



**ROUND 1**

# **BEHAVIOURAL SURVEILLANCE SURVEY NDOLA, ZAMBIA**

**Among**

**Long Distance Truck Drivers, Light Truck and  
Minibus Drivers and Uniformed Personnel  
in Transportation Border Route**

**2005**



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### **BEHAVIOURAL SURVEILLANCE SURVEY NDOLA, ZAMBIA**

#### **Long Distance Truck Drivers, Light Truck and Minibus Drivers and Uniformed Personnel in Transportation Border Route**

**2005**

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#### **FUNDED BY:**

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FHI/IMPACT.



# EXECUTIVE SUMMARY

## Background

Zambia is one of the countries hardest hit by the HIV epidemic with a national prevalence rate of 16 percent among the 15-49 year age group. HIV/AIDS has not only compounded the country's health problems, but has had far-reaching socio-economic consequences. The increasing poverty, partly a result of high unemployment levels, has fuelled the spread of the epidemic. HIV rates are particularly high along major highways and border posts.

In 1999, the Corridors of Hope (COH) Project, formerly called the Cross Border Initiative (CBI) Project, was initiated to target long-distance truck drivers, uniformed personnel and female sex workers in seven of the major border sites in Zambia. These sites were: Chirundu, Kapiri Mposhi, Kasumbalesa, Katete/Chanida, Livingstone/Kazungula and Nakonde. With additional funding from the President's Emergency Plan for HIV/AIDS Relief (PEPFAR), the project has expanded to three more sites: Lusaka, Ndola and Chipata. The project, funded through USAID and JICA, is implemented through a partnership between World Vision (WV), Society for Family Health (SFH) and Zambia Health Education and Communications Trust (ZHECT) with technical support from Family Health International (FHI). The project targets sexual behaviour change through increased access to HIV counselling and testing, improved management of sexually transmitted infections (STIs) and social marketing of condoms at project sites.

During the initial stages of the HIV epidemic in Zambia, sentinel surveillance systems were used as a monitoring tool. However, as the epidemic matures, the sentinel surveillance systems are found to be insufficient and need to be supplemented by Behaviour Surveillance Surveys (BSS), which, when carried out repeatedly, can capture trends in behavioural change.

As a means of monitoring the Corridors of Hope (COH) project, behavioural change surveillance is done through repeated behavioural surveys among female sex workers (FSWs) and their male clients. Round One BSS, conducted in 2000 at the beginning of COH project implementation, targeted FSWs and long-distance truck drivers only. Round Two BSS was conducted in 2003 to track behavioural change over time in some of the project sites and expanded to include uniformed personnel, and light truck and minibus drivers. In 2005, another round of BSS was conducted in one of the new project sites, Ndola, to map and document behavioural patterns among long-distance truck drivers, uniformed personnel, and minibus drivers. This report discusses the findings of the 2005 BSS in Ndola.

The Institute for Economic and Social Research (INESOR) was contracted to conduct the survey with technical assistance from FHI's IMPACT project. The primary objective of the BSS in Ndola was:

To monitor the outcomes of existing prevention interventions in a new site through a cross-sectional assessment of risk behaviours among men at high risk for sexually transmitted infections, including HIV.

Secondary objectives included:

- To add to and strengthen the monitoring system that will track behavioural trend data for high risk and vulnerable target groups;
- To provide information on behavioural trends of key target groups in some of the catchment areas of the project;
- To provide information to help guide HIV prevention programme planning;
- To provide evidence of the relative success of the combination of HIV prevention efforts taking place in selected sites;
- To obtain data in a standardised format, which will enable comparison with other BSS, carried out in other countries.

## **Methodology**

The BSS was a cross-sectional survey conducted among three groups of men: long-distance truck drivers, uniformed personnel, and light truck and minibus drivers. The uniformed personnel included males from the Zambia Revenue Authority (ZRA), Department of Immigration, and the Zambia Police Service. The light truck and minibus drivers, who are not directly targeted by the COH intervention but are considered to be clients of FSWs, were selected as a comparison group for this study. The study was conducted in the city of Ndola.

The number of men in each category, as well as lists of workplaces for uniformed personnel, truck stops and minibus and light truck stations were obtained during a mapping exercise. However, at the data collection, a “take-all” sampling approach was used for each category of the males because the numbers enumerated during the mapping exercise were less than the desired sample sizes. All of the truck drivers, minibus drivers aged 18 years and above who were passing through Ndola were found at their places of operation and were invited to participate in the survey. Uniformed officers were interviewed from their offices or places of operations. Interviews were conducted by trained interviewers, after obtaining an oral consent, using a standard semi-structured BSS questionnaire. The survey was conducted over a period of 14 days from 13<sup>th</sup> to 27<sup>th</sup> February 2005.

## **Results**

In total, 502 men were interviewed. The sample was comprised of 146 (29.1%) truck drivers, 150 (29.9%) light truck and minibus drivers and 206 (41%) uniformed personnel.

### **Demographic Characteristics**

The mean age of all the men was 35 years; 59.6 percent of the truck drivers were over 35. The uniformed personnel had a significantly higher educational level relative to other categories. Approximately 84.0 percent of all respondents were currently married. Truck drivers (91.8%) and uniformed personnel (91.7%) were significantly more likely to be currently married compared to minibus drivers (66.0%).

### **Risky Behaviours**

By the age of 20, about 75 percent of the respondents had had sexual intercourse. A greater proportion of the minibus drivers (23.5%) reported age at first sex to be younger than 15 years while the proportion for long distance truck drivers was 18% and 9% for uniformed personnel.

About 15 percent of all the men had had sex with a FSW. The proportion of married respondents reporting sex with a FSW was 15 percent (27% truck drivers, 19% minibus drivers and 4% uniformed). About a third (34%) of married men reported sex with a regular girlfriend in past 12 months apart from wife or spouse; whereas it was 27% of truck drivers, 33% of minibus drivers and 31% of uniformed personnel.

Of the married men, 14% had had sex with a FSW without using a condom at last sex (14% truck drivers, 16% minibus drivers and 11% uniformed). Approximately 40% of married men had had sex with a regular sex partner and did not use a condom at last sex (34% of truck drivers, 52% of minibus drivers and 39% of uniformed personnel).

About 16% of the men had alcoholic drinks every day in the last four weeks and 36% had alcoholic drinks at least once a week. The truck drivers were the least likely to report drinking alcohol daily (8%) while minibus drivers (22%) and uniformed personnel (18%) were more likely to drink alcohol daily. Twenty-five percent reported having tried dagga (marijuana), while no one reported ever having used heroin, cocaine or mandrax.

Some 29% of those who had had sex with a FSW took alcohol every day (16% truck drivers, 39% minibus drivers, 50% uniformed personnel). Only four (18%) said they did not use condoms consistently when they had sex with a FSW and had been taking alcohol, these four were all minibus drivers. Among those who had had sex with a regular girlfriend, nearly 66% said they took alcohol every day (truck drivers 50%, minibus drivers 82%, and uniformed personnel 56%).

### **Knowledge, Availability and Accessibility of Condoms**

Knowledge about male condoms was high, almost 100%. While almost everyone had heard of a condom, only about half (49%) reported ever having used a condom. The proportion of ever having used a condom was lowest among the minibus drivers (44%) and highest among the truck drivers (61%). Condom use at last sexual intercourse with a commercial sex partner was about 84% among all the groups. The proportions among uniformed personnel and truck drivers were 90% and 86%, respectively and 80% among minibus drivers.

Consistent condom use with commercial sex partners, defined as using a condom during every act of sexual intercourse with commercial partners in the past 12 months, was significantly higher among the uniformed personnel (90%) and truck drivers (89%), but relatively low for the minibus drivers (63%). The major reason for non-condom use reported by all the three categories was the unavailability of condoms.

Approximately 14% of the men (8% truck drivers, 29% minibus drivers, 0% uniformed personnel) reported that they had had sex with a commercial sex worker in the past 12 months and did not use a condom, although they were aware that consistent condom use was a method of preventing HIV transmission. A higher proportion (63%) of men did not consistently use condoms with a regular partner (girlfriend) in the last 12 months though they knew that condoms prevent HIV transmission. The highest was among minibus drivers (81%), followed by uniformed personnel (57%) and lowest was truck drivers (49%).



### **Knowledge, Attitudes and Practices related to STIs**

Knowledge related to STIs was high, nearly 100%. About 9% of all respondents reported an STI-related symptom in the past 12 months. A significantly higher proportion of minibus drivers (19%) reported an STI-related symptom, proportion for truck drivers was 5% and uniformed personnel 6% reported an STI-related symptom in the past 12 months. Truck drivers were the least likely to tell their partner about an STI, stop having sex, or to consistently use a condom during sex when they had an STI-related symptom.

### **Knowledge and Beliefs about HIV/AIDS**

Knowledge on HIV/AIDS was almost universal, with 100% saying they had heard of HIV/AIDS. Very high proportions knew of someone who was infected or had died of AIDS, just as they had lost a close friend or relative with HIV/AIDS. However, misconceptions about HIV transmission still exist, 10% (minibus drivers 14%, truck driver 14%, uniformed personnel 5%) of the respondents thought a person could get HIV from mosquito bites. Most of the respondents know the correct ways to prevent HIV: abstinence, being faithful, and condom use. The proportions of respondents who had a *complete knowledge of HIV prevention* – defined as being able to name all three prevention methods (abstinence, faithfulness and condom use) - were 80% among uniformed personnel, 85% among truck drivers but 67% among the minibus drivers. *Comprehensive knowledge of HIV* – defined as knowing all three prevention methods in addition to having no misconceptions about HIV transmission – was highest among the uniformed personnel (75%), while minibus drivers were the least likely to have comprehensive knowledge (56%) and the proportion for truck drivers was 68%.

### **Attitudes towards People with HIV/AIDS**

With regard to stigma, the majority (96%) of all the respondents felt that an HIV-positive student should be allowed to continue with school. Most (95%) of the respondents also felt that HIV-positive teachers should be able to continue teaching. The majority (98%) of the respondents expressed that they would take care of an HIV-positive relative in their home and over three-quarters (78%) said they were willing to buy food from an HIV-positive shopkeeper.

### **HIV Voluntary Counselling and Testing**

The findings show that the majority (84%) of the respondents thought it was possible in the community for someone to get a confidential HIV, though this varied significantly between groups and only 13% said have ever had an HIV test. Approximately 13% truck drivers, 7% minibus drivers and about 13% of uniformed personnel said they had ever had an HIV counselling, testing and received results. But among those not ever tested nearly 82% said would be interested in having an HIV test, 85% truck drivers 76% minibus drivers and 83% uniformed personnel said would be interested in having an HIV test..

### **Corridors of Hope Project Indicators**

Though it was carried out in a new site for the COH project, the survey included questions about exposure to the project. Approximately half of all the respondents said that they had ever talked to a staff member of COH; there were no differences between groups. Despite this proportion of men who had spoken to a COH staff member, only 8% had ever visited the COH Drop-in Centre for any reason. The proportion among truck drivers was 17%, uniformed personnel was 6%, and minibus

drivers was less than 1%. Peer educators, outreach worker and friends were the main sources of information about the COH for most respondents.

## **Discussion and Conclusion**

The results of this survey show gaps that still exist in translating knowledge into safer behaviours that reduce risk of HIV transmission. The findings show a high alcohol consumption and that though many of the men are married a number of them engage in unprotected sex with FSWs and other sex partners besides their wives. These men therefore put their spouses at risk of transmission and acquiring HIV and other STIs.

Misconceptions concerning HIV transmission and a modest level of stigma toward people living with HIV/AIDS still exist among some men. VCT uptake is still low. Given the increased availability and access to antiretroviral (ARV) drugs, there is need to increase uptake of HIV testing and counselling services. The project staff should therefore expand the efforts within the COH project to promote the importance of HIV testing and post-test counselling. The COH project in Ndola has already been successful in reaching out to approximately half the target population within just one year of its operation in Ndola. However, there is need for increased efforts to reach out to more of the targeted high-risk populations to access the COH Drop-in Centre for comprehensive HIV prevention services.

## **Recommendations**

1. Since the majority of the participating men were married, messages should promote faithfulness in order to protect their spouses from HIV and STI infection. Men should be made aware of the immense risk to which they expose their wives by engaging in high-risk sexual behaviours.
2. Very few respondents cited COH outreach workers and peer educators as a source of condoms. This should spur programme managers to strengthen peer educators' capacity as condom promoters and explore the multiple avenues that are available as a source for condom supplies and for condom promotion with the view of forming linkages.
3. There are important barriers that continue to impede the consistent use of condoms among the men at high risk that need to be overcome. Further investigations are needed to explore some of the factors promoting barriers and the extent to which they impede consistent use of condoms.
4. In view of the continual existence of misconceptions around HIV transmission, there is a need to develop better ways and strategies for correcting them.
5. There is an increasing recognition that use of alcohol and drugs has an influence on behaviour and HIV transmission and therefore the COH needs to begin addressing drug and alcohol use as some of the direct issues for the BCC campaign messages.
6. Given the levels of reported STIs among men, the COH project should consider providing STI treatment to all men, beyond truck drivers and uniformed personnel, who are clients of female sex workers. More

specifically, minibus drivers are an important part of the sexual network and therefore should be provided with STI treatment services so that HIV/STI prevention efforts are not frustrated. There should also be a deliberate effort to directly target other groups of high risk populations and professional groupings of men with HIV prevention and intervention activities. In addition, there is a need to conduct biologic studies among these men to validate the reported prevalence of STIs. This will provide the needed evidence to make an informed decision about whether or not to provide STI treatment to the male populations at border areas.

7. Though most respondents reported having access to a confidential HIV test, the proportion of the respondents who reported having taken an HIV test was low. HIV counselling and testing, being an entry point to continuum of care, should be encouraged and promoted among these high-risk groups of men. However HIV counselling and testing for high risk populations should only be promoted in a comprehensive manner and within a continuum of care.

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The survey instrument was long and consisted of questions on sensitive sexual matters. We, therefore, sincerely thank the long-distance truck drivers, minibus and light truck drivers and uniformed personnel who responded to the questionnaire.

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We hope that everyone, who in one way or another facilitated and/or participated in this study, will find some information in this report which can be used to inform their respective HIV-related line of activities.

## List of Abbreviations

AIDS	Acquired Immune-Deficiency Syndrome
ARV	Anti Retroviral
BSS	Behavioural Surveillance Survey
BBSS	Biologic and Behavioural Surveillance Survey
CBI	Cross Border Initiative
COH	Corridors of Hope
CSO	Central Statistics Office
CSW	Commercial Sex Worker
DHS	Demographic Health Survey
DHMT	District Health Management Team
DRC	Democratic Republic of Congo
FSW	Female Sex Worker
FHI	Family Health International
GRZ	Government of the Republic of Zambia
HIV	Human Immune-Deficiency Virus
IEC	Information, Education and Communication
IMF	International Monetary Fund
IMPACT	Implementing AIDS Prevention and Care project
INESOR	Institute of Economic and Social Research
JICA	Japanese International Co-operation Agency
MOH	Ministry of Health
NACS	National AIDS Council and Secretariat
NGO	Non-Governmental Organisation
SAP	Structural Adjustment Programs
SFH	Society for Family Health
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
TB	Tuberculosis
TDRC	Tropical Diseases Research Centre
UNZA	University of Zambia
USAID	United States Agency for International Development
VCT	Voluntary Counselling and Testing
WHO	World Health Organisation
WVI	World Vision International
ZDHS	Zambia Demographic and Health Survey
ZSBS	Zambia Sexual Behaviour Survey

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# 1 INTRODUCTION

## 1.1 The HIV/AIDS Situation

Zambia is one of the countries hardest hit by the HIV epidemic. At 16 percent in adults aged 15 to 49 years, Zambia has one of the highest national prevalence rates in sub-Saharan Africa.<sup>1</sup> HIV/AIDS has not only compounded the country's health problems, but has had far-reaching socio-economic consequences.

In Zambia, as in most of the sub-Saharan Africa, HIV infections are predominantly transmitted through heterosexual contact. There are identifiable predisposing conditions and sexual practices that facilitate the transmission of HIV infection, including a high prevalence of sexually transmitted infections, multiple sexual partners and low levels of condom acceptability and use. The increase in poverty levels and high level of urbanisation, where a high proportion of a predominantly young population live in dense urban settlements, which are connected by road and rail networks, accentuates the rate at which infection may spread.

Zambia has used the Ant-Natal Care (ANC) sentinel surveillance data as a principal means of monitoring the prevalence of HIV in antenatal attendees. With at least two sites in each province, these ANC sentinel sites are in both urban and rural areas. According to the 2002 results of the sentinel survey, HIV prevalence in antenatal attendees ranged from 11 percent to 25 percent. The most affected regions are those along the rail lines, which include the Copperbelt, Lusaka, Central and Southern Provinces. Rural HIV prevalence rates are lower on average than urban rates, ranging between 11 and 13 percent compared to between 20 and 25 percent in urban and peri-urban sites<sup>2</sup>.

