

# HIV HIGH RISK BEHAVIOURS AMONG NURSES

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for the degree of Master of Philosophy (HIV/AIDS  
Management) in the Faculty of Economics and Management  
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*Pectora coburant cultus recti*

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## **Declaration**

By submitting this assignment electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the owner of the copyright thereof (unless to the extent explicitly otherwise stated) and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

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## **Abstract**

Regardless of their age, sex and religious believes, nurses are aware of risky sexual behaviour and their perception of HIV transmission through sexual risk behaviour is unquestionable, in the community of study. However, knowledge about HIV sexual behaviour modification remains an element of concern.

The objectives of the study were to: To establish the HIV high risk behaviours for disease transmission at professional and social levels in the nursing community of the study; and to determine the attitudes and risks perceptions in HIV transmission in the nursing community.

The study was a survey, using a quantitative approach, based on modified standardised self-administered questionnaires that were distributed to the nurses in the hospital.

The result of the study showed that participants were generally sexually active in the past 12 months, and an equal number did/ or did not use a condom in their sexual encounters with their partner (46.4% each). Although some admitted having a sexual encounter with someone who was not their main partner (19.3%), the majority did not (61.3%). Those who admitted having sex with someone who was not their main partner had generally had a vaginal penetration (38.5%) and used a condom (53.8%). Participants have demonstrated an awareness of the use of hospital universal standard precautions against HIV transmission (72.7%).

The study concluded that regardless of their age, sex and religious believes, nurses are aware of risky sexual behaviour and their perception of HIV transmission through sexual risk behaviour is unquestionable, in the community of study. However, knowledge about HIV sexual behaviour modification remains an element of concern.

Some healthcare workers still trade sex in exchange for money, a number of them do not use condom in their sexual relationship, and some are ignorant and do not adhere to the guidelines of the universal standard precautions against HIV transmission.

## Opsomming

Ongeag hul ouderdom, geslag en geloof, is verpleegsters bewus van onveilige seksuele gedrag en hul persepsies van MIV oordrag deur seksuele oordrag is onverskoonbaar. Hul kennis rondom MIV seksuele gedragsverandering bly steeds kommerwekkend.

Die doelwitte van die studie was om MIV hoë risiko gedrag op professionele sowel as sosiale vlakke in die verpleeggemeenskap te bepaal sowel as die houding- en risiko persepsies rakende MIV oordrag.

'n Kwantitatiewe navoringsbenadering is in die studie gebruik en vraelyste is gebruik om data by die verpleegster in die hospitaal in te samel.

Die resultate van die studie het getoon dat die verpleegsters oor die algemeen seksueel aktief was in die laaste 12 maande en dat byna die helfde (46.4%) aangedui het dat hul nie kondome gebruik nie, hoewel dieselfde hoeveelheid ook aangedui het dat hul wel kondome gebruik. Hoewel daar van hulle was wat aangedui het om seksueel te verkeer met iemand wat nie hul maat was nie (19.3%) het nie meerderheid (64.3%) dit nie gedoen nie. Die wie aangedui het om seks met iemand as hul maat te hê, het dit gedoen deur vaginale penetrasie (38.5%) en deur die gebruik van kondome (53.8%).

Sommige gesondheidswerkers gebruik steeds seks in ruil vir geld, sommiges gebruik nie kondome nie en ander is agterlosig en voldoen nie aan die riglyne vir MIV voorkoming nie.

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We are grateful to the staff of the Africa Centre for HIV/AIDS Management for the scientific knowledge provided, the logistics and academic support in researching and finalising this study.

We would like to believe that the findings of this study will contribute to curbing the spread of the HIV/AIDS epidemic worldwide.

## **Acronyms**

AIDS Acquired Immunodeficiency Syndrome

ART Antiretroviral Therapy

CDC Centre for Disease Control

HCW Health Care Worker

HIV Human Immunodeficiency Virus

HTC HIV Testing and Counselling

PEP Post Exposure Prophylaxis

STD Sexually Transmitted Disease

VCT Voluntary counselling and Testing

WHO World Health Organisation

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## CHAPTER 1: INTRODUCTION

### 1.1 Introduction

The human immunodeficiency virus (HIV) is the virus that causes AIDS (acquired immune deficiency syndrome). The virus attacks the body's immune system, contributing ultimately to its vulnerability to opportunistic infections.

The virus is transmitted from person to person via bodily fluids, including blood and blood products, semen and vaginal discharge, as well as breast milk.

To date there is no evidence of transmission through saliva and tears. However, infection can be spread by sexual contact with an infected person, by sharing needles/syringes with someone who is infected, and through transfusions with infected blood.

Although healthcare workers are exposed to the virus every day at work, it is unlikely that they will acquire the virus from a patient, especially if they follow universal precautions, which are recommended with all patients. However, health care workers are also exposed to HIV transmission in their personal lives in the communities where they live.

The ultimate priority though, of all healthcare workers (HCWs) is determined by the maintenance of a healthy population and environment, and to manage adequately any condition that might become a threat to the health of their communities. However, the central problem arising from the perception of risk of occupationally transmitted Human Immunodeficiency Virus (HIV) infection amongst HCWs is that it may distract them from giving that expected quality healthcare.

