Being in a steady relationship is barrier to either selling or buying sex; 45 percent of the sex workers and 61.2 percent of clients have a steady partner. Furthermore, three quarters of surveyed clients had non-commercial casual sexual contacts in the six months prior to the study. Most sex workers support one or more children and/or family members; on average 2.3 dependents.

There is evidence that some girls and women who work as sex workers in the gold field are victims of human trafficking. In 2011, for example, the Suriname media reported about a 13-year old Maroon girl who had been forced to work as a sex worker in the gold mining areas of Brokopondo (Starnieuws, 28 October 2011). Nevertheless, our conversations with sex workers suggest that prior to starting work in the cabarets, most women are well-informed about the work they are expected to do. They enter the sex business out of free will, to earn the kind of money they will never earn doing any type of regular job in Brazil, the Dominican Republic, Guyana or Suriname. In Suriname gold fields, the price of a short visit to a sex worker is about 1.5 to 5 grams of gold (~75-250 USD) and an all-night stay costs about 8 to 10 grams of gold (~400-500 USD). Even if sex workers have to pay something to a brothel owner for lodging and food, they earn a fairly decent wage in the gold fields and may be able to save for a better future. We have spoken women who

use their incomes to support entire families, send children to University, or save for a small independent business.

This does not mean that there is no coercion to keep women in the cabaret. Various key informants reported that upon arrival in the *cabaret*, particularly foreign women may be indebted to the brothel owner who paid for their (international) travel to the mining area. In some instances, the passports of these women are kept by the brothel owner until the woman has paid off her debt. It also occurs that a man and an indebted sex worker want to start a partnership relationship outside of the cabaret, in which case the man has to pay off the debt.

4.4 Knowledge, behaviour, and access to HIV&AIDS outreach

We analyzed the consistency and correct form of condom use, risk perceptions, knowledge of HIV&AIDS, and access to HIV outreach services. In this section, the outcomes from the gold mining areas are further interpreted and compared to those from the 2011-2 Behavioural Surveillance Survey among sex workers in Paramaribo city (Table 21)

Like in the urban survey, we find a high rate of self-reported condom use. 97.2 percent of sex workers in the gold mining areas reported condom use during vaginal sex with their most recent client; a figure that is slightly lower than in the city (99.3%). The proportion of clients who used a condom the last time they had vaginal sex with a sex worker was lower; 12.1 percent of surveyed clients had not used a condom in this instance. The percentage of sex workers who reported that they had always used condoms with their clients in the month prior to the interview was higher in the gold mining areas (91.5%) than in Paramaribo (89.9%). The data suggest that as compared to sex workers (mostly women), clients (men) are relatively less likely to use condoms, regardless of their sexual partner: a sex worker, a casual sexual contact, or a steady partner.

Indeed, self-reported condom use is high, but the study suggests that condoms are not always used correctly. In line with the mentioned BSS among sex workers in Paramaribo, we find that several behaviours of sex workers and their clients increase the chances of condom failure, including:

- Failure to put on the condom correctly.
- Using two condoms on top of one another.
- Not using water-based lubricant.
- Taking genital herbal washes or steam baths to make the vagina tight and dry.

It is not unlikely that the listed behaviours are (partially) to blame for the high rate of reported condom failure: 58 percent of sex workers and 34.3 percent of clients from the sample had experienced a problem with condoms in the month prior to the interview.

The study reveals that as compared to sex workers in the capital city, sex workers active in the gold mining areas were less likely to have received free condoms from an outreach programme

(respectively 80.1 percent and 71.4 percent of surveyed sex workers). In the gold mining areas, the most common place to receive condoms is the MZ/Malaria Programme. In fact, apart from staff from the Ministry of Health Malaria Programme, there are no health workers entering the gold mining areas. As a result, people in the gold mining areas have inadequate access to HIV prevention, testing, care, treatment and support services. This lack of access is reflected in the responses. 41.1 percent of sex workers and 48.6 percent of clients said they did not know where to go for an HIV test in Suriname, and about half of survey respondents could not name any organization that provides medical or social support to persons living with HIV. Only 52.7 percent of sex workers and 30.5 percent of clients in the mining areas had received HIV-related information in the year preceding the surveys.