Population-based HIV surveys have also been used in Zambia. The 2001-2002 Demographic Health Survey (DHS) was the first nationally representative population-based survey to estimate the prevalence of HIV. The results show that 16 percent of adults aged 15 to 49 years tested were found to be HIV positive. Women have a higher (18%) prevalence rate than men (13%). As with the sentinel surveys, the urban areas have a higher (23%) prevalence than rural areas (11%)<sup>3</sup>.

The epidemic has increased the death rate for almost all ages. However, the impact is most severe among adults in the prime reproductive age and among children under the age of five.

According to the HIV/AIDS impact model of the Central Board of Health (CBOH), the annual number of deaths among adults aged 15-49 years in the country was expected to increase slowly after 1999 as a result of population growth. But the increase in AIDS cases has confounded this and has resulted in a dramatic increase in the number of deaths<sup>4</sup>.

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<sup>1</sup> CBoH/MOH (2004), The HIV/AIDS Epidemic in Zambia.

<sup>2</sup> CBoH/MOH (1994-2002) ANC Sentinel Surveillance of HIV/Syphilis Trends in Zambia.

<sup>3</sup> CSO (2001-2002), Zambia Demographic and Health Survey (ZDHS), Lusaka.

<sup>4</sup> CBoH/MOH (2004), The HIV/AIDS Epidemic in Zambia



In the light of the epidemic and consequent HIV/AIDS prevention programmes, surveys have been undertaken to assess changes in HIV risk behaviours. Results from the Zambia Sexual Behaviour Survey (ZSBS)<sup>5</sup> and Zambia Demographic and Health Survey (ZDHS) show that knowledge about HIV/AIDS is virtually universal. About four in every five adults know that people can take positive actions to avoid transmission of the virus. Similarly, more than 80 percent of adults know that an otherwise healthy looking person can be HIV-infected. About 70 percent know of someone who has died from AIDS. However, misconceptions about HIV transmission persist. Furthermore, only about nine percent among men and eight percent among female adults have been tested for HIV and know the results<sup>6,7</sup>.

## 1.2 Sexually Transmitted Infections

STIs are not well documented in Zambia. The available sources show that the number of reported STI cases at government health institutions rose from 190,344 in 1981 to 307,957 in 1992. In 1992, over half of STI cases occurred in two highly urbanised provinces: Lusaka (34.6%) and Copperbelt (18.3%). The World Health Organisation (WHO) estimated that in 1995 in Zambia 1,079,000 STI cases occurred, including 500,000 cases of trichomoniasis, 260,000 cases of Chlamydia infection, 260,000 cases of gonorrhoea and 59,000 cases of syphilis. In community surveys, up to 10 percent of men reported having an STI in the past year. In a 1997 survey of 66,000 pregnant women screened in five districts – Chipata, Kitwe, Livingstone, Lusaka, and Ndola – 10 to 15 percent, with a mean of 12 percent, had reactive syphilis serology. In 2001, the multi-centre study of four African cities revealed that, in Ndola, gonorrhoea prevalence rates were 2.1 percent in men and 2.9 percent in women. Syphilis sero-reactivity was over 10 percent in both men and women (11.3% in men and 14.0% in women) with high trichomoniasis infection rate among women (40%)<sup>8</sup>.

The 2003, ZSBS found that 4.4 percent of the men and 1.8 percent of the women interviewed had reported a history of either genital discharge or of genital ulcers in the past 12 months; but only half of these men and women interviewed listed genital ulcers as being symptoms of an STI. In this survey, of those who reported to have had sexual intercourse while having an STI, only 23-25 percent of women and men said that they used a condom at the time they had an STI. Despite the paucity of data, it appears that sexually transmitted infections remain a major public health problem in Zambia and that many people who are sexually active engage in high-risk sexual encounters.

## 1.3 The Setting for the Survey

One characteristic of the HIV/AIDS epidemic in Zambia is that it is concentrated along the rail lines and major highways. Zambia's major highways run alongside the two major rail lines, from Livingstone (border with Zimbabwe) to Kasumbalesa (border with DR Congo) and from the inland town of Kapiri Mposhi (which is at the junction of the two railway routes) to Nakonde (border with Tanzania). The major

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<sup>5</sup> CSO (2003) Zambia Sexual Behaviour Survey (ZSBS)

<sup>6</sup> CSO (2003) ZSBS, Lusaka

<sup>7</sup> CSO (2001-2) DHS, Lusaka

<sup>8</sup> Buve et al. (2001) The Epidemiology of Gonorrhoea, Chlamydial Infection and Syphilis in four African Cities. *AIDS* 15 (Supl 4)

trucking border towns are Chirundu, Livingstone, Kazungula, Katete/Chanida, Nakonde and Kasumbalesa and the major internal trucking towns include Lusaka, Ndola, Kafue and Kapiri Mposhi. Because of the high prevalence of HIV/AIDS along major highways and a concentration of high-risk groups in border areas, USAID and JICA through FHI/IMPACT and their implementing partners - World Vision International (WV), Society for Family Health (SFH) and Zambia Health Education and Communication Trust (ZHECT) - have been implementing the Corridors of Hope (COH) project targeting female sex workers and their male sexual clients with behavioural change messages and STI care in border sites since 1999.

As part of the evaluation of these intervention activities at project sites, behavioural surveys are carried out to monitor behavioural change over time. The need for behaviour surveys is established in the case of a mature epidemic such as in Zambia's case, as it complements the sentinel surveillance surveys in monitoring the epidemic. This is because HIV prevalence changes very slowly in response to behavioural changes due to the chronic nature of the HIV infection. Thus, sentinel surveillance data does not paint the whole picture. For example, it cannot indicate whether prevention interventions are having their desired short- to medium-term effects of changing behaviours. On the other hand, repeated behavioural surveys, through periodical monitoring of numbers of sexual partners and condom use, can capture trends in behavioural changes that put people at risk of infection or which lead to reduced HIV infections over time<sup>9</sup>. While there is information on the general population in Zambia on sexual behaviour from the Zambia Sexual Behavior (ZSBS) and the Demographic Health Surveys (ZDHS), there is little information on sexual behaviours specifically of high-risk populations with the exception of the behavioural surveillance surveys (BSS) conducted by the Institute of Economic and Social Research (INESOR), the Tropical Diseases Research Center (TDRC) and the Family Health International (FHI/IMPACT).

BSS are target group-specific surveys that are done outside of the household. These are an important component of national monitoring systems because they focus on the most vulnerable and high-risk segments of the population, whose behaviours can have the most effect on the course of the epidemic. Furthermore, BSS surveys provide indications of the extent of behaviour change in these high-risk populations.

INESOR and TDRC carried out this first round of a survey in Ndola with technical assistance from FHI/IMPACT program. This report presents the results of this behavioural surveillance survey of long-distance truck drivers, minibus drivers, and uniformed personnel conducted in Ndola, a COH project site established in 2003.

## 2 OBJECTIVES

### *Primary objective:*

To monitor the outcomes of the existing prevention interventions, through a cross-sectional assessment of risk behaviour variables among men at high risk for STIs and HIV.

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<sup>9</sup> BSS Guidelines for Repeated Behavioral Surveys 2000 FHI

### ***Secondary objectives:***

- To add to and strengthen the monitoring system that will track behavioural trend data for high-risk and vulnerable target groups.
- To provide information on behavioural trends of key target groups in some of the same catchment areas where voluntary counselling and testing (VCT) for HIV is being offered.
- To provide information to help guide HIV prevention programme planning.
- To provide evidence of the relative success of the combination of HIV prevention efforts taking place in selected sites.
- To obtain data in a standardised format, which will enable comparison with other behavioural surveillance studies carried out in other countries.

## **3 METHODOLOGY**

### **3.1 Sample Size, Sampling and Survey Procedures**

#### **3.1.1 Sample Size**

The sample size was calculated to detect a 10 percent increase in the condom use with commercial sex partners in the past 12 months. The initial P1 value was estimated at 50 percent. The design effect was estimated at 1.2 because of the cluster design used to sample the target groups and based on the data from the 2000 survey. The level of precision was set at 0.05 and the power at 0.80. Using this formula, and taking into account the fact that not all men will have had commercial partners in the last 12 months, and the chance that some of the individual men in the target groups will not be interviewed, the required sample size was 915 for entire group (truck drivers, minibus driver and uniformed) of men. However, prior to commencement of data collection, a mapping exercise was carried out in Ndola to determine the existing population sizes. From this exercise, a total of 671, truck drivers, 336 uniformed personnel and 502 light truck and minibus drivers were recorded. Because of these limited numbers of respondents for all the categories, it was not possible to obtain the required sizes for the samples. Therefore, a ‘take all’ approach was used, whereby all eligible and identified respondents were included in the survey.

#### **3.1.2 Sampling and Survey Procedure**

This was a cross-sectional survey of three groups of men: long-distance truck drivers; minibus and light truck drivers (referred to in this document as “minibus drivers”); and uniformed personnel (Zambia Revenue Authority, Department of Immigration and Police Service). The survey was carried out in Ndola city in Zambia, one of the new COH project sites. The primary sampling units where truck and minibus drivers congregated were identified in Ndola. These were mainly truck depots/stops and bus stations and places where light truck drivers loaded passengers and goods for delivery to various destinations. The uniformed personnel were interviewed from their offices and at some of the participants’ places of choice and times. All the men in the three categories aged 18 years and above found in the primary sampling units during the daytime between 8.00hrs and 18.00hrs were invited to participate. The survey was explained to all the potential participants and informed oral consent obtained before every interview.

### **3.2 Data Collection Instruments, Process, Informed Consent and Analysis**

#### **3.2.1 Data Collection Instruments**

The survey used a semi-structured questionnaire as a data collection instrument to record information that included socio-demographic factors, sexual history; male and female condom use, STI knowledge and treatment-seeking behaviours, knowledge about HIV/AIDS, stigma and discrimination against people living with HIV/AIDS, and service utilisation and exposure to interventions offered by the COH project. The questionnaire was similar to the one used in round one (2000) and round two (2003) of the BSS. A Chibemba translated version of the questionnaire was available for use whenever the interviewer encountered someone who preferred to be interviewed in the local language.

### **3.2.2 Data Collection Process**

Data collection was done over a period of 14 days from 13<sup>th</sup> to 27<sup>th</sup> February 2005. Before the commencement of data collection, a five-day training workshop was held for the research assistants, where interview principles and techniques were taught. Issues covered during the training included: orientation to the COH project, survey purpose, consent procedures, confidentiality, interviewing skills, data quality, sensitisation to issues pertaining to high risk population of men and women, roles and responsibilities of the team members. The instrument was pre-tested and revised appropriately. The training and pre-testing were done in Lusaka. Truck depots and bus stops were identified within Lusaka where the research assistants interviewed truck and minibus drivers.

Ten trained male research assistants conducted the interviews. COH project outreach workers and peer educators facilitated the recruitment of the participants. They helped to introduce the interviewers to the respondents. The interviewers then administered the questionnaire after obtaining consent. The interviews were conducted in privacy on a one-to-one basis. Each interview lasted an average of 30 minutes. Field supervisors reviewed all completed questionnaires before leaving the field to ensure accuracy in recorded responses.

### **3.3 Informed Consent and Confidentiality**

Because the survey addressed sensitive issues of sex and sexuality, partners outside of marriage, and STIs including HIV/AIDS, measures to ensure the privacy and confidentiality of information were put in place. The interviewers were obligated to obtain informed consent, ensure that all the information gathered remained confidential, and conduct the interviews in a private setting. This protocol was approved by the Ethics Committee at TDRC in Ndola, Zambia and by the Protection of Human Subjects Committee of FHI in Arlington, VA.

### **3.4 Data Analysis**

The completed questionnaires were reviewed in the field and transported to INESOR for data processing at the end of the data collection exercise. The questionnaires were then coded and entered into the database using Epi-Info Version 6. The files were converted into the Statistical Package for the Social Sciences (SPSS) for analysis. First level analysis consisted of descriptive statistics that computed frequencies, means and median for comparison among and between respondent categories. Further analysis consisting of cross tabulations and p-values were calculated for some variables of importance. The 'no response' and 'Don't know' were excluded from denominator.

## 4 RESULTS

A total of 865 men (254 uniformed, 240 minibus drivers and 371 truck drivers) were initially enumerated during the mapping as eligible participants for interview. However during the actual interviews, 48 (19%) uniformed officers--mostly police officers could not be interviewed mainly because they were out of the station on duty or were on leave from work. Among the minibus drivers, some could not be interviewed because of time as they refused to wait after passengers had filled their vehicles. Truck drivers were fewer than found during mapping time and a take-all sampling method was done. In total, 502 men agreed to participate and were interviewed. **Table 1** shows the breakdown of men interviewed by professional category.

**Table 1: Profession of 502 men participating in the survey**

Professional Category	Number	%
Truck drivers	146	29.1
Minibus drivers	150	29.9
Uniformed personnel	206	41.0
<b>Total</b>	<b>502</b>	<b>100.0</b>

### 4.1 Socio-demographic Characteristics of Survey Population

#### 4.1.1 Age

The median age of all the respondents was 34 years. A significantly larger proportion of minibus drivers was less than 30 years of age (39.2%) compared to truck drivers (15.1%) and uniformed personnel (23.3%).

#### 4.1.2 Educational Background

The average number of years spent in school was 11. In total, 60 (12.0%) had either no education or attained primary school level only. The uniformed personnel had a significantly higher educational level relative to other categories ( $P$ -value<0.001). The proportion of uniformed personnel with a secondary or higher level of education was 99.5 percent, while 81.5 percent and 78.7 percent of the truck drivers and minibus drivers had a secondary or higher level of education, respectively.

#### 4.1.3 Religion

Christianity was the predominant religion among the respondents. Over 95 percent said that they were Christian in each of the categories (not in table).

#### 4.1.4 Marital Status

The majority (86.4%) of the respondents reported ever being married. However, there were significant differences among the groups with respect to the proportion of respondents ever married. Truck drivers and the uniformed personnel (93.1% and 93.2%, respectively) were significantly more likely to report ever being married compared to minibus drivers (70.7%).

Approximately 84.0 percent of all the respondents were currently married. Once again, there were significant differences between the groups with respect to the proportion of respondents who were currently married ( $p < 0.001$ ). The truck drivers and uniformed personnel (91.8% and 91.7%, respectively) had the highest proportion

of the respondents that were currently married followed by the minibus drivers (66.0%). The majority of respondents (80%) reported having one wife in the past 12 months. Truck drivers had the highest proportion, with 82.3 percent reporting one wife in the past 12 months, while minibus drivers had the lowest proportion (73.6%). The mean age at first marriage was not very different for the various categories, having been lowest (23 years) among minibus drivers and either 24 or 25 years among the other groups. **Table 2** presents information on socio-demographic characteristics of the participants.

**Table 2: Age, education level and marital status**

Characteristics	Truckers	Minibus drivers	Uniformed	Total	P value
Median age (Q1, Q3)	36 (32,43)	31.5 (27,36)	35 (30,41)	34 (29, 40)	<0.001
	<b>n (%)</b>	<b>n (%)</b>	<b>n (%)</b>	<b>N (%)</b>	
Age Distribution					
<30 years	22 (15.1)	58 (39.2)	48 (23.3)	128 (25.6)	<0.001
30-34 years	37 (25.3)	47 (31.8)	53 (25.7)	137 (27.4)	
35+	87 (59.6)	43 (29.1)	105 (51.0)	235 (47.0)	
Total	146 (100)	148 (100)	206 (100)	500 (100)	
Education level					
None/primary	27 (18.5)	32 (21.3)	1(0.5)	60 (12.0)	<0.001
Secondary	119 (81.5)	118 (78.7)	204 (99.5)	441 (88.0)	
Total	146 (100)	150 (100)	205 (100)	501 (100)	
Ever been married					
Yes	135 (93.1)	106 (70.7)	192 (93.2)	433 (86.4)	<0.001
No	10	44	14	68	
Total	145 (100)	150 (100)	206 (100)	501 (100)	
Currently married					
Yes	134 (91.8)	99(66.0)	189 (91.7)	422 (84.1)	<0.001
No	12	51	17	80	
Total	146 (100)	150 (100)	206 (100)	502 (100)	

#### 4.1.5 Drivers' Country of Origin and Mobility

The BSS sought to determine the country of origin of the long-distance truck drivers. The majority of long-distance truck drivers were resident in Zambia (99.0%) and were employed by trucking companies based in Zambia (95.1%). (See **Table 3**).

**Table 3: Drivers' residential and employer location**

Country	Place of residence when not travelling	Country in which based (self or company)
	<b>n (%)</b>	<b>n (%)</b>
South Africa	0 (0)	4 (3.9)
Zimbabwe	1 (1.0)	1 (1.0)
Zambia	101 (99.0)	97 (95.1)
Total	102 (100)	102 (100)

## 4.2 General Risk Behaviours of Study Population

### 4.2.1 Alcohol Consumption in the last Four Weeks and Drug Use

Table 4 presents alcohol and drug use of the respondents. Overall, 16.4 percent of the respondents had alcoholic drinks every day in the last four weeks, 36.0 percent had alcoholic drinks at least once a week, and 47.6 percent had alcoholic drinks less than once a week or never. However, as shown in **Table 4**, there are differences among the respondent categories. The truck drivers were significantly less likely to report drinking alcohol daily (8.3%) compared to minibus drivers (21.8%) and uniformed personnel (18.2%).