Transmission of HIV among health care workers has been the subject of intense investigation throughout the course of the HIV epidemic. The percentage of health care workers with AIDS who have “no identified risk” for HIV infection has remained low (< 10%) and has not increased over time, despite the dramatic increase in the number of AIDS cases and concomitant exposure of health care workers to patients with HIV disease.

To date, there has been no report of transmission after exposure to body fluids other than blood or fluids heavily contaminated with blood. As a result, although the potential for HIV transmission to health care providers clearly exists, the risk of infection is inherently low and can be further minimized by following routine precautions to prevent transmission.

For healthcare workers, the main risk of HIV transmission is through accidental injuries from needles or other sharp medical instruments that may be contaminated with the virus. However, even this risk is small. It is therefore recommended that Health care workers should assume that the blood and other body fluids from all patients are potentially infectious. They should therefore follow infection control precautions at all times.

These precautions include:

- Routine use of barrier devices such as gloves and/ or goggles when anticipating contact with blood or blood products and body fluids,
- Immediate hand washing and washing of other skin surfaces after contact with blood or blood products and body fluids, and
- Careful handling and disposing of sharp instruments during and after use.

Researchers estimate that about 0.3-1% of healthcare workers exposed to the virus by an accidental needle stick or puncture develop HIV. This is largely because action can be taken to reduce the risk of transmission immediately after exposure.

However, Occupational exposures should be considered urgent medical concerns. Healthcare workers who are exposed to the virus should immediately be offered post-exposure prophylaxis (PEP), consisting of antiretroviral therapy (ART) to prevent the acquisition/transmission of HIV.

Given that occupational exposure is not the only risk for HIV transmission in health care workers, education and training of Health care workers regarding HIV transmission in general, including in their personal lives in their respective communities is mandatory. Current studies have demonstrated that the rate of transmission of HIV in this population by non occupational exposure does not differ

to that of the general population. In these cases, PEP must also be offered, even though Current antiretroviral drugs cannot cure HIV infection or AIDS. However, it is recognised that they can reduce the risk of transmitting disease to someone else by suppressing the virus, even to undetectable levels, though unable to completely eliminate HIV from the body.

## **1. 2 Background**

The HIV epidemic constitutes one of the challenges for public health professionals (Fauci, Braunwald, Kasper, Hauser, Longo, Jameson & Loscalzo, 2008, pp. 1144-1145).

In the absence of a definite cure for the disease, prevention measures at social and occupational levels remain the key for control of the spread of HIV infection. Prevention measures include the practice of “safer sex” and sexual abstinence, avoidance of multiple sexual partners, and adherence to universal standard precautions in hospitals.

Healthcare Professionals and nurses in particular are at the frontline of the response against HIV transmission. Unfortunately, they face the risk of themselves becoming infected with the HIV through both their professional and social behaviours.

Yet, Nurses are expected to display an exemplary behaviour towards prevention measures against HIV and AIDS transmission, as they are regarded as “role models” in their respective communities, because of their “assumed” knowledge in matters of HIV and AIDS, and their close proximity with people living with HIV and AIDS at their workplace.

### **1.2.1 Research problem**

Everyday life however, reveals a steady increase in HIV and AIDS transmission among Nurses, parallel to their high HIV occupational and social risk taking behaviours, despite their knowledge and awareness of the disease transmission.

Nurses are confronted with social, psychological and scientific barriers to testing for HIV such as the fear of a positive result, the lack of confidentiality at testing for HIV,

the stigma attached to the HIV status, and the fear of discrimination and isolation from other colleagues at their workplace.

What is not known is whether other factors exist that contribute to these risky behaviours, perpetrating the transmission of HIV and AIDS.

### **1.2.2 Research question**

“Which factors contribute to the HIV-related risk taking behaviour by Nurses in the selected environment of this study?” (Johannesburg)

### **1.2.3 Significance of the study**

The increasing rate of HIV transmission amongst Nurses deprives the community from its workforce, resulting from the loss of lives, the absenteeism at work, the low morale, the lack of motivation caused by the AIDS burden.

Beyond their occupation, Nurses are ordinary people with a personal as well as family life to take care of, in the same way as is the case for the general population affected by the HIV and AIDS.

The significance of this study is that it may help uncover the factors that perpetrate the HIV and AIDS transmission amongst this category of the population, providing therefore a platform for a more effective and efficient response against the HIV and AIDS epidemic. Measuring the HIV knowledge, risk perception and attitudes are linked to behaviour change, both in theory and practice.

Furthermore, given that the HIV risk reduction depends on the amount of information available on transmission and prevention, as well as people’s motivation to reduce the risk, based on their behavioural skills for accomplishing specific tasks contributing to risk reduction, the Nurses’ contribution in the application of this concept is of paramount importance.

### **1.2.4 Aim and objectives**

The aim of this research study is to identify the factors that contribute to risky behaviours among Nurses, in order to make recommendations on intervention strategies to contribute to reduction of risky behaviour.

The objectives of the study however are:

- To establish the HIV high risk behaviours for disease transmission at professional and social levels in the Nursing community of the study, based on current available published literature;
- To determine the attitudes and risks perceptions in HIV transmission in the Nursing community;

The study will be based on a pilot study presented as an assignment for the post graduate diploma in HIV/AIDS Management at the Stellenbosch University in 2011.

## CHAPTER 2: LITTERATURE REVIEW

According to UNAIDS, WHO and UNICEF (2011), at the end of 2010, it was estimated that approximately 34 million people are living with HIV/AIDS worldwide. The proportion of adults living with HIV/AIDS who are women is estimated at 50%.