The research highlights several topic areas in which more information and sensitization is urgently needed. In the first place, we find that knowledge on HIV prevention is generally good. Using a condom has by virtually all respondents –both sex workers and condoms- been identified as the best way to prevent the sexual transmission of HIV&AIDS. However, knowledge of transmission modes, on the other hand is suboptimal. 'Traditional' misconceptions continue to exist and new erroneous ideas have emerged. For example, 30.4 percent of sex workers believed that HIV may be transmitted through a mosquito bite, and another 11.6 were not sure about whether this is possible. 33.9 percent of sex workers and 27.9 percent of clients believed that one might contract HIV from using the restroom after an HIV+ person, and 19.6 percent of sex workers and 22.1 percent of clients feared that sharing a meal with an HIV+ person exposes one to HIV-infection. Furthermore, when asked about additional modes of HIV transmission, considerable numbers of sex workers named manicure/sharing nail clippers or kissing – both of which pose negligible HIV-infection risks.

Secondly, like earlier studies among sex workers (CAREC/PAHO and SMLA 2004; Heemskerk, Duijves & Uiterloo 2011; Heemskerk, Duijves & Uiterloo 2012), we find that sex workers and clients have a distorted perception about their own exposure to HIV&AIDS. Even though most sex workers and clients have experienced that condoms break; know that an HIV+ person cannot be recognized; and understand that HIV can be transferred through unprotected vaginal, oral and anal sex, many do not consider these factors when it comes to judging personal infection risks. 46.3 percent of sex workers and 73.3 (!) percent of clients were of the opinion that they were not at risk of contracting HIV.

Third, sex workers need to know what to do after condom failure. A wide variety of emergency strategies were reported aimed at reducing the chances of pregnancy and HIV infection. Very few of these strategies are effective ways to protect oneself.

And finally, sex workers in the mining area –most of who are foreigners- are poorly informed about where to go for HIV&AIDS information, testing and counselling, and support for HIV+ people. Providing such information and assistance in access to Suriname HIV&AIDS services may help reduce the number of new HIV infections among sex workers and their clients in the mining areas, and improve the health of HIV+ persons.

Table 21. Comparison of indicators of sexual risk behaviour and seroprevalence among sex workers in Paramaribo city versus those in the gold mining areas, Suriname

HIV INDICATORS	Paramaribo Nov 2011-Feb 2012		Gold mining areas Jan-Feb 2012	
	% (N*)	N_{total}**	% (N*)	N_{total}**
Seroprevalence among sex workers (% HIV+)	5.8% (11)	191	1% (1)	101
Seroprevalence among clients (% HIV+)	Not measured		0% (0)	93
Percentage of sex workers who reported condom use the last time they had had vaginal sex with a client (only those having vaginal sex)	99.3% (268)	270	97.2% (103)	106
Percentage of sex workers who reported condom use the last time they had had anal sex (only those having anal sex)	98.9% (92)	93	100% (11)	11
Percentage of sex workers who reported condom use the last time they had had oral sex (only those having oral sex)	96% (192)	200	73.1% (19)	26
Percentage of clients who reported condom use the last time they had had vaginal sex with a sex workers (only those having vaginal sex)	Not measured		87.9% (87)	99
Percentage of sex workers who report that they always used condoms with their clients in the month prior to the interview	89.9% (284)	316	91.5% (97)	106
Percentage of clients who report that they always used condoms with casual non-commercial sexual contacts in the month prior to the interview	Not measured		75.6% (62)	82
Percentage of sex workers who report that they always used condoms with their steady partner in the month prior to the interview (only those with a steady partner)	26.7% (39)	146	54.2% (39)	72
Percentage of clients who report that they always used condoms with their steady partner in the month prior to the interview (only those with a steady partner)	Not measured		19.1% (13)	68
Percentage of sex workers who correctly identify ‘using a condom’ as the most effective way to prevent the sexual transmission of HIV	96.5% (304)	315	95.5% (107)	112
Percentage of clients who correctly identify ‘using a condom’ as the most effective way to prevent the sexual transmission of HIV	Not measured		92.4% (97)	105