The respondents were given a list of drugs to which they responded either affirmatively or negatively to having ever used. The drugs included *dagga* (marijuana), heroin, cocaine, and mandrax. Approximately 25 percent reported having tried *dagga*, while no one reported ever having used heroine, cocaine or mandrax. As presented in **Table 4**, there was a significant difference ( $p=0.001$ ) between categories with regards to drug use. More minibus drivers (37.2%) than uniformed personnel (19.7%) and truck drivers (18.4%) reported ever having used drugs. However, of those who had tried drugs, more minibus drivers (35.4%), followed by truck drivers (15.4%) and uniformed personnel (4.8%) reported having used drugs on a daily basis.

**Table 4: Alcohol and drug use**

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
	n(%)	n(%)	n(%)	N(%)	
Alcohol consumption last four weeks					
Every day	12 (8.3)	32 (21.8)	37 (18.2)	81(16.4)	<0.001
At least once a week	53 (36.8)	57 (38.8)	68 (33.5)	178 (36.0)	
Less than once a week or never	79 (54.9)	58 (39.5)	98 (48.3)	235 (47.6)	
Total	144 (100)	147 (100)	203 (100)	494 (100)	
Drug use-Dagga					
Ever used					
Yes	26 (18.4)	55 (37.2)	40 (19.7)	121(24.6)	<0.001
No	115 (81.6)	93	163	371	
Total	141	148	203	492 (100)	

### 4.2.2 Sexual Behaviour and Partners

The survey findings showed that the vast majority of the respondents were sexually active in the past 12 months preceding the survey. **Table 5** presents the age at first sex for all the respondents. By the age of 20, over 70 percent of the respondents had had sexual intercourse. A greater proportion of the minibus drivers (23.5%) reported age at first sex to be younger than 15 years compared to uniformed personnel (9.5%) and truck drivers (17.8%).

**Table 5: Age at first sex**

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
Age at first sex	Median (Q1, Q3)	Median (Q1, Q3)	Median (Q1, Q3)	Median (Q1, Q3)	
Median age (Q1,Q3)	17 (15,19)	17 (15,19)	18 (16,20)	17 (15, 19)	0.004
	n (%)	n (%)	n (%)	N (%)	
Age group at first sex					
< 15 years	24 (17.8)	31 (23.5)	17 (9.5)	72 (16.1)	0.002
15-19 years	81 (60.0)	78 (59.1)	104 (58.1)	263 (59.0)	
20+ years	30 (22.2)	23 (17.4)	58 (32.4)	111 (24.9)	
Total	135 (100)	132 (100)	179 (100)	446 (100)	

#### 4.2.2.1 Live-In Sex Partners

**Table 6** details the numbers of live-in and regular partners (girlfriends) in the past 12 months by target group. The majority reported at least one live-in sex partner in the past 12 months, with more uniformed personnel (96.4%) and truck drivers (92.9%) reporting having had a living-in sex partner than minibus drivers (72.3%).

#### 4.2.2.2 Regular Partners

Approximately one-third (39.4%) of all the respondents reported having had a regular sex partner<sup>10</sup> (girlfriend) in last twelve months. The group with the highest proportion having at least one regular partner was minibus drivers (47.5%) followed by truckers (40.8%) and uniformed personnel (32.6%). The differences were statistically significant (p=0.012). Among those married, 33.8 percent said they had sex in the past 12 months with a regular sex partner, over a third of truck drivers (38.8%), minibus drivers (32.7%) and uniformed (31.2%) who were currently married had sex with a regular girl friend (p=0.396) (See **Table 7**).

**Table 6: Number of live-in and regular sex partners in the past 12 months**

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
	n(%)	n(%)	n(%)	N (%)	
Number of live in sex partners in the past 12 months					
0	10 (7.1)	38 (27.7)	7 (3.6)	55 (11.7)	<0.001
1	117 (83.0)	96 (70.1)	181 (93.8)	394 (83.7)	
2+	14 (9.9)	3 (2.2)	5 (2.6)	22 (4.7)	
Total	141 (100)	137 (100)	193 (100)	471 (100)	
Number of regular sex partners (girlfriends) in past the past 12 months (not live-in sex partners)					
0	84 (59.2)	72 (52.6)	130 (67.4)	286 (60.6)	0.012
1	48 (33.8)	46 (33.6)	54 (28.0)	148 (31.4)	
2+	10 (7.0)	19 (13.9)	9 (4.7)	38 (8.1)	
Total	142 (100)	137 (100)	193 (100)	472 (100)	

#### 4.2.2.3 Commercial Sex Workers (CSWs)

Less than 15 percent of all the respondents reported having had sex with a commercial sex worker or someone with whom they had exchanged money or gifts for sex. Uniformed personnel reported the least contact with commercial sex workers (4.1%),

<sup>10</sup> A regular was defined as a girl friend not living with respondent in last 12 months



followed by minibus drivers (8.8 %) and truck drivers (12.0%). Overall, less than ten percent (6.5%) of all the respondents had sexual contact with two or more commercial sex partners in the past 12 months. However, minibus drivers (15.0%) and truck drivers (14.1%) were significantly more likely to report having had two or more commercial partners in the past 12 months as compared to the uniformed personnel (1.0%).

**Table 7** presents some information on currently married men who also had sex with a female sex worker (FSW). In total, 15.3 percent gave history of sex with a female sex worker in the past 12 months. The proportion was 27.1 percent, 19.4 percent and 4.8 percent among truck drivers, minibus drivers and uniformed personnel, respectively ( $p < 0.001$ ).

The respondents were further asked how many times they had had sex with a commercial partner in the past 12 months preceding the survey. The responses ranged from an average of 1.3 times among uniformed personnel to 2 times among truck drivers and almost 3 times among minibus drivers.

**Table 7: Currently married men who had sex with a FSW or a regular girlfriend in the past 12 months.**

Characteristics	Truckers n (%)	Minibus drivers n (%)	Uniformed n (%)	Total N (%)	p value
Proportion of respondents who had sex with a CSW last 12 months AND were Currently married					
Yes	36 (27.1)	19 (19.4)	9 (4.8)	64 (15.3)	0.001
No	97	79	177	353	
Total	133	98	186	417	
Proportion who had sex with regular girlfriend last 12 months AND were currently married					
Yes	51 (27.1)	32 (32.7)	58 (31.2)	141 (33.8)	0.396
No	82	66	128	276	
Total	133	98	186	417	

#### 4.2.2.4 Non-Regular Partners

A small percentage (6.0%) of the respondents reported having had sex with a non-regular<sup>11</sup> partner in the past 12 months. However, the proportion of respondents varied significantly between professional groups ( $p < 0.006$ ). The minibus drivers (10.9%) were more likely to have reported sexual contacts with non-regular partners compared to truck drivers (7.0%) and uniformed personnel (4.7%).

**Table 8** presents the frequencies of sex with wives, live-in partners, regular girlfriends, commercial and non-regular sex partners in the past month. The men who reported having sexual intercourse with their wives, live-in partners, regular, commercial and non-regular sexual partners were asked about the frequency of sexual intercourse with their partners in the last 30 days. The frequencies appear to be quite

<sup>11</sup> For the purpose of this survey, a non-regular partner was defined as a partner with whom the respondent has had sex in the past 12 months. Partners who are spouses, long-standing girlfriends (regular), living with the respondent, or with whom they have exchanged sex for money (commercial sex workers) are not defined as non-regular partners.

similar among the groups, although the minibus drivers report having sex with their commercial sex partners more frequently than the other groups.

**Table 8: Frequency of sex in the past 30 days by category and by type of sex partner**<sup>12</sup>

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
	Median(Q1, Q3)	Median(Q1,Q3)	Median(Q1,Q3)	Median (Q1, Q3)	
Wife or live-in sex partner	4 (2,8)	6 (3,10)	8 (4,12)	6 (3,10)	0.001
Girlfriend not live-in sex partner	1 (1,3)	2 (1,5)	1 (0,3)	2 (1,4)	0.009
Commercial sex worker	1 (1,2)	1.5 (0,3)	0 (0,1)	1 (1,2)	0.007
Non-regular, non-commercial partner	1 (1,2)	2 (1,4)	1 (0,2)	1.5 (1,2)	0.150

### 4.3 Knowledge, Availability and Accessibility of Condoms

Participants who last time had sex with wife, living in partner, girlfriend, sex worker and other kind of sexual partner and did not use a condom were asked whether they ever used a male condom or heard about it. Out of 287 who did not use condom last time had sex with any of the partners mentioned in last paragraph almost all (99.7%) said had ever heard of a male condom and 49 percent of them said had ever used a condom. **Table 9** presents the findings of knowledge and availability of condoms. There was a significant difference in rates of those who reported ever using a male condom (but at last sex did not use a condom) between the three groups ( $p = 0.038$ ). The proportion of ever having used a condom was lowest among the minibus drivers (43.7%), followed by uniformed (44.9%) and highest among the truck drivers (61.3%).

Approximately, 97 percent of all the respondents knew of a place to obtain condoms. This was consistent across professional groups. The most commonly cited places for obtaining condoms were shops, bars/guesthouses/hotels and clinics/hospitals. While all the three groups were likely to obtain condoms from shops and bars/guesthouses, the uniformed personnel were more likely to go to a hospital or clinic and truck drivers were the most likely to mention peer educators on the Corridors of Hope project as a source for condoms.

<sup>12</sup> ‘n’ for each category: Truckers (Wife=134, Girlfriend=58, CSW=37, NRP/NCSW=9), Minibus drivers (Wife=99, Girlfriend=65, CSW=30, NRP/NCSW=21), Uniformed (Wife=189, Girlfriend=63, CSW=10, NRG/NCSW=13).

**Table 9: Knowledge and availability of condoms**

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
	n (%)	n (%)	n (%)	N (%)	
Ever heard of male condom					
Yes	79 (98.8)	71 (100)	136 (100)	286 (99.7)	-
No	1	0	0	1	
Total	80 (100)	71 (100)	136 (100)	287 (100)	
Ever used a male condom					
Yes	49 (61.3)	31 (43.7)	61 (44.9)	141 (49.1)	0.038
No	31	40	75	146	
Total	80 (100)	71 (100)	136 (100)	287 (100)	
Knows where to obtain a male condom					
Yes	138 (97.9)	132 (96.4)	184 (95.8)	454 (96.6)	0.588
No	3	5	8	16	
Total	141 (100)	137 (100)	192 (100)	470 (100)	

- Chi Square test not valid – expected frequency less than 5

A third (66.2%) of the respondents reported that they had bought a condom before (**Table 10**). The proportion of those who had ever bought a condom was highest amongst the truck drivers (72.5%) and lowest amongst the uniformed personnel (57.3%).

When asked how long it typically took them to obtain a condom, the majority of respondents (86.2%) reported that it took them less than 15 minutes to obtain a condom. A greater proportion (92.6%) of minibus drivers reported that it took less than 15 minutes compared to truck drivers (83.5%) and uniformed personnel (84.1%) (**Table 10**). However, when asked if the respondents had a condom on hand at the time of the interview, 31.9 percent of truck drivers, 29.8 percent of minibus drivers, and 16.9 percent of uniformed personnel had a condom. The different proportions between groups of those with a condom on hand are statistically significant ( $p < 0.003$ ).

**Table 10: Knowledge and availability of condoms-continued**

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
	n (%)	n (%)	n (%)	N (%)	
Ever bought a male condom					
Yes	103 (72.5)	99 (72.3)	110 (57.3)	312 (66.2)	0.003
No	39	38	82	159	
Total	142 (100)	137 (100)	192 (100)	471 (100)	
Time it takes to obtain a condom					
<15 minutes	111 (83.5)	112 (92.6)	153 (84.1)	376 (86.2)	0.059*
15-30 minutes	20 (15.0)	9 (7.4)	26 (14.3)	55 (12.6)	
31-60 minutes	2 (1.5)	0 (0)	3 (1.6)	5 (1.1)	
>60 minutes	0 (0)	0 (0)	0 (0)	0 (0)	
Total	133 (100)	121 (100)	182 (100)	436 (100)	
Has a condom on hand at time of interview					
Yes	45 (31.9)	39 (29.8)	32 (16.9)	116 (25.2)	0.003
No	96	92	157	345	
Total	141 (100)	131 (100)	189 (100)	461 (100)	

\* comparing <15 minutes vs. 15 or more minutes

### 4.3.1 Condom Use with Wives

Reported condom use at last sex with a wife was low (11.3 %) for all married respondents surveyed. Uniformed personnel had the lowest proportion (8.6%) of men reporting condom use at last sex with wife, while minibus drivers had the highest proportion (17.3%). Consistent condom use with a wife in the previous 12 months was even lower – 1.6 percent of all respondents reported using a condom consistently with their wives during the previous 12 months. **Table 11** presents the findings of condom use with wives.

**Table 11: Condom use with wives**

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
	n (%)	N (%)	n (%)	N (%)	
Condom use at last sex with wife					
Yes	14 (10.7)	17 (17.3)	16 (8.6)	47 (11.3)	0.086
No	117	81	169	367	
Total	131 (100)	98 (100)	185 (100)	414 (100)	
Consistent condom use with wife during the past 12 months					
Yes	2 (1.5)	1 (1.0)	4 (2.2)	7 (1.7)	0.772
No	129	95	180	404	
Total	131 (100)	96 (100)	184 (100)	411 (100)	

### 4.3.2 Condom Use with Regular Partners (Girlfriends)

Fifty-six percent of all the respondents with a regular partner (**n=185**) reported condom use at last sex. The truck drivers had the highest proportion (61.4%), followed by uniformed (60.3%) who reported condom use at last sex, while the minibus drivers had the lowest proportion (47.7%). The difference between the groups was not statistically significant (0.226). About 48 percent of truck drivers, about 40 percent of the uniformed personnel and 17 percent of the minibus drivers reported consistent condom use with a regular partner (girlfriend) during the previous 12 months. The differences between the groups were statistically significant ( $p=0.001$ ). **Table 12** presents the condom use among respondents and their regular partners.

**Table 12: Condom use with regular (girlfriend) sex partners**

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
	n(%)	n (%)	n(%)	N (%)	
Condom used at last sex with regular partner (Girlfriend-regular/not living together)					
Yes	35 (61.4)	31 (47.7)	38 (60.3)	104 (56.2)	0.226
No	22	34	25	81	
Total	57 (100)	65 (100)	63 (100)	185 (100)	
Consistent condom use with regular partner					
Consistently	27 (48.2)	11 (17.2)	25 (39.7)	63 (34.4)	0.001
Not consistently	29	53	38	120	
Total	56 (100)	64 (100)	63 (100)	183 (100)	

### 4.3.3 Condom Use with Commercial Sexual Partners

Among those who reported having sexual contact with a commercial sex worker in the past 12 months, condom use at last sexual intercourse with a commercial sex

partner was about 84 percent among all the groups. **Table 13** presents the results of condom use at last sex with commercial sex partners. The proportions among uniformed personnel and truck drivers were 90.0% and 86.5% respectively, as compared to 80% among minibus drivers. The decision to use condoms was mostly initiated by men, followed by those for whom the decision was jointly made. Minibus drivers claimed that they were more likely (91.7%) to have proposed condoms at last sex than the uniformed personnel (66.7%) or truck drivers (81.3%).

**Table13: Condom use at last sex with commercial sex partner**

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
	n (%)	n (%)	n(%)	N (%)	
Condom used at last sex with commercial sex worker					
Yes	32 (86.5)	24 (80.0)	9 (90.0)	65 (84.4)	-
No	5	6	1	12	
Total	37 (100)	30 (100)	10 (100)	77 (100)	
Who suggested condom use at last sex with commercial sex worker					
Myself	26 (81.3)	22 (91.7%)	6 (66.7)	54 (83.1)	-
Partner	2 (6.3)	1	2	5 (7.7)	
Joint	4 (12.5)	1	1	6 (9.2)	
Total	32 (100)	24	9	65 (100)	
Consistent condom use with commercial sex partners in past 12 months					
Consistently	33 (89.2)	19 (63.3)	9 (90%)	61 (79.2)	<0.001
Not consistently	4	11	1	16	
Total	37 (100)	30 (100)	10	77 (100)	

- *Chi Square test not valid – expected frequencies less than 5*

Consistent condom use with commercial sex partners, defined as using a condom during every act of sexual intercourse with commercial partners in the past 12 months, was significantly higher ( $p < 0.001$ ) among the uniformed personnel (one out of ten) and truck drivers (89.2%), but was still relatively low for the minibus drivers (63.3%). Reasons for not using condoms varied. Out of the 12 responses, two said a condom was not available (three were truckers, one minibus driver), four (one trucker, three minibus drivers) said they did not think condoms were necessary, four (three minibus drivers, one uniformed) said they did think about a condom, two (all minibus drivers) said they did not like condoms, and one (minibus driver) said his partner objected..

The major reason for non-use reported by all three categories was that condoms were not available. Non-availability of condoms for non-use was reported by three out of ten men. More truck drivers (60.0%) than the other categories cited non-availability for non-use of condoms at last sexual encounter with a commercial sex worker.