3.4 million Children are living with HIV/AIDS, of which 390,000 children were newly infected in 2010, against 2.7 million people who were newly infected with HIV in 2010 globally, all ages inclusive. AIDS deaths in 2010 were estimated at 1.8 million worldwide.

HIV/AIDS in South Africa is a prominent health concern; its prevalence is believed to be higher than any other country in the world.

The 2007 UNAIDS report estimated that 5,700,000 South Africans had HIV/AIDS, or just under 12% of South Africa's population of 48 million. In the adult population, excluding children, the rate is 18.10% (<https://www.cia.gov>).

The number of infected is larger than in any other single country in the world. The other top five countries with the highest HIV/AIDS prevalence are all neighbours of South Africa. In 2007, only 28% of people in South Africa with advanced HIV/AIDS were receiving anti-retroviral treatment (ART). In 2004, 2005 and 2006 the figures were 4%, 15% and 21% respectively.

By 2009, nearly 1 million or about 2% of all adult South Africans were receiving antiretroviral therapy (ART), of which 38% were children. ([www.statssa.gov.za/publications/P0302/P03022010.pdf](http://www.statssa.gov.za/publications/P0302/P03022010.pdf). page 8)

In 2010, some 280,000 South Africans died of HIV/AIDS. In the aught, between 42% and 47% of all deaths among South Africans were HIV/AIDS deaths ([www.statssa.gov.za/publications/P0302/P03022010.pdf](http://www.statssa.gov.za/publications/P0302/P03022010.pdf). page 8)

Although new infections among mature age groups in South Africa remain high, new infections among teenagers seem to be on the decline. HIV/AIDS prevalence figures in the 15–19 year age group for 2005, 2006 and 2007 were 16%, 14% and 13% respectively.



Publications related to HIV prevention measures are diverse. Conversely, there are few publications focusing particularly to the risk taking behaviours of healthcare workers in their professional and social lives.

Studies on HIV prevalence among health workers usually focus on occupational exposure to HIV. Little is known about HIV prevalence in this group. However, it is expected that HIV prevalence among health workers will reflect prevalence in their society.

According to Shisana, Hall, Maluleke, Chauveau, Schwabe (2004, pp846) most of the studies that have reported HIV/AIDS mortality among health workers are based on indirect estimates of HIV/AIDS. In Malawi, 2 researchers reported that in 1999 2% of health care workers died of AIDS (60 deaths out of 2 979). Among female health care workers, the highest death rates were among those aged 25 - 34 years. The cause of death was reported to be tuberculosis (TB) in 47% of deaths, chronic illness in 45% and acute illness in the remainder. Chronic illness was thought to be due to AIDS, with TB being the most common cause of death. The study did not measure AIDS mortality directly.

In a hospital study of deaths of female nurses in Zambia, Buve *et al.* estimated that the HIV/AIDS mortality rate was 2 in every 1 000 in 1980 - 1985, increasing to 7.4 in 1986 – 1988 and 26.7 in 1989 - 1991.

HIV is transmitted sexually by both heterosexual and homosexual contacts, by direct contact with blood and blood products, by vertical transmission of infected mothers to their infants during pregnancy, at delivery, or via breast milk feeding (Fauci et al. 2008).

## **2.1 Definition of HIV-related high risk behaviours**

HIV-related high risk behaviours are defined as the individual's social and occupational activities that expose him to the risk of becoming infected with the HIV.

### **2.1.1 Health Care workers**

In the health care setting are exposed to the **occupational risks** of infection with HIV by direct contact with blood and blood products from patients infected with the

HIV. The commonest mode of exposure is by far the accidental needle stick injury. Other circumstances of occupational exposure are cut injuries with infected sharp instruments or tissues such as bones fragments during surgical and orthopaedic procedures, percutaneous and mucocutaneous direct exposure to infected blood or body fluids.

Ippolito (1993, pp. 1451-1458) reported 89% of HIV infected Health care workers resulting from needle stick injuries (0,10% seroconversion rate) and 11% of those infected with mucous membranes exposure to infected body fluids (0.63% seroconversion rate). The Author highlighted the low seroconversion rates after occupational exposure.

Ippolito, Puro, Heptonstall, Jagger, De Carli and Petrosillo (1999, pp. 365-383) further published that the average estimated risk of HIV infection for healthcare workers following percutaneous or mucous membranes exposure is <0.5% in incidence studies. This observation was further confirmed by the findings of Kennedy and Williams (2000, pp. 387-391) as well as those of Henderson, Fahey, Willy, Schmitt, Carey, Koziol, Lane, Fedio and Saah (1990, pp. 740-746) reporting an average risk of HIV transmission of 0.3% after such exposure.

Publications of the World Health Organisation (WHO) in 2006 demonstrated that apart from being exposed to HIV like every member of the general community through sexual contact, health workers risk contracting the virus through occupational exposure. Further to this, a study in Malawi demonstrated that almost 10% of deaths in the Ministry of Health between 1995 and 2000 were estimated to be due to HIV and AIDS, with the majority in the most productive age group of 20-44 years (Martin-Staple, 2004).