HIV INDICATORS	Paramaribo Nov 2011-Feb 2012		Gold mining areas Jan-Feb 2012	
	% (N*)		N_{total}**	
Percentage of sex workers who both correctly identify ways of preventing the sexual transmission of HIV[13] and who reject (three) major misconceptions about HIV transmission	66.5%	316	38.4% (43)	112
Percentage of clients who both correctly identify ways of preventing the sexual transmission of HIV and who reject (three) major misconceptions about HIV transmission	Not measured		40.4% (42)	104
Percentage of sex workers who have received free condoms in the year prior to the interview	80.1%	317	71.4 (80)	112
Percentage of clients who have received free condoms in the year prior to the interview	Not measured		61.9% (65)	105
Percentage of sex workers who have received HIV&AIDS information in the year prior to the interview	73.8% (234)	317	52.7% (59)	112
Percentage of clients who have received HIV&AIDS information in the year prior to the interview	Not measured		30.5% (32)	105
Percentage of sex workers who do not believe that they are at risk of becoming infected with HIV	57.2% (180)	315	40.7% (44)	108
Percentage of clients who do not believe that they are at risk of becoming infected with HIV	Not measured		64.8% (68)	105

* Numerator; ** Denominator

[13] As correct answers we considered "using a condom" and "abstinence".

5. Recommendations

Based on the results, we provide the following recommendations;

1. Outreach activities aimed at promoting condom use among sex workers should not merely focus on the consistency of condom use, but also on correct condom use and on what can be done to reduce chances of HIV infection and pregnancy after condom failure.

2. Education on consistent and correct condom use should not only target sex workers but also their clients. As compared to sex workers, clients proved less likely and/or willing to use condoms, both with their steady partner and with casual commercial and non-commercial contacts.

3. Informational yet attractive posters and leaflets about HIV transmission and the location of various HIV services should be distributed in the mining areas. Malaria Programme workers could assist in these efforts. During the researchers' fieldwork no single HIV awareness poster was encountered in the mining areas.

4. Knowledge of correct condom use and HIV transmission must be improved. TVs and video players are available throughout most mining areas. A short documentary film (15 min.) specifically developed for the mining areas, addressing the specific populations and situations in the mining areas, could help raise knowledge and awareness. This film should be available in Portuguese and Sranantongo and could be broadcasted by Globo, the most popular channel in the mining areas. For Globo it may not be very interesting to broadcast a documentary specifically focused on the Suriname mining areas, because only a very small part of its viewers are the Brazilians in Suriname.

1. All persons living and working in small-scale gold mining areas come to Paramaribo to rest, buy supplies, and visit family and friends. Particularly foreign migrants tend to hang out in a select number of places prior to returning to the mining fields, such as the hotel/bar Perola and various places along the Tourtonnenlaan. Information about available HIV services in Paramaribo could be provided on leaflets in these places.

5. Free condoms may be distributed in small-scale gold mining areas by providing condoms on flights to the interior. These condoms should be accompanied by a small informational leaflet.

6. The owners of cabarets and others who spend time with sex workers, for example manicures or hairdressers, could be approached to assist in information delivery among sex workers, among women who potentially sell sex, and among clients of sex workers. They also should be encouraged to obtain and distribute free condoms from LIBI. The Commission Regulation Gold Sector could play a facilitating role in approaching the cabaret owners and in, for example, the distribution of free condoms.

7. Just like any industry, the sex industry should commit to basic health and safety standards for its workers. The Suriname government division for labour inspection, in collaboration with the Commission Regulation Gold Sector, should control cabarets for adherence to –to be defined- workers' rights and conditions, including the free availability of condoms.

8. Use best practice experiences from countries with similar issues, such as Guyana, French Guiana, and Brazil. The Brazilian Ministry of Health or Brazilian HIV organizations that work in the north of Brazil may have useful experiences to share. It also could be envisioned that a Brazilian government or a Brazilian HIV organization supports a mobile HIV service unit for the gold mining areas.

9. During the HIV-testing in the mining areas, the consultant was confronted with an enormous interest in testing, not only among sex workers but among all inhabitants of the mining areas, regardless of age, sex, or nationality. The mobile VCT sites were so popular that people had to be turned away because testing materials had run out. The Ministry of Health in collaboration with the Commission Regulation Gold Sector should bring VCT services to the mining areas. This can be done through regular (e.g. bi-annual) and announced visits of VCT service providers to the various mining areas. Alternatively, the Ministry could consider establishing more permanent VCT service sites, possibly in collaboration with the Malaria Programme.