#### **4.3.4 Married but had Sex with a CSW or with Regular Girlfriend and used Condom**

In **Table 14**, a total of nine male respondents who were married reported having had sex with a CSW and eight of them said he used a condom at last sex. All the truck drivers (five of the five), uniformed (one of one) and minibus drivers (two out of three) who were married and had sex with a CSW and their wives used a condom at last sex. In addition, nine of the men who were married and reported sex with a regular girlfriend, truck drivers (five of five), minibus drivers (three of three) and uniformed (one of one) said that they used a condom at last sex. There was none among men reporting married and had sex with a non-regular sex partner.

**Table 14: Married and had Sex with Commercial Sex Worker, Regular Sex Partner (Girlfriend) without Condom**

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
	n (%)	n (%)	n (%)	N (%)	
Married and had sex with a CSW BUT did not use condom last sex					
Yes	5 (13.9)	3 (15.8)	1 (11.1)	9 (14.1)	-
No	31	16	18	55	
Total	36	19	19	64	
Married and had sex with regular sex partner BUT did not use condom					
Yes	17 (34.0)	16 (51.6)	22 (38.6)	55 (39.9)	0.281
No	33	15	35	83	
Total	50	31	57	138	

-- Chi Square test not valid – expected frequency less than 5

#### 4.3.5 Condom Use with Non-regular Partners

Among the respondents who had reported having sex with a non-regular partner, uniformed personnel reported the lowest levels of condom use at last sex with a non-regular partner (46.2%). Slightly more than half (57.1%) of the minibus drivers reported that they used a condom during last intercourse, whilst all (100%) the truck drivers reported condom use at last sex.

Approximately 77 percent of all respondents who used a condom at last sex with a non-regular partner reported that it was they themselves who suggested condom use (Table 15). This varied between categories: 90.9 percent of the minibus drivers suggested condom use, while 77.7 percent of the truck drivers suggested condom use. Among the uniformed personnel, half (50%) did so.

**Table 15: Condom use at last sex with non-regular partners**

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
	n (%)	N (%)	n (%)	N (%)	
Condom used at last sex with non-regular partner/non-commercial					
Yes	9 (100.0)	12 (57.1)	6 (46.1)	27 (62.8)	-
No	0	9	7	16	
Total	9	21	13	43 (100)	
Who suggested condom use at last sex with non-regular partner					
Myself	7 (77.7)	10 (90.9)	3 (50.0)	20 (76.9)	-
Partner	0	1	2	3	
Joint	2	0	1	2	
Total	9	11	6	26 (100)	
Consistent condom use with non-regular sex partners in past 12months					
Consistently	9 (100.0)	5 (23.8)	5 (45.5)	19 (46.3)	0.001
Not consistently	0	16	6	22	
Total	9	21	11	41 (100)	

- Chi Square test not valid – expected frequencies less than 5

Consistent condom use with non-regular sex partners, defined as using a condom during every act of sexual intercourse with non-regular partners in the past 12 months, varied significantly between professional groups ( $p=0.001$ ). Consistent condom use was universal (100%) among the truck drivers but significantly lower among minibus drivers (23.8%) and uniformed personnel (45.5%). Overall, consistent condom use was slightly over 46 percent among all respondents.

In instances where condoms were not used at last sex with non-regular partners, the respondents varied in their reasons for non-use. The most commonly cited reasons for non-use reported by all three groups were non-availability, three (minibus drivers two, uniformed one); not liking them, four (minibus drivers one, uniformed three); or did not think it necessary, three (minibus drivers two, uniformed one); partner objected, one (minibus driver one) and not thinking of it, one (minibus driver one).

#### 4.4 Daily Alcohol Use and Use of Condom with Regular Girlfriend, CSWs and Non-regular Sex Partners

##### 4.4.1 Regular girlfriend

Out of the 41 men reporting sex with a regular girlfriend and took alcohol every day, 27 (65.9%) did not consistently use a condom when having sex with their regular girlfriends. The proportions were three out of six truck drivers, 14 out of 17 minibus drivers and 10 out of 18 uniformed personnel who took alcohol every day and had sex with their regular girl friends and did not use condoms consistently.

##### 4.4.2 Commercial sex worker

In total 22 (29.3%) out of 75 who had sex with CSWs took alcohol every day (six of 37 truck drivers, 11 of 28 minibus drivers and five of 10 uniformed). Of the 22 who took alcohol every day and had sex with CSWs, four (18.2%) did not use a condom consistently--all (four of the 11) were minibus drivers.

##### 4.4.3 Non-regular sex partner

Out of the five men who took alcohol every day and had sex with non-regular partners and non-CSWs, two of them did not consistently use condoms--both of them (all two) were minibus drivers.

#### 4.5 Knowledge, Attitudes and Practices Related to STIs

##### 4.5.1 Knowledge and Respondent History of STIs

Knowledge related to STIs was high, with 99.8 percent of the respondents ever having heard of STIs. The most commonly known STI symptom in both men and women was genital discharge. Respondents also knew that genital ulcers and abdominal pain were signs of STIs in women, and that genital ulcers were an indicator of STIs in men. Not surprisingly, a higher proportion of respondents knew about symptoms in men than in women (82.5% compared to 59.5%). **Table 16** presents the results of the knowledge of STIs among the respondents.

**Table 16: Knowledge of sexually transmitted infections (STIs)**

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
	n(%)	n (%)	n (%)	N (%)	
Ever heard of STIs					
Yes	139 (100)	148 (100)	204 (99.5)	491 (99.8)	-
No	0	0	1	1	
Total	139	148 (100)	205 (100)	492 (100)	
Can name 2 or more STI symptoms in men					
Yes	128 (88.3)	102 (73.4)	171 (84.7)	401 (82.5)	0.002
No	17	37	31	85	
Total	145 (100)	139 (100)	202 (100)	486 (100)	

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
Can name 2 or more STI symptoms in women					
Yes	110 (75.3)	64 (46.4)	115 (57.8)	289 (59.8)	<0.001
No	36	74	84	194	
Total	146 (100)	138 (100)	199 (100)	483 (100)	

*Chi Square test not valid – expected frequency less than 5*

Minibus drivers reported significantly higher proportions of STI symptoms in the past 12 months compared to truck drivers and uniformed personnel for all types of STI symptoms. **(Table 16)** About 5 percent of truck drivers and uniformed personnel reported either genital discharge or ulcers; almost one out of five minibus drivers reported genital discharge or ulcers in the past 12 months.

**Table 17: STI symptoms in the past 12 months**

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
	n (%)	n (%)	n (%)	N (%)	
Genital discharge					
Yes	3 (2.1)	22 (14.7)	3 (1.5)	28 (5.6)	<0.001
No	143	128	203	474	
Total	146 (100)	150 (100)	206 (100)	502 (100)	
Genital ulcers/sores					
Yes	4 (2.7)	17 (11.3)	9 (4.4)	20 (6.0)	0.003
No	142	133	197	472	
Total	146 (100)	150 (100)	206 (100)	502 (100)	
Genital ulcers or discharges					
Yes	7 (4.8)	28 (18.7)	12 (5.8)	47 (9.4)	<0.001
No	139	122	194	455	
Total	146 (100)	150 (100)	206 (100)	502 (100)	

#### 4.6 Health-Seeking Behaviour for STIs

When asked where they went to seek treatment for their last STI, most respondents reported going to a private or government health centre (73.7%), or the chemist (30.8%). Among truck drivers, the most common places mentioned were government (74%) and private health centres (60%). Among the minibus drivers, the places mentioned were government health centre (82.6%), followed by self-medication (42.9%), traditional healers (30.4%) and the chemist (29.2%). Uniformed personnel most often went to the chemist (57.1%), government health centre (42.9%) or self-medicated (42.9). Only 3 percent of all respondents reported seeking treatment at the COH/Blue House for their last treatment. **Table 18** presents the results of the health-seeking behaviour of the respondents.

**Table 18: Place where treatment was sought for last genital discharge or genital ulcers/sores**

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
	n	n	n	N (%)	
Government health centre					
Yes	6	19	3	28 (73.7)	-
No	2	4	4	10	
Total	8	23	7	38 (100)	



Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
Workplace clinic or hospital					
Yes	0	2	0	2 (5.3)	-
No	8	21	7	36	
Total	8	23	7	38 (100)	
Church or charity run clinic or hospital					
Yes	0	3	0	3 (7.9)	-
No	8	20	7	35	
Total	8	23	7	38 (100)	
Private clinic or hospital					
Yes	3	4	2	9 (23.7)	-
No	5	19	5	29	
Total	8	23	7	38 (100)	
Chemist					
Yes	1	7	4	12 (30.8)	-
No	7	17	3	27	
Total	8	24	7	39 (100)	
Traditional healer					
Yes	1	7	2	10 (26.3)	-
No	7	16	5	28	
Total	8	23	7	38 (100)	
Bought medicine on the street					
Yes	0	0	1	1(2.6)	-
No	8	23	6	37	
Total	8	23	7	38 (100)	
Took medicine I had at home					
Yes	0	0	3	3 (7.9)	-
No	8	23	4	35	
Total	8	23	7	38 (100)	
Treatment from COH Drop-in Centre					
Yes	1	0	0	1 (2.6)	-
No	7	23	7	37	
Total	8	23	7	38 (100)	

- Chi Square test not valid – expected frequency less than 5

Respondents were also asked about their sexual behaviour when they had an STI (**Table 18**). Approximately three-quarters did not stop having sex (70.3%) or tell their sex partners (73.7%), and the majority (91.4%) did not consistently use condoms during the time they had STI symptoms.

**Table 19: Sexual behaviour with an STI**

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
	n (%)	n (%)	n (%)	N (%)	
Stopped having sex during the time when had the STI symptoms					
Yes	0 (0)	8 (36.4)	3 (42.9)	11 (29.7)	-
No	8	14	4	26	
Total	8 (100)	22 (100)	7 (100)	37 (100)	
Always used a condom when having sex during the time had symptoms					
Yes	0 (0)	2 (10)	1 (14.3)	3 (8.6)	-
No	8	18	6	32	
Total	8 (100)	20 (100)	7 (100)	35 (100)	

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
Told sex partner about the discharge/STD					
Yes	0 (0)	7 (30.4)	3 (42.9)	10 (26.3)	-
No	8	16	4	28	
Total	8 (100)	23 (100)	7 (100)	38 (100)	

- Chi Square test not valid – expected frequency less than 5

## 4.7 Knowledge and Beliefs about HIV/AIDS

### 4.7.1 Awareness of HIV/AIDS

As with knowledge on condoms and STIs, knowledge on HIV/AIDS<sup>13</sup> was almost universal, with 100 percent saying they had heard of HIV/AIDS (**Table 19**). Furthermore, very high proportions knew of someone who is HIV-infected or had died of AIDS (80.2%), just as they had a close friend or relative who is HIV-infected or died of AIDS (89.1%).

**Table 20: Awareness of HIV/AIDS**

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
	n (%)	n (%)	n (%)	N (%)	
Ever heard of HIV/AIDS					
Yes	146(100)	150 (100)	206 (100)	502 (100)	-
No	0	0	0	0	
Total	146 (100)	150 (100)	206 (100)	502 (100)	
Knows some one who is infected with HIV or has died of AIDS					
Yes	119 (83.8)	118 (79.2)	159 (78.3)	396 (80.2)	0.427
No	23	31	44	98	
Total	142 (100)	149 (100)	203 (100)	494 (100)	
Has a close relative or close friend who is infected with HIV or who has died of AIDS					
Yes	107 (88.4)	109 (90.8)	143 (88.3)	359 (89.1)	0.002
No	14	11	19	44	
Total	121 (100)	120 (100)	162 (100)	403 (100)	

- Chi Square test not valid – expected frequency less than 5

### 4.7.2 Knowledge and Misconceptions about HIV Transmission

The levels of knowledge varied between groups. Most of the respondents (96.7%) knew that HIV could be spread through using infected needles (**Table 20**). The majority (87.1%) of respondents (90.8% minibus drivers, 89.9% uniformed personnel and 80.6% truck drivers) also knew that HIV could be transmitted through mother-to-child transmission. Of the respondents who knew about mother-to-child transmission,

<sup>13</sup> The knowledge indicators are composite indicators. The “knowledge of prevention methods” indicator tested complete knowledge of the most common HIV prevention methods (abstinence, be faithful to one uninfected partner and condom use). The “No Incorrect Beliefs about AIDS” indicator tested correct understanding regarding the most common misconceptions about HIV. To achieve a pass in that indicator, the respondent had to answer that: a healthy-looking person can be HIV-infected; you cannot be infected by a mosquito, or by sharing a meal with an infected person. Comprehensive knowledge about AIDS was defined as having answered all the questions in the two composite indicators above correctly. The criteria for accepting attitudes towards people with HIV were also strict. To achieve a pass mark in that indicator, respondents had to state: that they would be willing to care for a member of their family in their household if they became sick with AIDS, that a teacher who has the AIDS virus but is not sick should be allowed to continue teaching in school and that they would buy food from a shopkeeper or food seller who had the AIDS virus.

81.8 percent (88.2% minibus drivers, 82.9% truck drivers and 74.3% uniformed personnel) knew that this could occur through breast-feeding. However, misconceptions about HIV transmission still exist. Approximately 15 percent of minibus drivers (14.3%) and truck drivers thought that mosquitoes can transmit HIV.

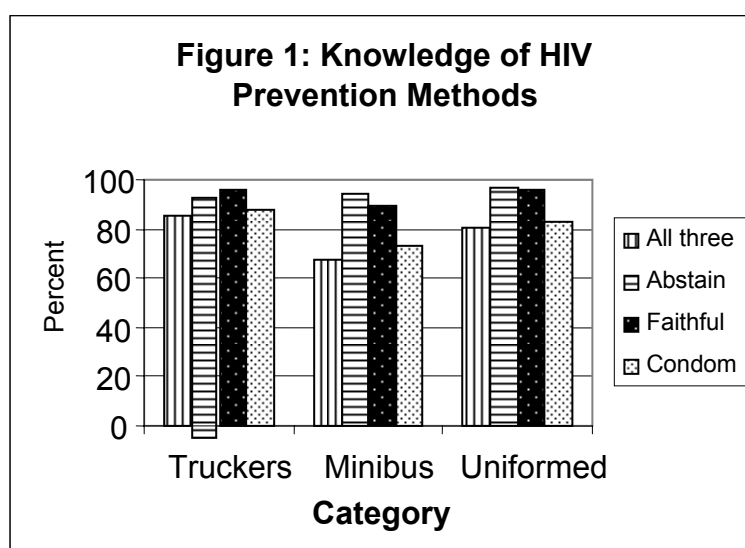
### 4.7.3 Knowledge of HIV Prevention

**Table 21** shows the proportion of respondents who know the correct ways to prevent HIV: abstinence, being faithful, and condom use. An overwhelming majority of respondents (97%) could name abstinence an HIV prevention method, even more than correct condom use (81.4%). A significantly higher proportion of uniformed personnel (96.1%) and truck drivers (95.8%) cited faithfulness as an HIV prevention method compared to minibus drivers (89.8%). Condom use was cited as an HIV prevention method more frequently by truck drivers (87.5%), and uniformed personnel (83.0%) than by minibus drivers (73.1%).

**Table 21: Knowledge of HIV transmission and prevention**

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
	n (%)	n (%)	n (%)	N (%)	
Can people protect themselves from the HIV virus by abstaining (not having) from sexual intercourse?					
Yes	142 (99.3)	139 (94.6)	200 (97.1)	481 (97.0)	0.062
No	1	8	6	15	
Total	143 (100)	147 (100)	206 (100)	496 (100)	
Can people protect themselves from the HIV virus by having one FAITHFUL, un infected sex partner?					
Yes	138 (95.8)	132 (89.8)	197 (96.1)	467 (94.1)	0.027
No	6	15	8	29	
Total	144 (100)	147 (100)	205 (100)	496 (100)	
Thinks that people can protect themselves from HIV virus by using a CONDOM correctly every time they have sex .					
Yes	126 (87.5)	106 (73.1)	166 (83.0)	398 (81.4)	0.005
No	18	39	34	91	
Total	144 (100)	145 (100)	200 (100)	489 (100)	
Thinks a person can get the HIV from Mosquito bites.					
Yes	19 (13.9)	19 (14.3)	11 (5.5)	49 (10.4)	0.011
No	118	114	189	421	
Total	137 (100)	133 (100)	200 (100)	470 (100)	
Thinks a person can get the HIV from sharing a meal.					
Yes	11 (7.6)	8 (5.9)	9 (4.4)	28 (5.8)	0.433
No	133	128	197	458	
Total	144 (100)	136 (100)	206 (100)	486 (100)	
Can a person get the HIV by getting injections with a needle that was already used by someone else?					
Yes	140 (97.9)	136 (95.8)	197 (96.6)	473 (96.7)	0.592
No	3	6	7	16	
Total	143 (100)	142 (100)	204 (100)	489 (100)	
Do you think that a healthy-looking person can be infected with HIV, the virus that causes AIDS?					
	n (%)	n (%)	n (%)	N (%)	
Yes	144 (98.6)	136 (95.1)	204 (99.0)	484 (97.8)	-
No	2	7	2	11	
Total	146 (100)	143 (100)	206 (100)	495 (100)	

The proportions of respondents who had a complete knowledge of HIV prevention – defined as being able to name all three prevention methods (abstinence, faithfulness to one uninfected sex partner and consistent condom use) - were 80.4 percent among uniformed personnel, 85.0 percent among truck drivers and 67.4 percent among the minibus drivers. Questions measuring a population’s knowledge of how to prevent HIV are an indication of how well various educational efforts have reached their target, but they are unable to show whether people are putting this knowledge into practice. Figure 1 illustrates the knowledge of HIV prevention methods.