Estimates of the WHO (2002) show that almost 2.5% of HIV cases affecting Health care Workers are the result of needle-stick injuries. Data from the Centre for Disease Control (CDC) in 2001 also show that the risk for HIV transmission from a single percutaneous exposure is approximately 0.3%. This risk of contracting HIV through blood borne pathogens is enhanced by excessive handling of contaminated needles resulting from unsafe practices coupled with poor infection practices (Aisien, 2005).

To make matters worse, data collected in Malawi, related to Health care workers access to post-exposure prophylaxis following occupational exposure to HIV demonstrated a poor access to these facilities with 74% of those affected not seeking help due to the lack of awareness of the program, 15% due to the fact that they did not want to be tested for HIV and some due to the thought that occupational exposure was not serious (Oosterhout, 2007).

This study confirmed the findings from other studies that reported a low uptake of Health care workers of HIV counselling and testing, resulting from the fear of stigmatization (Kiragu et al., 2007). Yet, further studies demonstrate that their (Health care workers) coping mechanisms with HIV is poor with most of them remaining in “hiding”, refusing to talk about their illness and therefore choosing to suffer in silence, missing opportunities to benefit from treatment, care and support programs (Dieleman et al., 2007). Often, this fear is justified by the lack of privacy and confidentiality in HIV counselling and testing, which may contribute to rumours and gossip in the workplace from colleagues, isolation of patients resulting in denial of proper medical care, verbal abuse, manifested by HIV stigma.

In his report, Allen (1988, pp.2-5) stated that age, race and sex distribution of persons with AIDS employed in health care services is similar to that of all AIDS cases. Most (95.1%) have a risk factor for HIV infection unrelated to employment. The remaining 4.9% were distributed between occupational and other unknown risk factors for HIV infection.

Health Care Workers are also at increased risk of infection with HIV by their social life risk behaviours often resulting from their low level of education in HIV transmission, ignorance and rejection of behaviour modification measures, migration, economic reasons and gender inequality, the increasing casual use of drugs and substances that potentiate exposure to risky behaviours such as alcohol abuse and sharing of needles and other paraphernalia (“works”) during intravenous injection of recreational drugs (Fauci et al. 2008).

According to Diane Chinn, *“substance abuse affects people in all areas of health care system, including doctors, nurses, dentists, therapists, pharmacists, clinical and laboratory technicians. But some health care workers may be at greater risk because*

*of where they work or their medical specialty. Physicians working in emergency medicine, psychiatry and anaesthesiology are at highest risk for substance abuse.*

*Nurses who work in emergency rooms, intensive care units, surgical services and in oncology (cancer) units are more likely to develop substance abuse issues than other nurses such as, those who work in paediatric and women's health services, which have very low rates of substance abuse problems among nurses.*

*Health care workers in these areas perform high risk procedures, work long hours and must make life-or-death decisions on a daily basis. In addition, health care professionals work in an environment where prescription medications are seen as effective tools to heal the body or calm the mind".*

### **2.1.3 Gender inequality**

Gender inequalities contribute to women's vulnerability to HIV infection. In the workplace, gender inequality contributes to women trading casual sexual relationships with their Managers, Supervisors often with little control on how, when and where sex takes place, unable to communicate their need for safer sex with partners and lacking the ability to refuse unsafe sex, in order to gain their favours, to secure their employment or escalate to positions of power.

### **2.1.4 Economic factors**

Economic factors affect women more than men to some extent because low income and wages, insufficient to meet one's current needs, lead to chronic shortfalls in their monthly budget, aggravated by their responsibilities such as number of dependents, rent, purchases for their households (Makoe, Mokomane, 2008). The above threat of poverty may lead to increased vulnerability to sexual exploitation through the need to trade or sell sex, or to engage in multiple concurrent relationships, in order to survive (Epstein, 2007).

### **2.1.5 Demographic factors**

Low income or wages and lack of economic opportunities drive workers into **migration**, from one hospital or group of hospitals to another, often leaving their

families behind and engaging in compromising casual sexual relationships that increase their risk for infection, far from their families.

Women with low income, Nurses in particular feel the need to work overtime, indirectly increasing their risk to being raped by strangers between their home and workplaces when walking in the very early hours of the morning or late evening, to and from work.

Describing the social aspect of risk taking behaviours in young people of Ethiopia, Tefera (1999, pp. 1263-1272) reported high risk sexual behaviours, and yet a low perception of individual risks.

Furthermore, in *JAMA* (1991), surveillance data for occupationally acquired HIV infection in the USA suggested that most health care workers with AIDS acquired the HIV infection through a non occupational route, highlighting the role of social and particularly sexual risk taking behaviours in HIV transmission.

HIV-related high risk behaviours by Nurses are also determined by the transmission of the virus to their infants during pregnancy and after delivery when Nurses fail to comply with the recommendations regarding the use of antiretroviral therapy during pregnancy, in order to protect their unborn babies, and/ or the recommendations regarding breast feeding by mothers living with the HIV. This non-compliance often resulted from the fear of being identified by colleagues at work as HIV-positive, causing rumours and gossip, speculations of promiscuous sexual lifestyle, and discrimination (Kermode, Holmes, Langkam, Thomas & Gifford, 2005).

## **2.2 Reasons for HIV-related high risk behaviours**

Several reasons can be attributed to the HIV-related risk taking behaviours in the nursing community. In their occupational lives, Nurses expose themselves to the risk of becoming infected with HIV by not complying with the Universal standard precautions, by direct patient care where one has exsudative lesions or weeping dermatitis, and by not disinfecting or not sterilizing reusable devices employed in invasive procedures.