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ANNEXES

Annex 1 Survey form sex workers

Date: _____

Location: _____

Personal code: | | | | | |

GPS: N: _____ W: _____

1. How old are you now? _____ Years

2. Number of children and/or other family members you support financially with their ages:

   _____

3. What is your nationality/ what country do you come from?
   a. Suriname d. Dominican f. Other: ……
   b. Brazilian e. French g. Other Latin: ……
   c. Guyanese f. Chinese

4. With which population group do you identify / belong?
   a. Creole c. Hindustani e. Javanese g. Maroon
   b. Indigenous d. Mix f. Chinese h. Other: ……

5. What is the highest level of formal education you completed?
   a. None
   b. …… Class of Primary school (GLO)
   c. Completed Primary school
   d. ….Class of Secondary school (VOJ)
   e. Completed Secondary school
   f. ……..Class of High school (VOS)
   g. Completed High school
   h. University
   i. Special education
   j. Technical/vocational
   k. Other: _____

6. How old were you the first time someone paid to have sex with you?_____ Years

7. Did you use a condom? a. Yes b. No

8. Where do you usually find / meet your clients?
   a. On the street c. In a house e. In a club g. In a cabaret (gold fields)
   b. In a bar d. In a hotel f. By phone appointment h. Other:_____

9. Where do you usually have sex with your clients?
   a. Somewhere outdoors c. At my own home e. In the club where I work
   b. In a bar d. In a (short-stay) hotel g. cabaret
   h. other:_____ _____

10. Do you only work as a sex workers in Suriname or in other countries as well?
    a. Only Suriname b. French Guiana c. Guyana d. Brazil e. Other_____

11. What clients do you usually have?
a. Men b. Women c. Men and women d. Other:_____

12. Do you perform the following sexual services? (check all that apply)
a. Vaginal sex b. Oral sex c. Anal sex

13. The last time you had vaginal sex with a client, did you and your client use a condom?
a. Yes b. No c. no vaginal sex d. No answer

14. The last time you had anal sex with a client, did you and your client use a condom?
a. Yes b. No, only regular condom c. No condom d. No anal sex e .No answer

15. The last time you had oral sex with a client, did you or your client use a condom or dental dam? (beflapje)? a. Yes b. No c. No oral sex d. No answer

16. In the past month did you consistently use condoms with your clients ?
a. Always c. Don't know e. Never
b. Sometimes d. Almost every time f. No answer

17. Did you ever receive information on how to properly use a condom?
a. No b. Yes at school c. Yes from family or friends d. Yes from an organization
e. Other_____

18. Where do you usually get your condoms? (multiple answers possible)
a. Pharmacy/drug store d. RGD clinic g. NAP
b. Supermarket e. Stg. Lobi h. Other, _____
c. Derma f. RACHAB (SMLA) i. Brought from abroad

19. What criteria do you use when buying and/or obtaining condoms?
a. Price b. Strength c. Brand d. Custom/habit e. Material f. Other_____

20. Are you currently using any drugs?
a. Marijuana/Hashes c. Never used drugs e. Amphetamines
b. Cocaine (crack, coke) d. Not using drugs now f. Other, _____

21. Have you injected drugs in the past 6 months? ☐ Yes ☐ No ☐ no answer

22. If so, did you use clean needles to inject the drugs?
☐ Yes ☐ No ☐ no answer

23. In the past 12 months, have you exchanged sex for drugs?
a. Yes b. No c. No answer

24. At moments that you are at work do you consume alcohol? How much?
a. Nothing at all b. 1-2 glasses c. 3-6 glasses d. >6 glasses

25. Do you have a steady partner? If yes, for how long have you been together?
a. No steady partner c. Yes, 6-12 months e. Yes, 2-5 years
b. yes, 1-6 months d. Yes, over a year f. Yes, longer than 5 year

26. Do you have more than one non-paying partners? If yes, how many?
a. No b Yes, (*write number*)_____ c. No answer

27. In past month did you consistently use condoms with your steady partner(s)?
a. Always b. Almost every time c. Sometimes
d. Never e. Don't know f. No answer

28. In the past months have you experienced problems with condom use?
a. Slid off
b. Damaged when opened/put on
c. Got stuck
d. No problems
e. Rip/Burst
f. Secretly removed by partner
g. Other;_____
h. Not applicable