Comprehensive knowledge of HIV is defined as knowing all three prevention methods in addition to having no misconceptions about HIV transmission. Comprehensive knowledge was highest among the uniformed personnel, with 74.9 percent having a comprehensive knowledge of HIV, followed by truck drivers with 68.2 percent. The group with the lowest proportion was the minibus drivers at 55.9 percent. Comprehensive knowledge was statistically significantly higher among the uniformed personnel ( $p = 0.001$ ). **Table 22** presents the findings of the comprehensive knowledge.

**Table 22: Comprehensive knowledge of HIV/AIDS**

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
	n (%)	n (%)	n (%)	N (%)	
Comprehensive knowledge					
Yes	90 (68.2)	66 (55.9)	146 (74.9)	302 (67.9)	0.001
No	42	52	49	143	
Total	132 (100)	118 (100)	195 (100)	445 (100)	

**Table 23** presents condom use practices of those respondents who identified consistent condom use as a way to prevent HIV transmission and also reported having sex with a commercial or non-regular sex worker. About 12 percent of all respondents who knew condoms prevent HIV transmission did not use condoms. On proportion, it was high among minibus drivers (22.2%). None of the 10 uniformed personnel who knew condoms prevent HIV had had sex with a CSW without using a condom.

A larger percentage of almost all groups reported not using condoms consistently with non-regular partners than with commercial sex partners, despite knowing that condoms reduce their risk of acquiring HIV. Once again, minibus drivers had over half of the respondents who knew that consistent condom use could reduce the risk of HIV infection, yet they did not use a condom consistently with a non-regular partner.

**Table 23: Non-consistent condom use among those respondents who knew condoms prevent HIV**

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
	n (%)	n (%)	n (%)	N (%)	
Knows condoms prevent HIV and did NOT use condoms consistently with CSWs					
Yes	3 (8.3)	6 (28.6)	0(0)	6(13.8)	-
No	33	15	8	59	
Total	36	26	8	65	
Knew condoms prevent HIV and did not use condoms consistently with non-regular partner					
Yes	0	12 (80)	6 (60)	19 (54.5)	-
No	8	3	4	14	
Total	8	15	10	33	
Knew condoms prevent HIV and did not use condoms consistently with regular girlfriend					
Yes	25 (49.0)	39 (81.1)	34 (59.6)	98 (62.8)	0.003
No	26	9	23	58	
Total	51	48	57	156	

- Chi Square test not valid – expected frequency less than 5

#### 4.7.4 Attitudes toward People with HIV/AIDS

The survey included a series of questions aimed at exploring the respondents' views about the extent of HIV stigmatisation. Although the degree varies among groups, the overall results of this section, which can be seen below in **Table 24**, have shown that a certain amount of stigma and discrimination does exist. The findings showed that the majority of all respondents felt that an HIV-positive student should be allowed to continue with school and those HIV-positive teachers should be able to continue teaching.

Over 96 percent of respondents--truck drivers, uniformed personnel and minibus drivers--said they would care for an HIV-positive female relative in their home, but approximately a quarter reported that they would want to keep the HIV-positive status of a relative a secret.

There appears to be higher levels of stigma and discrimination amongst all the groups with regards to buying food from HIV-positive people. When asked whether or not they would buy food from a shopkeeper with HIV, approximately a quarter were not willing to buy food from an HIV-positive shopkeeper.

**Table 24: Attitudes toward people living with HIV/AIDS (stigma-related attitudes)**

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
	n (%)	n (%)	n (%)	N (%)	
If a student has HIV but is not sick, should he or she be allowed to continue attending school?					
Yes	139 (95.2)	138 (95.2)	202 (98.1)	479 (96.4)	0.241
No	7	7	4	18	
Total	146 (100)	145 (100)	206 (100)	497 (100)	
If a female relative became ill with HIV, would you be willing to care for her in your household?					
Yes	142 (97.9)	143 (96.6)	204 (99.5)	489 (98.2)	-
No	3	5	1	9	
Total	145 (100)	148 (100)	205 (100)	498 (100)	
If a teacher has HIV but is not sick, should he or she be allowed to continue teaching in school?					
Yes	138 (94.5)	134 (92.4)	199 (96.6)	471 (94.8)	0.219
No	8	11	7	26	
Total	146 (100)	145 (100)	206 (100)	497 (100)	
If you knew a shopkeeper or food seller had the HIV virus, would you buy food from them?					
Yes	110 (75.9)	112 (77.8)	161 (80.1)	383 (78.2)	0.636
No	35	32	40	107	
Total	145 (100)	144 (100)	201 (100)	490 (100)	
If a member of your family become ill with HIV, would you want it to remain secret?					
Yes	32 (22.4)	48 (33.8)	47 (23.6)	127 (26.3)	0.050
No	111	94	152	357	
Total	143 (100)	142 (100)	199 (100)	484 (100)	

- Chi Square test not valid – expected frequency less than 5

#### 4.8 HIV Voluntary Counselling and Testing

The respondents were asked a series of questions pertaining to access and use of voluntary counselling and testing services. **Table 25** presents the findings of the access and use of VCT services. The findings show that the majority of respondents reported having access to confidential HIV testing, though this varied significantly between groups ( $p < 0.001$ ). Approximately 16 percent of truck drivers, 10 percent of minibus drivers and 14 percent of uniformed personnel said had ever been tested for HIV. In total 11 percent of respondents said had under gone counselling, testing and received HIV results. When broken into professional category, 13 percent of truck drivers, 7 percent of minibus drivers and almost about 13 percent of uniformed claimed to have received HIV counselling, testing and test results. Among the 435 who had not under gone an HIV counselling and testing, about 81 percent said would be interested in having an HIV test, representing 85 percent, 76 percent and 83 percent of truck drivers, minibus drivers and uniformed personnel respectively.

**Table 25: HIV Counselling and Testing (VCT)**

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
	n (%)	n (%)	n (%)	N (%)	
It is possible in my community for someone to get a confidential HIV test?					
Yes	108 (73.9)	133 (88.7)	179 (86.9)	420 (83.8)	0.001
Total	146	150	206	502	
Have you ever had an HIV test?					
Yes	23 (15.7)	15 (10.0)	29 (14.1)	67 (13.4)	0.311
Total	146	150 (100)	206 (100)	502 (100)	
Number of who voluntarily undergo the HIV counselling and testing?					
Yes	19 (13.0)	12 (8.0)	26 (12.6)	57 (11.4)	-
Total	146	150	206	502	
Total number who received counselling and testing for HIV and received their test results					
Yes	19 (13.0)	11 (7.3)	26 (12.6)	57 (11.4)	-
Total	146	150	206	501	
If never tested, would you be interested in having an HIV test?					
Yes	104 (84.6)	103 (76.2)	147 (83.0)	354 (81.4)	0.510
Total	123	135	177	435	

*Chi Square test not valid – expected frequency less than 5*

#### 4.9 Corridors of Hope Project Indicators

The Corridors of Hope project has targeted behavioural and STI interventions toward sex workers and their clients, namely truck drivers and uniformed personnel at border posts. The 2003 BSS was designed to track behavioural trends among these groups within selected COH project sites. Behavioural data from minibus drivers, who were not directly targeted by the COH project, were also collected to serve as a comparison. In April 2004, the project expanded to two cities Lusaka and Ndola. In both cities the project is implemented only in one compound with activities concentrated in the targeted and surrounding compounds which target sex workers, truck drivers and uniformed personnel.

##### 4.9.1 Exposure to the COH Project

The 2005 survey included questions that asked for exposure to the COH project. The following indicators are used to assess the exposure to the project (**Table 26**)

- Interaction with a COH staff member
- Visits to the Drop-in Centre
- Source of information about COH project
- Source of STI/HIV information

Approximately half (48.1%) of all the respondents had ever talked to a staff member of COH. It is interesting to note that even minibus drivers who were not part of the target population for the intervention had also talked to a COH staff member (46.2%). Despite the relatively large proportion of men who had spoken to a COH staff member, only 17.1 percent of truck drivers, 6.3 percent of uniformed personnel, and 0.7 percent of minibus drivers actually visited the COH Drop-in Centre for any reason. Peer educators were the most common source of information about the COH for respondents.

When asked what the main source of STI/HIV information was, approximately 40 percent of all respondents said it was the radio, 17.6 percent said it was the television. The COH project as a source of STI/HIV information was mentioned by only 2.1 percent of all respondents.

**Table 26: Exposure to Corridors of Hope project interventions**

Characteristics	Truckers	Minibus drivers	Uniformed	Total	p value
	n (%)	n (%)	n (%)	N (%)	
Do you know of any sites that offer STI services?					
Yes	114 (78.6)	62 (41.9)	163 (79.9)	339 (68.2)	<0.001
No	31	86	41	158	
Total	145 (100)	148 (100)	204 (100)	497 (100)	
Have you ever talked to a staff member of CBI/WVI/Corridor of Hope project?					
Yes	35 (50.7)	6 (46.2)	23 (45.1)	64 (48.1)	0.821
No	34	7	28	69	
Total	69 (100)	13	51 (100)	133 (100)	
Have you ever visited the Drop in Centre/Blue House for any reason?					
Yes	25 (17.1)	1(0.7)	13 (6.3)	39 (7.8)	<0.001
No	121	147	192	460	
Total	146 (100)	148 (100)	205 (100)	499 (100)	
Who introduced you to CBI/WVI/COH project?					
Peer educator	8	1	6	15 (37.5)	-
Friend who is not PE	5	0	4	9 (22.5)	
Health care provider	0	0	2	2 (5.0)	
Others	12	0	2	14 (35.0)	
Total	25	1	14	40 (100)	
Last time you visited CBI/WVI/Corridors of Hope project were you given any information or educational material?					
Yes	25	0	7	32 (82.1)	-
No	0	1	6	7	
Total	25	1	13	39 (100)	
Do you feel you have adequate information regarding STIs and HIV?					
Yes	69 (47.3)	69 (46.0)	121 (59.9)	259 (52.0)	0.014
No	77	81	81	239	
Total	146 (100)	150 (100)	202 (100)	498 (100)	
At work do you have programs on HIV					
Yes	36 (25.0)	5 (3.4)	84 (41.0)	125 (25.2)	<0.001
No	108	142	121	371	
Total	144 (100)	147 (100)	205 (100)	496 (100)	
If you are found to have HIV would the company allow you to continue working?					
Yes	92 (82.1)	96 (85.7)	180 (91.8)	368 (87.6)	0.035
No	20	16	16	52	
Total	112 (100)	112 (100)	196 (100)	420 (100)	

- Chi Square not valid – expected frequency less than 5



## 5 DISCUSSION

Projects like the Corridors of Hope are making serious efforts to confront the challenge of the HIV epidemic in Zambia. Many of the common, curable STIs facilitate HIV spread by increasing both efficiency of transmission and vulnerability to infection. Control of these infections has been accorded high priority since the beginning of the HIV/AIDS epidemic. Prevention through education and effective treatment of STIs continues to be the main strategy available for controlling the spread of the disease. The aim is to change peoples' attitudes not only towards the disease and infected persons, but also to encourage the adoption of safer sexual behaviours.

To obtain baseline data, assess the outcomes of the COH project and to monitor behavioural trends over time, Behavioural Surveillance Surveys (BSS) are carried out. This report provides findings from the baseline BSS conducted in Ndola. Like the previous BSS carried out in other sites, the results from this 2005 BSS show that despite the widespread knowledge of HIV prevention, high-risk behaviours still persist among truck drivers, minibus drivers and uniformed personnel. Round Two BSS conducted in 2003 found that, while three-quarters of respondents had knowledge of the three main methods of HIV prevention, 11 percent of truck drivers, 36 percent of minibus drivers and 16 percent of uniformed did not use condoms with commercial sex worker during the last sexual contact (BBSS 2003).

### 5.1 Socio-demographic Characteristics of Study Populations

Minibus drivers were the youngest group with a median age of 31.5 years (range 27-36); while the median age of the long-distance truck drivers was 36 years (range 32-43). The relatively younger population of minibus drivers has implications for risky behaviour and consequently for the development of program interventions among this group, as working with a younger population will require different outreach methods and target strategies.

Education plays an important role in HIV/AIDS intervention programmes<sup>14,15</sup>. Education could act as a precursor to enhanced access to and/or acquisition of HIV/AIDS information. The majority of the respondents surveyed had a secondary or higher level of education, with uniformed personnel having the highest educational level. However, there were still about 13 percent of the respondents who had only a primary level of education. This must be considered when developing behaviour change materials, as the materials will need to be tailored to the level of education of the target population who should not be left behind.

Most (83%) of the respondents reported that they were currently married. This could be viewed positively with the notion that, ideally, married men are less likely to engage in multiple sexual relationships. But many surveys have reported many married men to have other or multiple sexual relationships<sup>16</sup>. Furthermore, there is still a proportion of married men who have other high-risk sexual partners. In this

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<sup>14</sup> Agha S. (2002) Declines in Casual Sex in Lusaka, Zambia: 1996-1999, [Letter] *AIDS*; 16:291-293.

<sup>15</sup> Fylkesnes et al (2001) Declining HIV Prevalence and Risk Behaviors in Zambia: Evidence from Surveillance and Population-based Surveys, *AIDS*; 15:907-916.

<sup>16</sup> CSO (2003) Zambia Sexual Behaviour Survey (ZSBS)

situation, the wives or regular partners of these men who engage in high-risk sex are being exposed to serious health consequences of high-risk behaviours even when they themselves do not engage in them. It is therefore imperative that HIV prevention programs stress the promotion of faithfulness and fidelity with spouses or regular partners.

The younger and never married respondents had more sexual partners in the past 12 months, which indicates the possibility of higher levels of sexual activity among the single men, a situation that can lead to an increased incidence of STIs. Research on non-marital sexual networking in the Ekiti District found that high levels of pre-marital sexual activity sustained the STI epidemic<sup>17</sup>. Consistent condom use and abstinence must be promoted among this sexually active category of unmarried men.

## 5.2 Risk Behaviours and Sexual Partners

Alcohol and drug use have a high correlation with increased risky sexual behaviour since alcohol use undermines judgement and safe sex negotiation. In this survey, the overall response showed that 29 percent of the total respondents who took alcoholic drinks every day in the last four weeks had sex with a commercial sex worker. Minibus drivers had the highest proportion (39.3%) followed by the uniformed personnel (50%) and truck drivers 16 percent.

Though drug and alcohol abuse has never been of direct interest to the COH project, program managers should begin to address this issue in light of the study finding that about 48 percent of the respondents had used dagga before, with minibus drivers having the highest proportion (37.2%). Daily alcohol consumption among this group was also high at about 22 percent. Behaviour change messages should include the dangers associated with alcohol use and high-risk sex.

Almost all of the respondents were sexually active. Minibus drivers had the highest proportion of respondents reporting commercial sex and sex with non-regular partners. Truck drivers had the highest proportion of respondents that were currently married or had live-in partners. About 14 percent of the truck drivers, 16 percent of minibus drivers and 14 percent of uniformed personnel who were currently married and had sex with a CSW did not use condom at last sex in the past 12 months, thereby putting their spouses and the sex workers not yet infected at danger of contracting and transmitting HIV.

Nevertheless, highly mobile populations – truck drivers and minibus drivers – had more sexual partners than the uniformed personnel. This finding reiterates the point that highly mobile men engage in multiple sexual relationships and are more likely to play a substantial part in spreading STIs. Mobile populations may feel a sense of alienation and isolation by being away from their home, separated from their families, their cultural norms, belief and identity. This may lead to a lack of social control by peers, a freedom to experience new behaviours, but also a sense of estrangement and loneliness, which are factors likely to increase the likelihood of excessive use of alcohol and practices of unsafe sex (Af-aids list serve discussion on mobile populations, 2005). The role of truck drivers in the transmission of HIV within the

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<sup>17</sup> Orubuloye et al. (1991) Sexual Networking in the Ekiti District of Nigeria. *Stud in Family Planning*; 22:61-73.

sub-Saharan Africa has been established<sup>18</sup>. As seen from this study, minibus drivers also provide a major clientele to the female sex workers and also have a higher reported history of STIs in the past 12 months. This suggests the need for continued aggressive intervention strategies that will target all groups of men vulnerable to HIV with behavioural change messages and the treatment of STIs as means for reducing the transmission of HIV.

### **5.3 Knowledge, Attitudes and Practices relating to Condoms**

Knowledge and awareness about condoms was universal with almost all the respondents having heard about condoms. However, only about half of all the respondents reported ever having used a condom. This exemplifies the fact that while knowledge is a pre-cursor to reducing risk, it by no means is sufficient to ensure safe behaviour. The data makes it clear that HIV prevention programs targeting high risk groups need to go beyond messages that promote knowledge about the virus and how to prevent it, and focus on innovative services that will both persuade people to act on their knowledge and make it easier for them to do so.