In a study by Singru and Banerjee (2008) Occupational exposure to blood and body fluids in the preceding 12 months was reported by 32.75% of the respondents. The

self-reported incidence was the highest among the nurses. Needle-stick injury was the most common mode of such exposures (92.21% of total exposures).

Index finger and thumb were the commonest sites of exposure. Only 50% of the affected individuals reported the occurrence to concerned hospital authorities. Less than a quarter of the exposed persons underwent post-exposure prophylaxis (PEP) against HIV, although the same was indicated in about 50% of the affected HCWs based on the HIV status of the source patient.

In their social lives, Nurses are continuously exposed to the risk of becoming infected with the HIV for several reasons:

- The lack of knowledge about HIV transmission (one should not always assume that knowledge);

A study conducted in Kenya by Rogstad, Tesfaledet, Abdullah, and Ahmed-Jushuf, In order to determine knowledge of HIV transmission, sexual risk behaviour and perception of risk in African health care workers, showed that even in the educated group, misconceptions regarding HIV transmission were high and many continue to be at risk for their sexual behaviour. 200 employees at the Aga Khan Hospital, Nairobi, Kenya, were asked to complete an anonymous self-administered questionnaire. There was a 75% response rate.

Twenty-five per cent believed that condoms were not protective against HIV transmission. Eighty-nine per cent believed oral sex to be a risk factor, as did 70% for kissing, 41% for masturbation of a partner and 43% for nursing an AIDS patient. Younger people were more likely to think condoms were ineffective ( $P = 0.007$ ) and that insect bites were a significant risk factor ( $P = 0.004$ ). Twenty-seven per cent had changed their sexual behaviour as a result of the AIDS epidemic, but 48% did not use condoms with non-regular partners. Four had current or previous homosexual relationships. Seventy per cent believed they were at risk of being HIV positive but only 12% had been tested.

The ignorance of their own HIV status or the fear to test for HIV puts others at risk by their own behaviours;

- The lack of counselling and education about HIV transmission when they are diagnosed with the disease, as demonstrated by their low uptake, resulting from the fear of stigmatization (Kiragu et al., 2007; Tarwireyi and Majoko, 2003).
- The erroneous belief that take preference to scientific knowledge in HIV management (i.e. some communities in South Africa believe in the cure from the disease by having sex with a virgin);
- The misconceptions of prevention measures such as the practice of circumcision and condom use;
- The deliberate choice to ignore or reject the practice of preventative behaviours regardless of their awareness of the risks... and many more.

*“The secrecy surrounding the disease contributed to the stigma. Health workers cannot talk openly which leads to gossip as well as the use of coded language when People Living With AIDS are being referred to. The stigma also relates to the fact that many patients have contracted the disease through promiscuous behaviours”* (HALL, 2003, pp.7).

### **2.3 Implications of HIV-related high risk behaviours**

The implications of these risky behaviours can be described at individual, professional and community levels:

At **individual level**, risky behaviour exposes the person involved to the infection with the HIV and therefore the risk of developing AIDS. Eventually, this may result in the increased absenteeism at work because of ill health, the decrease in morale, motivation and individual productivity, adversely impacting on financial income and the ability to look after one’s family needs.

According to HALL (2003), the secrecy surrounding the disease reduces their productivity, confront them with ethical issues and hinder them in curbing the further spreading of HIV/AIDS. Nurses can also be infected with the disease, which will ultimately lead to increased absenteeism, stress and lower performance among sufferers and increased workloads and emotional discontent for the remaining workforce.

At **professional level**, the infection with HIV prevents Nurses from providing patients with a proper care. Furthermore, as reported by UNAIDS (2002), companies are adversely affected by the high HIV prevalence among the workforce as determined by the measurement of HIV/AIDS-associated impact indicators such as sick leave, compassionate leave, absenteeism, ill-health, health-care costs, retirement, death, training, recruitment and payroll costs... These factors turn employees once considered as assets to the company into liabilities.

According to Barnett and Whiteside (2002: 242) HIV/AIDS raises costs, reduces the productivity of individual workers and alters the firm's operating environment through:

- Increased absenteeism, the result of employee ill health or because staff, particularly woman, take time off to care for sick members of their families or because funeral ceremonies are frequent and time consuming;
- Falling productivity: workers whose physical or emotional health is failing will be less productive and unable to carry out more demanding jobs;
- Employees who retire on medical grounds or who die have to be replaced and their replacements may be less skilled and experienced;
- Recruitment and training of replacement workers incurs costs for an organisation;
- Employers may increase the size of the workforce and hence payroll costs to cover for absenteeism;
- As skilled workers become scarcer, wage rates may increase; and
- The business environment may change with investors reluctant to commit funds if they think AIDS and its impact will compromise their investments and returns.

HALL (2003), further states that there is insufficient publication on the impact of AIDS from the employee, rather than from the South African organisational perspective at the work place. The effects of HIV and AIDS in the work place will generally affect the job load, stress level, job satisfaction and performance, relationships with co-workers, and perhaps influence the employee's decision to leave or to stay with a company.

At the **community level**, HIV-related risk taking behaviours ultimately contribute to the spread of the infection to the general population.