29. What do you do when a condom breaks or slips off? (multiple answers possible)
a. Rinse/wash
b. Take antibiotics (e.g. 'red-and-black')
c. Take morning after pill (against HIV)
d. Replace the condom
e. Seek medical advice/help asap
f. Take HIV test after three months
g. Just continue
h. Take morning after pill (pregnancy)
i. Immediately stop having sex
j. No action, hope or pray for the best
k. Take HIV test asap
l. Other _____

30. Do you or your sexual partner (paying or non-paying) ever wear two condoms on top of one another for additional protection?
a. Always c. Don't know e. Never
b. Sometimes d. Almost every time f. No answer

31. Do you use water-based lubricant to decrease the risk of condom rupture?
a. Always c. Don't know e. Never
b. Sometimes d. Almost every time f. No answer

32. (for women only): Do you wash your vagina with herbs to remain dry and tight?
a. No, never b. Yes, daily c. Yes, weekly d. Once in a while

33. Do you think you are at risk for HIV infection?
a. Yes, because: _____
b. No, because I always use condoms with clients
c. No, because I select my clients carefully
d. No, because: _____
e. Don't know

34. In the past 12 months, have you received information about HIV and AIDS? If yes, from who?
a. RGD clinic b. Derma c. Stg. Lobi d. NAP
e. General Practitioner f. SMLA g. Media h. Other_____
i. No information j. French Guiana k. Home country

35. In the last 12 months, have you received free condoms from an outreach programme, activity, employer or clinic? If yes, from which one?
a. RGD clinic d. RACHAB (before Maxi Linder) g. No condoms received
b. NAP e. Stg. Lobi h. Other: _____
c. Derma f. Employer (club owner, pimp)

36. What is your opinion of these condoms? Are they pleasant to use?

a. Perfectly fine b. Too dry c. Too tight d. Too thin e. Too thick f. Unpleasant smell
g. other,_____

37. If a friend of yours would turn out to be HIV+, where would you send him or her to obtain social or medical support **in Suriname**?

a. RGD clinic b. Stg. Lobi c. NAP d. General Practitioner
e. Stg. Rachab f. Derma h. Other, _____
i. Don't know where one can go in Suriname for support to HIV+ people

38. What is the best way of preventing the sexual transmission of HIV when you are having sex?
Answer:_____

39. Do you know other ways of reducing the risk of HIV infection when you are having sex?
Answer:_____

Do you agree or disagree?	**Agree**	**Disagree**	**Don't know**
40. One can get HIV from a mosquito bite			
41. You run a risk of being infected with HIV if you share a meal with someone who is infected			
42. You run a risk of being infected with HIV if you use the toilet after a person who is HIV+			
43. A healthy-looking person can have HIV			

44. Do you know ways to be infected with HIV other than sexual transmission?
a. No b. Yes , _____

45. Do you know where to go for an HIV test **in Suriname**? If yes, please state where?

a. RGD clinic d. Stg. Rachab (Maxi linder) g. Other: _____
b. Derma e. General Practitioner h. hospital
c. Stg. Lobi f. Don't know where to go

46. When did you have a sexually transmitted infection (STI) for the last time?
a. In the past 12 months b. Never c. More than a year ago d. Don't know

47. In the past year, have you tested for HIV?
a. Yes b. No c. Don't know d. No answer

48. If you did an HIV test, please do not tell me the result, but did you find out the result of your test?
a. Yes b. No c. Don't know d. No answer

49. In the past year, have you tested for STIs other than HIV?
    a. Yes b. No c. Don't know d. No answer

50. If you had an STI in the past year, what kind of STI was it?
    a. Don't know b. _____

51. What did you do to treat this STI?
    a. No treatment, it went away by itself
    b. I received treatment from Stichting Lobi
    c. I received treatment from Derma
    d. I received treatment from my General Practitioner
    e. I bought medicine at the pharmacy
    f. I used a home remedy
    g. Other, _____

52. In the last 12 months, have you been threatened with violence or have you been assaulted?
    a. No c. Yes, assaulted e. No answer
    b. Yes, threatened d. Yes, threatened and assaulted

53. Do you use any contraceptives other than the condom to protect yourself against unwanted pregnancy? If yes, which one?
    a. No other contraceptives c. I don't know
    b. Yes, _____ d. No answer