Across all groups, consistent condom use was highest with commercial sex partners (81%), and not surprisingly, lowest with wives (1.6%). Despite the fact that they engage in more commercial sex to begin with however, consistent condom use was not optimal among minibus drivers (63.3%). In order to effectively stop the spread of STIs and HIV, short-term prevention efforts must aggressively promote consistent condom use with ALL high-risk partners. Long-term efforts can focus messages that address the importance of consistent condom use with all partners, including regular partners. These efforts should work on changing the social landscape that has dissuaded males to use condoms consistently. Therefore, failure to translate knowledge into practice has to be contextualised. There are important structural barriers that need to be overcome. However, it may be worthwhile to further investigate some of the factors accounting for the mismatch between knowledge and use of condoms. This would initially entail an exploratory phase to identify possible costs and obstacles to behaviour change.

### **5.4 Knowledge, Symptoms and Practices Relating to STIs**

Knowledge on STIs was widespread with almost all the respondents having ever heard of STIs. The proportion of respondents who reported a history of a genital ulcer or discharge in the past 12 months was significantly higher (19%) among minibus drivers as compared to uniformed personnel (6.0%) and truck drivers (5.0%). The reported high prevalence among minibus drivers is accompanied by the low (63.3%) consistent condom use with high-risk partners (i.e. commercial sex workers), suggesting that aggressive interventions are warranted in this group.

The two commonly reported STI treatment sources were government or private institutions for both truck drivers and minibus drivers while the uniformed personnel reported purchasing medication from pharmacies (57.0%) although self-medication was also an important option in about 43 percent of the respondents. Only about 3 percent of all respondents reported seeking treatment at the COH/Blue House for their last STI, suggesting a need to scale up COH activities.

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<sup>18</sup> Hunt (1989) Migrant Labor and STD: AIDS in Africa. *Journal of Health and Soc Beh*; 30:353-373

Truck drivers were the least likely to inform their partner, cease having sex, or use condoms consistently. This is significant considering the strong association between STIs and HIV transmission. The uniformed personnel had the highest proportion of respondents informing their partner, though this was low even among them (42.8%). Partner notification is one of the key strategies for ensuring complete STI cure and ultimately the effective control of STIs.

## **5.5 Knowledge, Attitudes and Practices Relating to HIV/AIDS**

All the respondents said that they had heard of HIV/AIDS. Similarly, very high proportions of the respondents knew of someone who had died of AIDS, just as they had lost a close friend or relative to HIV/AIDS. However, these findings show that although awareness about the existence of HIV/AIDS was high, the knowledge about the modes of transmission was not as high. Furthermore, there are still misconceptions regarding HIV transmission. For example, about 14 percent of minibuses, light trucks and long-distance truck drivers believed that HIV infection could be spread through mosquito bites. Similarly, about 8 percent and 6 percent truck drivers and minibus drivers believed that sharing meals with an HIV positive person could transmit HIV. This reflects the persistence of misconceptions and myths surrounding the mode of spread of HIV. These misconceptions and beliefs need to be addressed in a comprehensive strategy that will remove the misconceptions around HIV transmission, as they further stigmatise those living with HIV/AIDS, which are exemplified by the results of this survey. While more than 90 percent of all the respondents were found to have more accepting attitudes toward people with HIV, the findings also show that about 22 percent were opposed to the idea of buying food from a shopkeeper or food seller known to have HIV.

In this survey, the most widely cited methods that people thought infection could be avoided were abstinence, faithfulness and use of condoms, in that order. Our view is that these statements more likely reflect what is accepted by the community, rather than the existing sexual behaviours. Clearly, these men are not abstaining and many are not being faithful to one partner. Similarly the mention of condoms as a preventive device reflects the existing ideals within the HIV/AIDS discourse, whereas in the everyday social interactions condoms might not be consistently used.

## **5.6 VCT Access and Use**

The majority (83.8%) of respondents reported having access to a confidential HIV test in their community. However, the proportions that have been counselled, tested and received results are still relatively low at approximately 11 percent with the minibus drivers posting the lowest (7.3 %) while truck drivers and uniformed personnel had highest of 13 percent.

Encouragingly, many (82.8%) said were willing to undergo HIV counselling and testing therefore institutional frameworks and efforts are needed to have these services available to people to have counselling and take the HIV test. Voluntary counselling and testing (VCT) is a crucial entry point into the continuum of HIV/AIDS prevention and care. Efforts to promote VCT services within the COH project require social marketing of the benefits and perhaps more importantly,

creating an enabling environment to reduce stigma towards people with AIDS<sup>19</sup>. In order to do this, the project will need to explore VCT strategies that will be suitable for these highly mobile populations. Mass VCT may be one of the strategies since CARE has successfully piloted it in Kalingalinga urban health centre.

## 5.7 Project Indicators

A staff member of COH had talked to only about 48 percent of the respondents and of these only a very small proportion (8.0%) said they had visited a COH Drop-in Centre. The highest proportion among those who had been talked to by a COH member was among the truck drivers (50.7%), compared to uniformed personnel, of whom 45.1% had discussions with a member of staff of COH. A smaller proportion had actually visited the COH Drop-in Centre (17% of truck drivers, 6% of uniformed personnel, and 1% of minibus drivers). This small percentage is likely due to the fact that COH has been operating in Ndola for less than a year. Additionally, the low percentage of the target population visiting the Drop-in Centre is not a sign of low program coverage, as target population members are more likely to visit the centre only if there is a medical need, such as diagnosis or treatment of STIs. For this target population, peer educators have been the main source of information about the COH project, followed by friends.

While BSS is not designed to attribute specific changes in behaviour and levels of STIs to specific prevention programs, it can help identify what is working and what is not, and where the gaps are in prevention programming. The 2003 BSS results show that consistent condom use rates with high-risk partners among COH's target population of truck drivers and uniformed personnel were significantly higher than the rates among minibus drivers, who were not directly targeted by COH. In addition, the targeted population of COH (truck drivers and uniformed personnel) had greater comprehensive knowledge of HIV and significantly lower reported rates of STI symptoms compared to those not directly targeted by COH (minibus drivers). These findings suggest that the COH project is having some positive effect on the targeted populations. In light of this, it is encouraging that approximately half of the study population has had some exposure to the COH program. However, there is a continued and an urgent need to expand outreach programs and innovative methods to improve coverage and facilitate access to the COH project. The role of peer educators as mobilizers within the community needs to be strengthened. In addition, more workplace peer educators are needed to reach out to these highly mobile and vulnerable men, who are involved in a line of work that indirectly facilitates their exposure to HIV.

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<sup>19</sup> Kalichman SC, Simbayi LC. "HIV Testing Attitudes, AIDS Stigma and Voluntary HIV Counseling and Testing in a Black Township in Cape Town, South Africa." *Sexually Transm Infect* 2003;79:442-447.

## 6 CONCLUSION

This survey clearly shows that there are gaps between the knowledge and sexual behaviours necessary to curb the spread of HIV. The findings of this survey show that many of the men are married, but a large proportion of these men also engage in daily alcohol consumption and high-risk sex with commercial and non-regular partners. To compound this issue, consistent condom use with high-risk groups remains low, therefore, levels of risk behaviours to HIV are still high.

Misconceptions concerning HIV transmission and some levels of stigma toward people living with HIV/AIDS still exist among some men; so there is a need to direct BCC efforts to address both misconceptions and stigma-related issues. Uptake of VCT services is not yet optimal among all high-risk men; therefore, expanded efforts within the COH project are needed to promote the importance of HIV testing and knowing the result. While the COH project is making efforts to reach out to more high-risk populations, many men are still not accessing the COH Drop-in Centre. Therefore, the project must begin to think about expanding its reach to cover a wider range of the target group with both STI and behaviour change intervention services.

## 7 RECOMMENDATIONS

1. Since the majority of the participating men were married, messages should promote faithfulness in order that they protect their spouses from HIV infection. Men should be made aware of the immense responsibilities they have in relation to their wives and family.
2. Very few respondents cited COH outreach workers and peer educators as a source of condoms. This should spur programme managers to strengthen peer educators' capacity as condom promoters and explore the multiple avenues that are available as a source for condom supplies and for condom promotion with the view of forming linkages.
3. There are important barriers that continue to impede the consistent use of condoms among the men at high risk that need to be overcome. Further investigations are needed to explore some of the factors promoting barriers and the extent to which they impede consistent use of condoms.
4. In view of the continual existence of misconceptions around HIV transmission, there is a need to develop better ways and strategies for correcting them.
5. There is an increasing recognition that the misuse of alcohol and drugs has an impact on behaviour and HIV transmission. Therefore the COH needs to begin addressing drug and alcohol abuse as some of the direct issues for the BCC campaign messages.
6. Given the levels of reported STIs among men, the COH project should consider providing STI treatment to all men, beyond truck drivers and uniformed personnel, who are clients of female sex workers. More

specifically, minibus drivers are an important part of the sexual network and therefore should be provided with STI treatment services so that HIV/AIDS prevention efforts are not frustrated. There should also be a deliberate effort to directly target other professionals and groupings of men at high risk of HIV transmission or acquisition. In addition, there is a need to conduct biologic studies among these men to validate the reported prevalence of STIs. This will strengthen the argument for or against providing treatment to the male populations at border areas.

7. Though most respondents reported having access to a confidential HIV test, the proportion of the respondents who reported having taken an HIV test was lower than expected. VCT should be encouraged and promoted among these high-risk men, and they should also be counselled and urged to collect their test results so that they can know their HIV status. VCT should be promoted in a comprehensive manner and within a continuum of care.

## 8 REFERENCES

- Agha S. (2002) Declines in Casual Sex in Lusaka, Zambia: 1996-1999. [a letter], *AIDS*; 16:291-293.
- Bond V, Dover P. (1997) Men, Women and the Trouble with Condoms: Problems associated with Condom Use by Migrant Workers in rural Zambia. *Health Transitional Review*, 7 (Suppl.): 377-91.
- Buve A, Weiss A, Laga E, et al. (2001). The Epidemiology of Gonorrhoea, Chlamydia Infection and Syphilis in four African Cities. *AIDS*, 15(Supl 4).
- Central Board of Health (CBOH) Morbidity Statistics 2002. Lusaka
- Central Statistical Office [CSO] (1999) *Zambia Sexual Behavior Survey 1998*. North Carolina at Chapel Hill: Measure Evaluation.
- Central Statistical Office [CSO], Ministry of Health [Zambia] and Macro International Inc. (1997) *Zambia Demographic and Health Survey, 1996*. CSO and Macro International Inc: Calverton, Maryland.
- Central Statistical Office [CSO], Ministry of Health [Zambia] and Macro International Inc. (2002) *Zambia Demographic and Health Survey, 2000*. CSO and Macro International Inc: Calverton, Maryland.
- Darrow WM, Siegel K. (1990) Preventive Health Behaviors and STD. In: Holmes et al. (eds.) *Sexually Transmitted Diseases*. New York: McGraw-Hill Information Services Company.
- Fylkesnes K, Musonda MM, Sichone M, Ndhlovu Z, Tembo F, Monze M. (2001) Declining HIV Prevalence and Risk Behaviours in Zambia: Evidence from Surveillance and Population-Based Surveys. *AIDS*, 15:907-916.
- Fylkesnes K, Brunborg H, Msiska R. (1994) National AIDS/STD/TB/Leprosy Programme. Lusaka, Zambia
- Fylkesnes K, Mubanga M, Musonda R, Lou PN, Msiska R. (1998) Studying Dynamics of the HIV Epidemic: Population-Based Data compared with Sentinel Surveillance in Zambia, *AIDS*, 12(10).
- Hunt CW. (1989) Migrant Labour and STD: AIDS in Africa. *Journal of Health and Social Behaviour*, 30:353-373
- Ministry of Health [MOH] (1999) HIV- Background, Projections, HIV/AIDS Impact and Interventions. Lusaka
- Ndulo J, et al (1995) Quality of Care in Sexually Transmitted Diseases in Zambia: Patients' Perspective. *East African Medical Journal*, 72:641-644.
- Orubuloye et al. (1991) Sexual Networking in the Ekiti District of Nigeria. *Studies in Family Planning*, 22:61-73.
- Phillips (1991) The Primary Prevention of AIDS. In: Pitts M, Phillips K (eds) *The Psychology of Health: an Introduction*. London: Routledge



**Appendix: QUESTIONNAIRE**

**FAMILY HEALTH INTERNATIONAL (FHI)  
HIV/AIDS/STD BEHAVIORAL SURVEILLANCE SURVEYS (BSS)  
FOR USE WITH MALE ADULT TARGET GROUPS**

BBSS ZAMBIA 2003

**Introduction:** “My name is..... I’m working for the Institute of Economic and Social Research, University of Zambia and Family Health International (FHI). We are interviewing people here in [name of town, province or site] in order to find out about peoples HIV/AIDS knowledge, attitudes and risk behaviour. Have you been interviewed in the past few weeks for this study? IF THE RESPONDENT HAS BEEN INTERVIEWED BEFORE DURING THIS ROUND OF BSS, DO NOT INTERVIEW THIS PERSON AGAIN. TELL THEM YOU CANNOT INTERVIEW THEM A SECOND TIME. THANK THEM AND END THE INTERVIEW. IF THEY HAVE NOT BEEN INTERVIEWED BEFORE, CONTINUE: GET CONSENT USING THE STANDARD CONSENT FORM.

001 QUESTIONNAIRE IDENTIFICATION NUMBER [ ][ ][ ][ ][ ]

002 PROFESSIONAL CATERGORY OF RESPONDENT

1. LONG DISTANCE TRUCK DRIVER  
[ ]
2. BUS DRIVER, MINBUS DRIVERS , LIGHT TRUCK DRIVERS & TRANSPORTERS  
[ ]
3. UNIFORMED PERSONNEL (ZRA, DEFENCE, POLICE etc  
[ ]

003 TOWN \_\_\_\_\_

004 PROVINCE \_\_\_\_\_

005 PLACE OF INTERVIEW 1. Truck Stop 2. CBI drop in centre 3. Place of Work  
4. Others (Specify) \_\_\_\_\_

006 CLUSTER/ZONE

007 INTERVIEWER: Code [ ][ ] Name \_\_\_\_\_

008 DATE INTERVIEW: \_ \ \_ \ \_  
D \ M \ Year

009 TOTAL TIME USED \_\_\_\_\_

010 EDITORS CODE [ ][ ]

CHECKED BY EDITOR: Signature \_\_\_\_\_ Date \_\_\_\_\_

The ADULT questionnaire includes the following sections:

Section 0 – Questionnaire identification data (6 codes)	
Section 1 – Background characteristics	17 questions
Section 2 – Marriage	4 questions
Section 3 – Sexual history: numbers and types of partners	3 questions
Section 4 – Sexual history: regular partners	12 questions
Section 5 – Sexual history: non-regular partners	6 questions
Section 6 – Sexual history: commercial partners	13 questions
Section 7 – Male and female condoms	13 questions
Section 8 – STDs	9 questions
Section 9 – Knowledge, opinions, and attitudes towards HIV/AIDS	18 questions
Section 10 – Exposure to prevention	10 questions
<b>TOTAL NUMBER OF QUESTIONS .....</b>	<b>105 Questions</b>

**FHI 2003 HIV/AIDS/STD BEHAVIORAL SURVEILLANCE SURVEY (BSS) FOR ADULTS**

**Section 1: Background characteristics**

No.	Questions and filters	Coding categories	Skip to
Q100	TIME INTERVIEW STARTED		
Q101	In what month and year were you born?	MONTH [ ][ ] DON'T KNOW MONTH 88 NO RESPONSE 99 YEAR [ ][ ] DON'T KNOW YEAR 88 NO RESPONSE 99	
Q102	How old were you at your last birthday? <b>(COMPARE AND CORRECT Q102 IF NEEDED)</b>	AGE IN COMPLETED YEARS [ ][ ] DON'T KNOW 88 NO RESPONSE 99 ESTIMATE BEST ANSWER	
Q103	Have you ever attended school?	YES 1 NO 2 NO RESPONSE 99	→Q106 →Q106
Q104	What is the highest level of school you completed: primary, secondary or higher? <b>CIRCLE ONE</b>	PRIMARY 1 SECONDARY 2 HIGHER 3 NO RESPONSE 99	
Q105	How many total years of education have you completed up to now?	# YEARS COMPLETED [ ][ ] NO RESPONSE 99	
Q106	What is your religion?  <b>CIRCLE ONE</b>	Christian 1 Muslim 2 Buddhist 3 Hindu 4 Other (specify)----- 6 NO RELIGION 0	→Q108 →Q108 →Q108 →Q108 →Q108
Q107	What is your Christian denomination or church?	NO RESPONSE 99 Catholic 1 United Church of Zambia 2 Seventh Day Adventist 3 Reformed Church in Zambia 4 Pentecostal 5 Anglican 6 Jehovah Witness 7 Others (specify)_____ 8	→Q108
Q108	How long have you stayed here at this site/border? (days/months/years)	days _____ months _____ Years _____	
Q109	<b>FILTER CHECK</b> Q110 TO Q115 FOR TRUCK DRIVERS AND MINI/BUS/LIGHT TRUCK DRIVERS ONLY.... [ ]	NON DRIVER (UNIFORMED PERSONNEL) [ ]	→Q117
Q110	How many times have you come through this border/site in the past 3 months, that is since the beginning of last February 2003(ESTIMATION FOR MINIBUS/BUS/LIGHT TRUCK DRIVERS	NUMBER OF TIMES SINCE LAST [ ][ ] DON'T KNOW 88 NO RESPONSE 99	
Q111	How long did you stay last time you were at this border/site?	DURATION IN DAYS [ ][ ] DON'T KNOW 88 NO RESPONSE 99	
Q112	How long do you usually stay at this border/site	DURATION IN DAYS [ ][ ] DON'T KNOW 88 NO RESPONSE 99	
Q113	In which country are you or your company based? (if trucker base of truck company)  <b>CIRCLE ONE</b>	South Africa 1 Somalia 2 Malawi 3 Zimbabwe 4 Tanzania 5 Kenya 6 Mozambique 7 Congo DR 8	