## **2.4 Nurses' perceptions and attitudes towards HIV-related high risk behaviours**

The possibility of becoming infected with the HIV virus is a major concern for nurses. Various authors have reported nurses' fear of becoming infected in the course of their professional duties (Fusilier et al., 1998; Horsman & Sheeran, 1995; Loewenbrück, 2000). Loewenbrück, Horsman and Sheeran have indicated that the fear experienced is normally far greater than the actual risk of infection. Also, nurses' perceived risk of infection after exposure to other infectious diseases such as the Hepatitis B-virus is low if compared to their perceived risk of contracting HIV.

However, in South Africa the enormous increase in the number of infections, together with a lack of enforced precautions by government, continuously fuels the fear of infection among health workers, especially those operating in trauma units (Wessels, 1997).

Barden-O'Fallon, DeGraft-Johnson, Bisika, Sulzbach, Benson and Tsui (2004) stated that Knowledge of HIV does not necessarily translate into perceived risk. In addition, there appear to be a gender difference in the influence of cognitive and behavioural factors on perceived risk.

In Ghana, Awuso-Asare and Marfo (1997, pp. 271-280) demonstrated a gap between knowledge and practice among the health care workers. Although they were aware of the basic precautions to avoid infection, and of the process of counselling, yet they did not follow them in spite of their own observation that the disease poses a threat to them. There was however a lack of consensus among those interviewed on the issue of confidentiality.

According to Roqstad, Tesfaledet, Abdullah, and Ahmed-Jushuf (1993, pp. 200-3), in Kenya, 70% of Nurses interrogated on their sexual risk taking behaviour believed they were at risk of being HIV positive but only 12% had been tested. This study demonstrated that even in the educated group, misconceptions regarding HIV transmission were high and many continue to be at risk for their sexual behaviour.

This is supported by Kiragu (2007, pp. 131-6) when in Zambia, physicians, nurses, clinical officers, and paramedics were interviewed to assess HIV/AIDS risk-taking and status awareness. Only 33% had been tested for HIV and only 24% said their partners had been tested. 26% of sexually active respondents had multiple partners,

37% of these had not used condoms. Only 60% of respondents believed condoms were effective in preventing HIV. In this survey, women were less likely to trust or use condoms even in high-risk relationships. The data suggested the need to develop HIV/AIDS programs for health care workers, with emphasis towards gender-based obstacles hampering safer behaviours.

The findings by Kermode et al. (2005) showed a general willingness of Health Care Workers to provide care for patients with HIV, tempered by concerns regarding provision of such care. The published data clearly indicate the need to explore the HIV risk taking behaviour in the personal lives of health care workers, as a major contribution to halting the spread of the epidemic in that community.

## **CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY**

### **3.1 Location of the study:**

The study was conducted at the “Netcare Rand Clinic”, in Hillbrow/Johannesburg-South Africa. Hillbrow was once presumed one of the highest crimes rated area of the City of Johannesburg, characterized by an overcrowded population with its related problems such as recreational drug dealing, sex trade and violence, house robberies and breakings, hijacking, promiscuity, and other violent crimes. Some of the Nurses originate from this area or its surroundings.

The choice of the location was motivated by the investigator’s familiarity with the area as well as his relationship with the Nurses working within this hospital, factors that facilitated data collection. Furthermore, the choice of one location regrouping all participants to the study helped minimize financial costs of the study.

### **3.2 Methodology approach:**

The methodology approach is quantitative and the research design is a survey based on modified standardised self-administered questionnaires that were distributed to the Nurses in the hospital (Altman, 1991, pp. 12-13).

### **3.3 Sample size:**

44 out of 69 Nurses working at this hospital were randomly targeted at their place of work and were reached through their Unit Managers.

### **3.4 Sample characteristics:**

All Nurses, across all races and age groups were targeted. The study also included male and female Nurses, single and married, of all religious faiths and all cultural believes.

The ratio of female-to-male was generally high as expected, given that there are more female than male Nurses in most hospital and this element was taken into account in the final interpretation of the results.

Nurses were generally selected in this hospital because of the similarities in their lifestyle and the small differences in their income, in order to avoid bias that may result from these factors.

### **3.5 Data collection and Ethics**

Questionnaires were collected over a period of two weeks after distribution. Participants' anonymity was guaranteed by protecting their identities, and a code protected safe was provided in order to safeguard the collected questionnaires, which will be destroyed after three years. All participants were requested to give a written consent before completion of the questionnaire.

No monetary incentives were provided for participation in the study. Participants were advised to complete the questionnaires in their own privacy. As mentioned above, no names or identifying information were documented throughout the study.

The length of the questionnaire was 12 pages of an A4 paper, and was tested by the investigator to an initial testing group of 10 persons, aiming a 15-20 minutes answering time. The questionnaire was written in English, which is the official language used in the place of study. However, a translated "Zulu" version of the questionnaire was made available and provided to those in need.

The questionnaire also covered various aspects of HIV-related knowledge, attitudes, perceptions, and risk transmission including, but not limited to:

- Demographics;
- Socio-economic backgrounds;
- HIV awareness, knowledge and behaviour;
- Decision-making in sexual behaviour;
- Gender equality and attitudes;
- Sense of self-efficacy and attitude;
- Knowledge of HIV behaviour modification.

Together with the questionnaire, a self explanatory formal consent to the participation to the study was provided. The questionnaire was also used as the measuring instrument of the study.