54. Have you been pregnant in the past 12 months? If yes, what did you do?
    a. No pregnancy
    b. Yes, I had an abortion by a non-registered/illegal doctor
    c. Yes, I took the morning after pill / abortion pill
    d. Yes, I had an abortion by a legal/registered doctor
    e. Yes, I had the child
    f. I don't know
    g. No answer

55. If you were to fall ill, how will your medical expenses be covered?
    a. I have health insurance
    b. I have a social security (*sociale zaken*)
    c. I have to pay for my own medical expenses
    d. other:_____
    e. I go to French Guiana where care is free
    f. I have insurance in my home country

THANK YOU FOR YOUR PARTICIPATION IN THIS SURVEY

Annex 1 Survey form clients of sex workers

CSW Questionnaire Clients (English)

Personal Code
1 = First letter first name
2 = First letter family name
3 = Year of birth (2 spaces)
4 = Male (M)/Female (F)

Date: _____

Location: _____

Personal code: | | | | | |

GPS: N: _____ W: _____

1. How old are you now? _____ Years

2. What is your nationality/ what country do you come from?

1. Suriname	4. Dominican	7. Other: ……
2. Brazilian	5. French	8. Other Latin: ……
3. Guyanese	6. Chinese	

3. What is the highest level of formal education you completed?

1. None	7. Completed High school
2. …… Class of Primary school (GLO)	8. University
3. Completed Primary school	9. Special education
4. ….Class of Secondary school (VOJ)	10. Technical/vocational
5. Completed Secondary school	11. Other: _____
6. ……..Class of High school (VOS)	

4. Do you have a steady partner? If yes, for how long have you been together?

1. No steady partner	3. Yes, 6-12 months	5. Yes, 2-5 years
2. yes, 1-6 months	4. Yes, over a year	6. Yes, longer than 5 years

5. In past month did you consistently use condoms with your steady partner(s)?

1. Always	3. Almost every time	5. Sometimes	7. No answer
2. Never	4. Don't know	6. Did not have sex	

6. Do you have sexual contacts with others then your partner? If yes, how many non commercial sex partners did you have in the last 6 months (excluding your steady partner)?

1. No	2. Yes, (*write number*)_____	3. No answer

7. In past month did you consistently use condoms with your other non commercial sexual partner(s)?

1. Always	3. Almost every time	5. Sometimes	7. No answer
2. Never	4. Don't know	6. Did not have sex	

8. The last time you had vaginal sex with a CSW, did you use a condom?

1. Yes	2. No	3. no vaginal sex	4. No answer

9. The last time you had anal sex with a CSW, did you use a condom?
   1. Yes 2. No, only regular condom 3. No condom 4. No anal sex 5 .No answer

10. In the last 6 months did you have sex with someone of the same sex?
   1. Never 3. Every now and then 5. No answer
   2. Only once 4. Often

11. The last time you had anal sex with someone of the same sex, did you use a condom?
   1. Yes 2. No 3. No sex with partner of the same sex 4. No answer

12. In the past months have you experienced problems with condom use?
   1. Slid off
   2. Damaged when opened/put on
   3. Got stuck
   4. No problems
   5. Rip/Burst
   6. Secretly removed by partner
   7. Other;_____
   8. Not applicable

13. What do you do when a condom breaks or slips off? (multiple answers possible)
   1. Rinse/wash
   2. Take antibiotics (e.g. 'red-and-black')
   3. Take morning after pill (against HIV)
   4. Replace the condom
   5. Seek medical advice/help asap
   6. Take HIV test after three months
   7. Just continue
   8. Immediately stop having sex
   9. No action, hope or pray for the best
   10. Take HIV test asap
   11. Other _____

14. Do you ever wear two condoms on top of one another for additional protection?
1. Always 3. Don't know 5. Never
2. Sometimes 4. Almost every time 6. No answer

15. Do you use water-based lubricant to decrease the risk of condom rupture?
1. Always 3. Don't know 5. Never
2. Sometimes 4. Almost every time 6. No answer

16. Do you think you are at risk for HIV infection?
   1. Yes, because: _____
   2. No, because I always use condoms
   3. No, because I select my partners carefully
   4. No, because: _____ 5. Don't know

17. In the past 12 months, have you received information about HIV and AIDS? If yes, from who?
1. RGD clinic 4. Derma 7. Stg. Lobi 10. NAP
2. General Practitioner 5. SMLA 8. Media 11. Other_____
3. No information 6. French Guiana 9. Home country

18. In the last 12 months, have you received free condoms from an outreach programme, activity, employer or clinic? If yes, from which one?