No.	Questions and filters	Coding categories	Skip to																																				
		Botswana 10 Zambia 11 OTHER----- 12 NO RESPONSE 9																																					
Q114	Where do you reside when you are not travelling?  <b>RESPONDENT TO PICK ONLY ONE</b>	South Africa 1 Somalia 2 Malawi 3 Zimbabwe 4 Tanzania 5 Kenya 6 Mozambique 7 Congo DR 8 Botswana 10 Zambia 11 OTHER----- 12 NO RESPONSE 99																																					
Q115	What is your country of origin?	South Africa 1 Somalia 2 Malawi 3 Zimbabwe 4 Tanzania 5 Kenya 6 Mozambique 7 Congo DR 8 Botswana 10 Zambia 11 OTHER----- 12 NO RESPONSE 99																																					
Q116	What other occupation apart from driving do you do?	<b>NONE 1</b>  OTHER (specify) _____ 2																																					
Q117	During the last 4 weeks how often have you had drinks containing alcohol? Would you say ..... <b>READ OUT</b> <b>CIRCLE ONE</b>	Every day 1 At least once a week 2 Less than once a week 3 Never 4 DON'T KNOW 88 NO RESPONSE 99																																					
Q118	Some people have tried a range of different types of drugs. Which of the following, if any, have you tried?  <b>Any other?</b> <b>READ LIST</b>	<table border="0"> <thead> <tr> <th></th> <th>YES</th> <th>NO</th> <th>DK</th> <th>NR</th> </tr> </thead> <tbody> <tr> <td>Daga (Ichamba)</td> <td>1</td> <td>2</td> <td>88</td> <td>99</td> </tr> <tr> <td>Heroin</td> <td>1</td> <td>2</td> <td>88</td> <td>99</td> </tr> <tr> <td>Cocaine</td> <td>1</td> <td>2</td> <td>88</td> <td>99</td> </tr> <tr> <td>Mandrax</td> <td>1</td> <td>2</td> <td>88</td> <td>99</td> </tr> <tr> <td>Other-----</td> <td>1</td> <td>2</td> <td>88</td> <td>99</td> </tr> </tbody> </table>		YES	NO	DK	NR	Daga (Ichamba)	1	2	88	99	Heroin	1	2	88	99	Cocaine	1	2	88	99	Mandrax	1	2	88	99	Other-----	1	2	88	99	<b>IF NO DK NR</b> <b>→</b> <b>Q201</b>						
	YES	NO	DK	NR																																			
Daga (Ichamba)	1	2	88	99																																			
Heroin	1	2	88	99																																			
Cocaine	1	2	88	99																																			
Mandrax	1	2	88	99																																			
Other-----	1	2	88	99																																			
Q119	<b>IF EVER TRIED ANY OF THE DRUGS</b> During the last 4 weeks, would you say you took the above drug 1-everyday 2-at least once a week 3-less than once a week or 4- never	<table border="0"> <thead> <tr> <th></th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>99</th> </tr> </thead> <tbody> <tr> <td>Daga (Ichamba)</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>99</td> </tr> <tr> <td>Heroin</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>99</td> </tr> <tr> <td>Cocaine</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>99</td> </tr> <tr> <td>Mandrax</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>99</td> </tr> <tr> <td>Other -----</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>99</td> </tr> </tbody> </table>		1	2	3	4	99	Daga (Ichamba)	1	2	3	4	99	Heroin	1	2	3	4	99	Cocaine	1	2	3	4	99	Mandrax	1	2	3	4	99	Other -----	1	2	3	4	99	
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**FHI 2003 HIV/AIDS/STD BEHAVIORAL SURVEILLANCE SURVEY (BSS) FOR ADULTS**

**Section 2 Marriage and live-in partnerships**

No.	Questions and filters	Coding categories	Skip to
Q201	Have you <i>ever</i> been married?	YES 1 NO 2 NO RESPONSE 99	→ Q203 → Q203
Q202	How old were you when you first married?	Age in years [ ][ ] DON'T KNOW 88 NO RESPONSE 99	
Q203	What is your <b>current marital</b> relationship?  (PROBE IF RESPONSE NOT CLEAR)	currently married, living with spouse 1 currently married, living with other sexual partner 2 currently married, not living with spouse or any other sexual partner 3 not married, living with sexual partner 4 not married, not living with sexual partner 5 NO RESPONSE 99	→ Q301 → Q301
Q204	IF MARRIED:  Do you have more than one wife?	YES 1 NO 2 NO RESPONSE 99	

**FHI 2003 HIV/AIDS/STD BEHAVIORAL SURVEILLANCE SURVEY (BSS) FOR ADULTS**

**Section 3 Sexual history: numbers and types of partners**

Now I'd like to ask you some questions that *may be difficult and personal. But as I said at the beginning, your answers to these questions will be treated with strict confidentiality and will not be linked to you in any way. The questions that will follow will all be about your sexual activities and partners...*

No.	Questions and filters	Coding categories	Skip to
Q301	Have you ever had sexual intercourse?  [For the purposes of this survey, "sexual intercourse" is defined as vaginal or anal sex]	YES 1 NO 2 NO RESPONSE 99	→Q801
Q302	At what age did you first have sexual intercourse?	AGE IN YEARS [ ][ ] DON'T KNOW 88 NO RESPONSE 99	
Q303	Have you had sexual intercourse in the last 12 months? That is since last April last year	YES 1 NO 2 NO RESPONSE 99	→Q801
Q304	Think about <i>sexual</i> partners you've had in the last 12 months.  How many are:  a) your wife (s)  b) living in partner  c) girl friend not living with you (regular)  d) someone paid for sex (commercial)  e) non-regular, non-commercial (casual)	<b>WIVES</b> [ ][ ]  NO RESPONSE 99  <b>LIVING IN PARTNER</b> [ ][ ] DON'T KNOW 88 NO RESPONSE  <b>GIRL FRIEND</b> [ ][ ]  NO RESPONSE 99  <b>PAID FOR SEX</b> [ ][ ] DON'T KNOW 88 NO RESPONSE 99  <b>CASUAL</b> [ ][ ] DON'T KNOW 88 NO RESPONSE 99	

**2003 HIV/AIDS/STD BEHAVIORAL SURVEILLANCE SURVEY (BSS) FOR ADULTS**

**Section 4 Sexual history: regular partners**

No.	Questions and Filters	Coding categories	Skip to
Q401	FILTER: CHECK Q304a  HAD SEX WITH WIFE OR LIVING IN PARTNER DURING <u>PAST 12 MONTHS</u> .... [ ]  ↓	DID NOT HAVE SEX WITH WIFE OR LIVING IN PARTNER DURING <u>PAST 12 MONTHS</u> [ ]→	<b>Q501</b>
Q402	<b>If married</b>  How many times did you have sexual intercourse with your wife over the last 30 days? <i>That is since the beginning of April this year</i>	Number of times [ ][ ] NO WIFE 77 DON'T KNOW 88 NO RESPONSE 99	<b>→Q407</b>
Q403	The <b>last time</b> you had sex with wife; did you and your wife use a condom?	YES 1 NO 2 DON'T REMEMBER 88 NO RESPONSE 99	<b>→Q405</b> <b>→Q406</b> <b>→Q406</b>
Q404	Who suggested condom use that time?  <b>CIRCLE ONE</b>	Myself 1 Wife 2 Joint decision 3 NO RESPONSE 99	<b>→Q406</b> <b>→Q406</b> <b>→Q406</b> <b>→Q406</b>
Q405	Why didn't you and your wife use a condom that time?  Any other reasons?  <b>DO NOT READ</b>  <b>CIRCLE ALL ANSWERS MENTIONED</b>	Not available N Y Too expensive 1 2 Partner objected 1 2 Don't like them 1 2 Used other contraceptive 1 2 Didn't think it was necessary 1 2 Didn't think of it 1 2 itching 1 2 Other _____ 1 2 DON'T KNOW 1 2 NO RESPONSE 1 2	
Q406	In general, how often did you and your wife (s) use a condom during the past 12 months? <i>That is since last April 2002----</i>  Would you say every time, almost every time, sometimes or never?	EVERY TIME 1 ALMOST EVERY TIME 2 SOMETIMES 3 NEVER 4 DON'T KNOW 88 NO RESPONSE 99	
Q407	Do you have a live in partner, meaning a sexual partner living with you but not married to you?  <b>CHECK Q304b</b>	YES 1 NO 2 NO RESPONSE 99	<b>→Q501</b>
Q408	<b>If have live in partner</b>  How many times did you have sexual intercourse with your live in partner over the last 30 days? <i>That is since the beginning of April 2003</i>	Number of times [ ][ ] NO LIVE IN PARTNER 77 DON'T KNOW 88 NO RESPONSE 99	
Q409	The last time you had sex with a living in partner did you and your partner use a condom?	YES 1 NO 2 DON'T REMEMBER 8 NO RESPONSE 99	<b>→Q411</b> <b>→Q412</b> <b>→Q412</b>
Q410	Who suggested condom use that time?  <b>CIRCLE ONE</b>	Myself 1 My partner 2 Joint decision 3 NO RESPONSE 99	<b>→Q412</b> <b>→Q412</b> <b>→Q412</b> <b>→Q412</b>
Q411	Why didn't you and your partner use a condom that time?	Not available N Y Too expensive 1 2 Partner objected 1 2	

No.	Questions and Filters	Coding categories	Skip to
	Any other reasons?  DO NOT READ LIST <b>CIRCLE ALL ANSWERS MENTIONED</b>	Don't like them 1 2 Used other contraceptive 1 2 Didn't think it was necessary 1 2 Didn't think of it 1 2 itching 2 2 Other _____ 2 2 DON'T KNOW 88 NO RESPONSE 99	
Q412	In general, how often did you and your live in partner(s) use a condom during the past 12 months? <i>That is since last April last year</i>  Would you say every time, almost every time, sometimes or never?	EVERY TIME 1 ALMOST EVERY TIME 2 SOMETIMES 3 NEVER 4 DON'T KNOW 88 NO RESPONSE 99	

**FHI 2003 HIV/AIDS/STD BEHAVIORAL SURVEILLANCE SURVEY (BSS) FOR ADULTS**  
**Section 5 Sexual history: GIRLFRIEND/ REGULAR partners**

No.	Questions and Filters	Coding categories	Skip to
Q501	FILTER: CHECK Q304c  HAD SEXUAL INTERCOURSE WITH A GIRL FRIEND (REGULAR/NOT LIVING TOGETHER) IN <u>LAST 12 MONTHS</u> ...[ ] ↓	HAS NOT <i>HAD</i> SEXUAL INTERCOURSE WITH A GIRL FRIEND (REGULAR/NOT LIVING TOGETHER) IN <u>LAST 12 MONTHS</u> ... [ ]→	→Q601
Q502	Think about your <b>most recent</b> girl friend ( <i>someone you are not living together</i> ). How many times did you have sexual intercourse with this person over the last 30 days? <i>That is since the beginning o April this year</i>	Number of times [ ][ ] DON'T KNOW 88 NO RESPONSE 99	
Q503	The <b>last time</b> you had sex with a girl friend( <i>someone you are not living together</i> ), did you and your partner use a condom?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	→Q505 →Q506 →Q506
Q504	Who suggested condom use that time?  <b>CIRCLE ONE</b>	Myself 1 My partner 2 Joint decision 3 NO RESPONSE 99	→Q506 →Q506 →Q506 →Q506
Q505	Why didn't you and your partner use a condom that time?  <b>CIRCLE ALL ANSWERS MENTIONED</b>	Y N Not available 1 2 Too expensive 1 2 Partner objected 1 2 Don't like them 1 2 Used other contraceptive 1 2 Didn't think it was necessary 1 2 Didn't think of it 1 2 Could reduce the pleasure 1 2 Other _____ 1 2 DON'T KNOW 88 NO RESPONSE 99	
Q506	In general, how often did you and your girl friend ( <i>someone you are not living together</i> ) use a condom during the past 12 months? <i>That is since Beginning of April last year-</i>  Would you say every time, almost every time, sometimes, or never?	EVERY TIME 1 ALMOST EVERY TIME 2 SOMETIMES 3 NEVER 4 DON'T KNOW 88 NO RESPONSE 99	

**FHI 2003 HIV/AIDS/STD BEHAVIORAL SURVEILLANCE SURVEY (BSS) FOR ADULTS**

**Section 6 Sexual history: COMMERCIAL/PAY sexual partners**

No.	Questions and Filters	Coding categories	6.7.1.1.1.1
Q601	FILTER: CHECK Q304d  HAD SEX WITH COMMERCIAL SEX WORKERS OR SOMEONE YOU EXCHANGED MONEY OR GIFT FOR SEX) DURING <u>LAST 12 MONTHS</u> ..... [ ] ↓	DID NOT HAVE SEX WITH COMMERCIAL OR SOMEONE YOU EXCHANGED MONEY OR GIFT FOR SEX DURING <u>LAST 12 MONTHS</u> [ ]→	→Q608
Q602	Think about your <b>most recent</b> commercial sexual partner. How many times did you have sexual intercourse with this person over the last 30 days? <i>That is since the beginning of April this year-</i>	Number of times [ ] [ ] DON'T KNOW 88 NO RESPONSE 99	
Q603	The <b>last time</b> you had sex with a commercial partner; did you and your partner use a condom?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	→Q605 →Q606 →Q606
Q604	Who suggested condom use that time?  <b>CIRCLE ONE</b>	Myself 1 My partner 2 Joint decision 3 DON'T KNOW 88 NO RESPONSE 99	→Q606 →Q606 →Q606 →Q606
Q605	Why didn't you and your partner use a condom that time?  <b>ADD OTHER LOCALLY APPROPRIATE CATEGORIES AFTER PRE-TESTING</b>  <b>CIRCLE ALL ANSWERS MENTIONED</b>	Y N Not available 1 2 Too expensive 1 2 Partner objected 1 2 Don't like them 1 2 Used other contraceptive 1 2 Didn't think it was necessary 1 2 Didn't think of it 1 2 Other _____ 1 2 DON'T KNOW 88 NO RESPONSE 99	
Q606	In general, how often did you and your commercial/paying partner(s) use a condom during the past 12 months? <i>That is since last April 2002</i>  Would you say every time, almost every time, sometimes, or never?	EVERY TIME 1 ALMOST EVERY TIME 2 SOMETIMES 3 NEVER 4 DON'T KNOW 88 NO RESPONSE 99	
Q607	Did you have sex with any other kind of partner in last 12 months ( non-commercial/pay partner either spouse/live in partner)	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 4	→Q701 →Q701
Q608	<b>FILTER: CHECK Q304e</b>  IF HAD SEX WITH NON-REGULAR/NON-COMMERCIAL PARTNER DURING <u>PAST 12 MONTHS</u> .... [ ] ↓	DID NOT HAVE SEX WITH NON-REGULAR /NON-COMMERCIAL PARTNER DURING <u>PAST 12 MONTHS</u> [ ]→	→Q701
Q609	Think about your <b>most recent other kind of sexual partner (non-regular and non-commercial)</b> . How many times did you have sexual intercourse with this person over the last 30 days? <i>That is since the beginning of April 2003</i>	Number of times [ ] [ ] DON'T KNOW 88 NO RESPONSE 99	
Q610	The <b>last time</b> you had sex with <b>other kind of sexual partner</b> ; did you and your partner use a condom?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	→Q612 →Q613 →Q613



Q611	Who suggested condom use that time? <b>CIRCLE ONE</b>	Myself My partner Joint decision DON'T KNOW NO RESPONSE	1 2 3 88 99	→Q613 →Q613 →Q613 →Q613 →Q613
Q612	Why didn't you and your partner use a condom that time?  <b>ADD OTHER LOCALLY APPROPRIATE CATEGORIES AFTER PRE-TESTING</b>  <b>CIRCLE ALL ANSWERS MENTIONED</b>	Not available Too expensive Partner objected Don't like them Used other contraceptive Didn't think it was necessary Didn't think of it Other _____ DON'T KNOW NO RESPONSE	Y N 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 88 99	
Q613	In general, how often did you and <b>other kind of sexual partner</b> (s) use a condom during the past 12 months? <i>That is since last April last year-</i>  Would you say every time, almost every time, sometimes, or never?	EVERY TIME ALMOST EVERY TIME SOMETIMES NEVER DON'T KNOW NO RESPONSE	1 2 3 4 88 99	