### **3.6 Data analysis**

An Expert in Statistics was consulted for the presentation and analysis of data. A programmable calculator was used for statistical analysis (Altman, 1991, pp. 149). Estimates and confidence intervals were treated in the same way as means and standard deviations. The percentage coverage of confidence intervals is stated. Wherever possible actual P values rather than ranges and sampling distribution relating to the parameter of interest, such as a mean or a proportion are quoted.

#### **3.6.1 Possible limitations and quality control.**

Most participants were selected at the time when a number of their colleagues were on December holidays. Some participants were away for other work related activities. At the time of collection of questionnaires from participants, some were still on holiday and others did not bring back the questionnaires within the prescribed time. Logistical and time constraints to conduct this study have therefore partly influenced the total number of participants.

Furthermore, given the sensitive nature of HIV related matters, it was anticipated that some participants may choose to give false information, refuse to participate or answer some of the questions related to their personal sexual behaviours and drug abuse. These were possible sources of bias in the study.

## CHAPTER 4: RESULTS AND DISCUSSION

A total of 44 respondents from 50 Nurses reached; out of 69 nurses working at Netcare Rand Hospital answered the questionnaire, representing a response rate of 88%. Six Nurses did not return the questionnaire and the other 19 Nurses could not be reached because some were on leave at the time of data collection, some were sick or attending other work related activities. All participants were reached at the Netcare Rand Hospital.

### 4.1 Respondents' socio-demographic profiles

This section focused on age, race, sex, residential area, marital status, religion, ethnic group, place of birth, and work experience of respondents.

### 4.2 Age

Out of 44 participants, 40 disclosed their age and 4 refused to do so. The minimum age was 20years, whilst the maximum was 65years. The mean age was 39years as presented in the table below.

**Table 1: Distribution age-group of respondents.**

Age group	Number of respondents	Percentage
19-29	12	30
30-39	12	30
40-49	6	15
50-59	7	17.5
60 and above	3	7.5
<b>Total</b>	<b>40</b>	<b>100%</b>

### 4.3 Race

Most respondents were Africans 93,2% (N=41) and the other respondents were white 6.8% (N=3).

**Table 2: Distribution race of respondents**

<b>Race</b>	<b>Number of respondents</b>	<b>Percentages</b>
African	41	93.2
White	3	6.8
Colored	0	0
Indian/Asian	0	0
Others	0	0
<b>Total</b>	<b>44</b>	<b>100%</b>

#### 4.4 Sex

90.9% (N=40) of respondents were female, whilst the other 9.1% (N=4) respondents were males. As expected, generally the nursing staffs in this hospital are predominantly made of females.

**Table 3: Distribution sex of respondents**

<b>Sex</b>	<b>Number of respondents</b>	<b>Percentages</b>
Male	4	9.1
Female	40	90.9
Transgender male-to-female	0	0
Transgender female-to-male	0	0
<b>Total</b>	<b>44</b>	<b>100%</b>

#### 4.5 Residential area

As represented in the table below, most respondents 47.7% (N=21) were resident of the City of Johannesburg.

**Table 4: Distribution residential areas of respondents**

<b>Residential area</b>	<b>Number of respondents</b>	<b>Percentage</b>
City of Johannesburg	21	47.7
Other urban areas	5	11.4
Suburban area	7	15.9
Location	4	9.1
Rural area	7	15.9
<b>Total</b>	<b>44</b>	<b>100%</b>

#### 4.6 Marital status

Most of respondents never married 45.5% (N=20), while all others were either married, separated, divorced, widowed or living with a partner, in the proportions represented below.

**Table 5: Distribution marital status of respondents**

<b>Marital Status</b>	<b>Number of respondents</b>	<b>Percentage</b>
Married	16	36.4
Separated/Not divorced	1	2.3
Divorced	3	6.8
Living with a partner	2	4.5
Widowed	2	4.5
Never married	20	45.5
<b>Total</b>	<b>44</b>	<b>100%</b>

#### 4.7 Religion

Out of 44 respondents, 20.5% (N=9) were Catholic, 11.4% were Protestants (N=5), 6.8% (N=3) were from traditional religions, 4.5% (N=2) had no specific religion, while the other 56.8% (N=25) were from other religions. There were no Muslims amongst the respondents.



**Table 6: Distribution religion of respondents**

<b>Religion</b>	<b>Number of respondents</b>	<b>Percentages</b>
Protestant	5	11.4
Catholic	9	20.5
Muslim	0	0
Traditional	3	6.8
No religion	2	4.5
Others	25	56.8
<b>Total</b>	<b>44</b>	<b>100%</b>

#### 4.8 Ethnic group

42 participants responded to this question. For some unknown reasons, the other 2 participants abstained. They were represented as per the table below, with the majority of the respondents being Zulu 34.1% (N=15).

**Table 7: Distribution ethnic groups of respondents**

<b>Ethnic group</b>	<b>Number of respondents</b>	<b>Percentages</b>
Zulu	15	35.7
Sotho	8	19
Xhosa	5	12
Afrikaans	0	0
English	3	7.1
Others	11	26.2
<b>Total</b>	<b>42</b>	<b>100%</b>

#### 4.9 Place of birth

Respondents' places of birth were equally distributed between the City of Johannesburg and other urban areas 22.7% (N=10) each. However, most respondents were born in rural areas 40.9% (N=18), and all others outside of South Africa 11.4% (N=5). 2.3% (N=1) respondent refused to disclose his/her place of birth.