1. RGD clinic
2. NAP
3. Derma
4. RACHAD (before Maxi Linder)
5. Stg. Lobi
6. No condoms received
7. Other: _____

19. What is your opinion of these condoms? Are they pleasant to use?

1. Perfectly fine 2. Too dry 3. Too tight 4. Too thin 5. Too thick 6. Unpleasant smell
7. other,_____

20. Did you ever receive information on how to properly use a condom?

1. No 2. Yes at school 3. Yes from family or friends 4. Yes from an organization
5. Other_____

21. Do you buy condoms in the gold mining area?

1. Yes, at the Chinese supermarket in the garimpo
2. Yes, at any store in the garimpo
3. No, I buy my condoms in Paramaribo
4. No I buy my condoms in: _____
5. No, in the mining area I only have sex without a condom
6. No, I do not have sex here and no need for condoms

22. What criteria do you use when buying and/or obtaining condoms?

1. Price 2. Strength 3. Brand 4. Custom/habit 5. Material 6. Other_____

23. Are you currently using any drugs?

1. Marijuana/Hashes
2. Cocaine (crack, coke)
3. Never used drugs
4. Not using drugs now
5. Amphetamines
6. Other, _____

24. Have you injected drugs in the past 6 months? 1. ☐ Yes 2. ☐ No 3.☐ no answer

25. If so, did you use clean needles to inject the drugs?

1. Yes 2. No 3. no answer

26. In the past 12 months, have you exchanged sex for drugs?

1. Yes 2. No 3. No answer

27. If a friend of yours would turn out to be HIV+, where would you send him or her to obtain social or medical support **in Suriname**?

1. RGD clinic
2. Stg. Rachad
3. Stg. Lobi
4. Derma
5. NAP
6. General Practitioner
7. Other, _____
8. Don't know

28. What is the best way of preventing the sexual transmission of HIV when you are having sex?
    Answer:_____

29. Do you know other ways of reducing the risk of HIV infection when you are having sex?
    Answer:_____

Do you agree or disagree?	Agree	Disagree	Don't know
30. One can get HIV from a mosquito bite			
31. You run a risk of being infected with HIV if you share a meal with someone who is infected			
32. You run a risk of being infected with HIV if you use the toilet after a person who is HIV+			
33. A healthy-looking person can have HIV			

34. Do you know ways to be infected with HIV other than sexual transmission?
    1. No 2. Yes , _____

35. Do you know where to go for an HIV test **in Suriname**? If yes, please state where?

1. RGD clinic
2. Derma
3. Stg. Lobi
4. Stg. Rachad (Maxi linder)
5. General Practitioner
6. Don't know where to go
7. hospital
8. Other: _____

36. When did you have a sexually transmitted infection (STI) for the last time?
    1. In the past 12 months 2. Never 3. More than a year ago 4. Don't know

37. In the past year, have you tested for HIV?
    1. Yes 2. No 3. Don't know 4. No answer

38. If you did an HIV test, please do not tell me the result, but did you find out the result of your test?
    1. Yes 2. No 3. Don't know 4. No answer

39. Can you name me two STI's?
    1._____ 3. Don't know
    2._____ 4. No answer

40. In the past year, have you tested for STIs other than HIV?
    1. Yes 2. No 3. Don't know 4. No answer

41. If you had an STI in the past year, what kind of STI was it?
    1. Don't know 2. _____

42. What did you do to treat this STI?

1. No treatment, it went away by itself
2. I received treatment from Stichting Lobi
3. I received treatment from Derma
4. I received treatment from my General Practitioner
5. I bought medicine at the pharmacy
6. I used a home remedy
7. Other, _____

43. If you were to fall ill, how will your medical expenses be covered?

1. I have health insurance
2. I have a social security (*sociale zaken*)
3. I go to French Guiana where care is free
4. I have to pay for my own medical expenses
5. other:_____
6. I have insurance in my home country

THANK YOU FOR YOUR PARTICIPATION IN THIS SURVEY