**FHI 2003 HIV/AIDS/STD BEHAVIORAL SURVEILLANCE SURVEY (BSS) FOR ADULTS**  
*Section 7 Condoms*

No.	Questions and Filters	Coding categories	Skip to
Q701	<b>FILTER: SEE Q403, Q409, Q503, Q603, Q610</b>  <b>CONDOMS NOT USED..... [ ]</b> ↓	<b>CONDOMS USED</b> [ ]→	→Q704
Q702	Have you and a sexual partner <i>ever</i> used a male condom?  <i>(Show picture or sample of one.)</i> <i>(The respondent may not have used a condom with partners in sections 4-6, but may have used a condom at some other time in the past.)</i>	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	
Q703	Have you ever heard of a male condom?  <b>(Show picture or sample of one)</b> <b>(I mean a rubber object that a man puts on his penis before sex.)</b>	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	
Q704	Have you ever bought a condom?	YES 1 NO 2 NO RESPONSE 99	→Q707
Q705	Last time you bought condom, which brand was it?	Maximum 1 Lovers plus 2 Care 3 Protector 4 Success 5 Others (specify)----- 6	
Q706	Last time you bought condoms, how much did you spend?	ZK _____ DON'T KNOW 88	
Q707	How many condoms do you have on you now or do you have accessible for use? Would you please show them to me?	Number of condoms [ ] [ ] NONE 88 NO RESPONSE 99	
Q708	Do you know of any place or person from which you can obtain male condoms?	YES 1 NO 2 NO RESPONSE 99	

Q709	Which places or persons do you know where you can obtain male condoms?  Any others?  <b>PROBE AND RECORD ALL ANSWERS</b>	Shop Pharmacy Market Clinic Hospital Family planning centre Bar/guest house/hotel Peer educator Friend OTHER _____ NO RESPONSE	Yes No 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 99	
Q710	How long would it take you to obtain a condom (male or female) close to your house or to where you work?	Under 15 Mins 15 to 30 Mins 31 to 60 Mins More than 60 Mins DON'T KNOW NO RESPONSE	1 2 3 4 88 99	
Q711	<b>FOR SEXUALLY ACTIVE RESPONDENTS ONLY CHECK Q302</b> During the past 12 months, did you ever have sexual intercourse <i>without</i> using a condom with any sexual partner other than your wife?	YES NO DON'T KNOW NO RESPONSE	1 2 88 99	→Q713
Q712	Why didn't you and your partner use a condom that time?  <b>ADD OTHER LOCALLY APPROPRIATE CATEGORIES AFTER PRE-TESTING.</b>  <b>CIRCLE ALL ANSWERS MENTIONED.</b>	Not available Too expensive Partner objected Don't like them Used other contraceptive Didn't think it was necessary Didn't think of it Wanted pregnancy Didn't think partner had a disease Other _____ DON'T KNOW NO RESPONSE	Y N 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 88 99	
Q713	Have you ever heard of a female condom? <b>(Show picture or sample of one.)</b>	YES NO DON'T KNOW NO RESPONSE	1 2 8 9	→Q801 →Q801
Q714	Have you <i>ever</i> used a female condom? <b>(Show picture or sample of one.)</b>	YES NO DON'T KNOW NO RESPONSE	1 2 8 9	
Q715	Do you know of any place or person from which you can obtain female condoms?	YES NO NO RESPONSE	1 2 9	
Q716	Where would you feel most comfortable buying female condoms? Where do you prefer to buy condoms? <b>(Read list)</b>	Shop Pharmacy Market Clinic Hospital Family planning centre Bar/guest house/hotel Peer educator Friend Other _____ NO RESPONSE	Yes No 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 99	

**2003 HIV/AIDS/STD BEHAVIORAL SURVEILLANCE SURVEY (BSS) FOR ADULTS**  
**Section 8 STDs**

No.	Questions and filters	Coding categories	Skip to																														
Q801	Have you ever heard of diseases that can be passed through sexual intercourse?	YES 1 NO 2 NO RESPONSE 99	→Q804																														
Q802	Can you describe any symptoms of STDs in men? Any others?  <b>DO <u>NOT</u> READ OUT THE SYMPTOMS</b>  <b>CIRCLE 1 FOR ALL MENTIONED.</b>  <b>CIRCLE 2 FOR ALL <i>NOT</i> MENTIONED.</b>  <b>MORE THAN ONE ANSWER IS POSSIBLE.</b>	<table style="width:100%; border:none;"> <tr> <td></td> <td style="text-align:right;">Yes</td> <td style="text-align:right;">No</td> </tr> <tr> <td>GENITAL DISCHARGE</td> <td style="text-align:right;">1</td> <td style="text-align:right;">2</td> </tr> <tr> <td>BURNING PAIN ON URINATION</td> <td style="text-align:right;">1</td> <td style="text-align:right;">2</td> </tr> <tr> <td>GENITAL ULCERS/SORES</td> <td style="text-align:right;">1</td> <td style="text-align:right;">2</td> </tr> <tr> <td>SWELLINGS IN GROIN AREA</td> <td style="text-align:right;">1</td> <td style="text-align:right;">2</td> </tr> <tr> <td>OTHER _____</td> <td style="text-align:right;">1</td> <td style="text-align:right;">2</td> </tr> <tr> <td>NO RESPONSE</td> <td style="text-align:right;">1</td> <td style="text-align:right;">2</td> </tr> </table>		Yes	No	GENITAL DISCHARGE	1	2	BURNING PAIN ON URINATION	1	2	GENITAL ULCERS/SORES	1	2	SWELLINGS IN GROIN AREA	1	2	OTHER _____	1	2	NO RESPONSE	1	2										
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OTHER _____	1	2																															
NO RESPONSE	1	2																															
Q803	Can you describe any symptoms of STDs in women? ..... Any others?  <b>DO <u>NOT</u> READ OUT THE SYMPTOMS</b>  <b>CIRCLE 1 FOR ALL MENTIONED.</b>  <b>CIRCLE 2 FOR ALL <i>NOT</i> MENTIONED.</b>  <b>MORE THAN ONE ANSWER IS POSSIBLE.</b>	<table style="width:100%; border:none;"> <tr> <td></td> <td style="text-align:right;">Yes</td> <td style="text-align:right;">No</td> </tr> <tr> <td>ABDOMINAL PAIN</td> <td style="text-align:right;">1</td> <td style="text-align:right;">2</td> </tr> <tr> <td>GENITAL DISCHARGE</td> <td style="text-align:right;">1</td> <td style="text-align:right;">2</td> </tr> <tr> <td>FOUL SMELLING DISCHARGE</td> <td style="text-align:right;">1</td> <td style="text-align:right;">2</td> </tr> <tr> <td>BURNING PAIN ON URINATION</td> <td style="text-align:right;">1</td> <td style="text-align:right;">2</td> </tr> <tr> <td>GENITAL ULCERS/SORES</td> <td style="text-align:right;">1</td> <td style="text-align:right;">2</td> </tr> <tr> <td>SWELLINGS IN GROIN AREA</td> <td style="text-align:right;">1</td> <td style="text-align:right;">2</td> </tr> <tr> <td>ITCHING</td> <td style="text-align:right;">1</td> <td style="text-align:right;">2</td> </tr> <tr> <td>OTHER _____</td> <td style="text-align:right;">1</td> <td style="text-align:right;">2</td> </tr> <tr> <td>NO RESPONSE</td> <td></td> <td style="text-align:right;">99</td> </tr> </table>		Yes	No	ABDOMINAL PAIN	1	2	GENITAL DISCHARGE	1	2	FOUL SMELLING DISCHARGE	1	2	BURNING PAIN ON URINATION	1	2	GENITAL ULCERS/SORES	1	2	SWELLINGS IN GROIN AREA	1	2	ITCHING	1	2	OTHER _____	1	2	NO RESPONSE		99	
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ITCHING	1	2																															
OTHER _____	1	2																															
NO RESPONSE		99																															
Q804	Have you had leakage (genital discharge) during the past 12 months? <i>That is since April last year</i>	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99																															
Q805	How many times or separate episodes of genital discharge have you had in past 12 months?	ONCE 1 TWICE 2 MORE THAN THREE 3 NEVER 4																															
Q806	Have you had a genital ulcer/sore during the past 12 months?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99																															
Q807	How many times or separate episodes of genital sore/ulcers on private parts have you had in past 12 months?  <b>FILTER CHECK Q804 AND Q806</b>  HAD DISCHARGE OR SORE IN THE LAST 12 MONTHS <input type="checkbox"/>	ONCE 1 TWICE 2 MORE THAN THREE 3 NEVER 4 NO DISCHARGE OR ULCER <input type="checkbox"/> → IN LAST 12 MONTHS	→Q901																														

Q808	<p>The last time you had a genital ulcer / sore or discharge: did you do any of the following?</p> <p><b>READ OUT: MORE THAN ONE ANSWER IS POSSIBLE.</b></p> <p>a. Seek advice/medicine from a government clinic or hospital?</p> <p>b. Seek advice/medicine from a workplace clinic or hospital?</p> <p>c. Seek advice /medicine from a church or charity- run clinic or hospital?</p> <p>d. Seek medicine from a private clinic or hospital?</p> <p>e. Seek advice/medicine from a chemist?</p> <p>f. Seek advice/ medicine from a traditional healer?</p> <p>g. Bought capsules on the street?</p> <p>h. Took medicine you had at home?</p> <p>i. Seek treatment from CBI/blue house?</p> <p>j. Stop having sex during the time when you had the symptoms?</p> <p>k. <b>Always</b> use a condom when having sex during the time you had symptoms?</p> <p>l. Tell your sexual partner about the discharge/STD?</p>	<table border="0"> <tr> <td>YES</td> <td>NO</td> </tr> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>2</td> </tr> </table>	YES	NO	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	
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Q809	If yes to any of above (a-i) how long or how many days did it take between beginning of symptoms and seeking care?	<table border="0"> <tr> <td>NUMBER OF DAYS</td> <td><input type="text"/></td> </tr> <tr> <td>DON'T KNOW</td> <td>88</td> </tr> <tr> <td>NO RESPONSE</td> <td>99</td> </tr> </table>	NUMBER OF DAYS	<input type="text"/>	DON'T KNOW	88	NO RESPONSE	99																					
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DON'T KNOW	88																												
NO RESPONSE	99																												
Q810	Last time you had STD which was first source of treatment?	.Government hospital/clinic 1 .Work place clinic/hospital 2 .Sought treatment from private clinic 3 Sought medicine from traditional healer 4 Sought treatment from CBI/blue house.5 .Bought medicine from pharmacy/chemisty.6 Bought capsules from market .7 Others (specify)-----8																											

**FHI 2003 HIV/AIDS/STD BEHAVIORAL SURVEILLANCE SURVEY (BSS) FOR ADULTS**  
*Section 9 Knowledge, opinions, and attitudes*

No.	Questions and filters	Coding categories	Skip to
Q901	Have you ever heard of HIV or the disease called AIDS?	YES 1 NO 2 NO RESPONSE 99	→Q1001
Q902	Do you know anyone who is infected with HIV or who has died of AIDS?	YES 1 NO 2	→Q904

		DON'T KNOW 88 NO RESPONSE 99													
Q903	Do you have a close relative or close friend who is infected with HIV or who has died of AIDS?	YES, A CLOSE RELATIVE 1 YES, A CLOSE FRIEND 2 NO 3 NO RESPONSE 99													
Q904	Can people <b>protect</b> themselves from the HIV virus by using a condom correctly every time they have sex?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99													
Q905	Can a person get the HIV from Mosquito bites?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99													
Q906	Can people protect themselves from the HIV virus by having <b>one faithful, non infected</b> sex partner?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99													
Q907	Can people protect themselves from the HIV virus by abstaining (not having) from sexual intercourse?	YES 1 NO 2 DON'T KNOW 8 NO RESPONSE 9													
Q908	Can a person get the HIV virus by sharing a meal with someone who is infected?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99													
Q909	Can a person get the HIV by getting injections with a needle that was already used by someone else?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99													
Q910	Do you think that a healthy-looking person can be infected with HIV the virus that causes AIDS?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99													
Q911	Can a pregnant woman infected with HIV or AIDS transmit the virus to her unborn child?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99													
Q912	Can a pregnant woman infected with HIV or AIDS pass the virus to her child at time of delivery (child birth)?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99													
Q913	Can a pregnant woman infected with HIV or AIDS pass the virus to her child through breastfeeding?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99													
Q914	What can a pregnant woman do to decrease the chance of passing HIV to her unborn child?  DO NOT READ LIST  <b>CIRCLE ALL THAT ARE MENTIONED.</b>	<table border="0"> <tr> <td>Take medication (Antiretroviral)</td> <td>Yes 1</td> <td>No 2</td> </tr> <tr> <td>OTHER _____</td> <td>1</td> <td>2</td> </tr> <tr> <td>DON'T KNOW</td> <td>88</td> <td></td> </tr> <tr> <td>NO RESPONSE</td> <td>99</td> <td></td> </tr> </table>	Take medication (Antiretroviral)	Yes 1	No 2	OTHER _____	1	2	DON'T KNOW	88		NO RESPONSE	99		
Take medication (Antiretroviral)	Yes 1	No 2													
OTHER _____	1	2													
DON'T KNOW	88														
NO RESPONSE	99														
Q915	Do you know of any hospital program that is offering mother to child transmission of HIV prevention services?	YES 1 NO 2 DON'T KNOW 8 NO RESPONSE 99													
Q916	Where are mother to child transmission prevention services offered in this site?	Don't know 88													

Q917	If a student has HIV but is not sick, should he or she be allowed to continue attending school?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	
Q918	If a female relative of yours become ill with HIV, the virus that causes AIDS would you be willing to care for her in your household?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	
Q919	If a teacher has HIV but is not sick, should he or she be allowed to continue teaching in school?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	
Q920	If you knew a shopkeeper or food seller had the HIV virus, would you buy food from them?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	
Q921	If a member of your family become ill with HIV, the virus that causes AIDS, would you want it to remain secret?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	
Q922	Is it possible in your community for someone to get a confidential test to find out if they are infected with HIV? By confidential I mean that no one will know the result if you don't want them to know it.?	YES 1 NO 2 NO RESPONSE 9	
Q923	<i>Restate confidentiality statement</i> I don't want to know the result, but have you ever had an HIV test?	YES 1 NO 2 NO RESPONSE 9	<b>If 2 skip to Q926</b>
Q924	Did you voluntarily undergo the HIV test, or were you required to have the test?	Voluntary 1 Required 2 NO RESPONSE 99	
Q925	Please do not tell me the result, but did you find out the result of your test?	YES 1 NO 2 NO RESPONSE 9	
Q926	Would you be interested in having an HIV test?	YES 1 NO 2 NO RESPONSE 9	<b>If 1 skip to Q1001</b>
Q927	Why would you not be interested in an HIV test?	SCARED 1 DON'T WANT TO KNOW 2 FEAR TO BE ISOLATED 3 THERE IS NO CURE FOR HIV 4 LACK OF CONFIDENTIALITY 5 OTHER SPECIFY-----5	

**FHI 2003 HIV/AIDS/STD BEHAVIORAL SURVEILLANCE SURVEY (BSS) FOR ADULTS**  
**Section 10 Exposure to intervention**

No.	Questions and filters	Coding categories	Skip to
Q1001	Do you know of any service sites that offer STI services?	YES 1 NO 2 NO RESPONSE 99	<b>→Q1004</b> <b>→Q1004</b>
Q1002	What are the names of the places you know that offer STI services? (Probe with CBI/WVI/corridor of Hope project)	_____	<b>IF NOT CBI GO TO 1004</b>
Q1003	Have you ever talked to a staff member of CBI/WVI/Corridor of Hope project?	YES 1 NO 2 NO RESPONSE 99	
Q1004	Have you ever visited the drop-in centre/blue house for any reason?	YES 1 NO 2 NO RESPONSE 99	<b>→Q1007</b>

Q1005	Who introduced you to CBI/WVI/Corridor of Hope project?	PEER EDUCATOR (PE) 1 FRIEND WHO IS NOT PE 2 HEALTH CARE PROVIDER 3 OTHERS-----4	
Q1006	Last time you visited CBI/WVI/Corridor of Hope project where you given any information, or educational material?	YES 1 NO 2 NO RESPONSE 99	
Q1007	Which is your main source of information on STIs and HIV	Radio 1 Television 2 Friends 3 Health centre 4 CBI 5 Other specify _____ 6	
Q1008	Do you feel you have adequate information regarding STIs and HIV?	YES 1 NO 2 NO RESPONSE 99	
Q1009	At work do you have programs on HIV?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	
Q1010	If you are found to have HIV would the company allow you to continue working?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	
Q1100	TIME INTERVIEW COMPLETED		

*That is the end of our questionnaire. Thank you very much for taking time to answer. We appreciate your help.*