**Table 8: Places of birth of respondents**

Place of birth	Number of respondents	Percentages
City of Johannesburg	10	22.7
Other Urban area	10	22.7
Rural area	18	40.9
Other country than RSA	5	11.4
Refuse to disclose	1	2.3
<b>Total</b>	<b>44</b>	<b>100%</b>

#### 4.10 Work experience

Most respondents have been practicing as Nurses for more than 10years 38.6% (N=17). Others have been practicing for a maximum of 1year 2.3% (N=1), between 1 and 3years 29.5% (N=13), between 3.1 to 5years 11.4% (N=5), between 5.1 to 10years 18.2% (N=8).

**Table 9: Work experience of respondents**

Years of practice	Number of respondents	Percentages
0 to 1 year	1	2.3
1.1 to 3 years	13	29.5
3.1 to 5 years	5	11.4
5.1 to 10 years	8	18.2
More than 10 years	17	38.6
Can't remember/Don't know	0	0
Refuse to disclose	0	0
<b>Total</b>	<b>44</b>	<b>100%</b>

#### 4.11 Respondents' socio-economic backgrounds

This section deals with income and affordability of Nurses to the environment where they live.

All 44 participants responded to the various questions allocated to this section.

#### 4.12 Monthly income

Most respondents earned more than R10. 000 per month 31.8% (N=14), while some earned as little as between R1000 to R 2500 per month 9.1% (N=4). The others were distributed as follow:

**Table 10: Distribution monthly earning of respondents**

Monthly earnings	Number of respondents	Percentage
R1000 to R2500	4	9.1
R2501 to R5000	5	11.4
R5001 to R7500	8	18.2
R7501 to R10000	4	9.1
R10001 and above	14	31.8
Refused to disclose	9	20.4
<b>Total</b>	<b>44</b>	<b>100%</b>

#### 4.13 Household

Out of 44 respondents, 34.1% (N=15) lived alone, 27.3% (N=12) with children, 20.4% (N=9) with a sexual partner, 9.1% (N=4) with a sexual partner and siblings, and another 9.1% (N=4) with a sexual partner, siblings and children.

**Table 11: Household of respondents**

House hold	Number of respondents	Percentages
Live alone	15	34.1
Live with a sexual partner	9	20.4
Live with a sexual partner and siblings	4	9.1
Live with a sexual partner, siblings and children	4	9.1
Live with siblings and children	0	0

Live with children	12	27.3
Refuse to disclose	0	0
<b>Total</b>	<b>44</b>	<b>100%</b>

#### 4.14 Absence from home

Most respondents have never been away from home for the 12 months 54.5% (N=24).

Others have been away from home for a maximum of 2weeks 18.2% (N=8). The remainder were away from home for 2 to 4weeks 6.8% (N=3), 1 to 3 months 11.4% (N=5), 3 to 6 months 4.5% (N=2), 9 to 12 months 2.3% (N=1).

1 respondent (2.3%) refrained from answering this question.

**Table 12: Absence from home of respondents**

<b>Duration of absence from home</b>	<b>Number of respondents</b>	<b>Percentages</b>
0 to 2 weeks	8	18.2
2.1 to 4 weeks	3	6.8
1 to 3 months	5	11.4
3.1 to 6 months	2	4.5
6.1 to 9 months	0	0
9.1 to 12 months	1	2.3
Refuse to disclose	1	2.3
Never been away	24	54.5
<b>Total</b>	<b>44</b>	<b>100%</b>

#### 4.15 Gender equality and attitudes

In this section of gender empowerment, respondents were asked how they considered themselves to the opposite sex. Questions were also asked about one's place in the relationship, with regard to income generation, as well as decision making about sexual activities and condom use.

#### 4.16 Relation to the opposite sex

Most respondents considered themselves equal to the opposite sex 67.4% (N=30). All other respondents were represented as follow:

**Table 13: Relation to the opposite sex**

Relation to opposite sex	Number of respondents	Percentage
Equal to the opposite sex	30	68.2
Inferior to the opposite sex	3	6.8
Superior to the opposite sex	1	2.3
Don't know	6	13.6
Refused to disclose	4	9.1
<b>Total</b>	<b>44</b>	<b>100%</b>

#### 4.17 Relationship classification according to income

Respondents when asked to classify themselves in the relationship, with regard to income generation, 27.3% (N=12) reported that they were the second income maker, while 22.7% (N=10) reported to be both equal income makers, 18.2% (N=8) reported to be the main income maker. Equally, another 18.2% (N=8) did not know, and the remainder 13.6% (N=6) refused to disclose their perception.

**Table 14: Income status in the relationship of respondents**

Income status	Number of respondents	Percentages
Main income maker	8	18.2
Second income maker	12	27.3
Both equal income makers	10	22.7
Don't know	8	18.2
Refuse to disclose	6	13.6
<b>Total</b>	<b>44</b>	<b>100%</b>

#### 4.18 Decisions about sexual activities and condom use

While most respondents reported that they both with their partners always made decisions about sexual activities and condom use 54.5% (N=24), 15.9% (N=7) reported that they made these decisions always alone, 11.4% (N=5) refused to disclose this information, 9.1% (N=4) reported that they only sometimes made these decisions. However 4.5% (N=2) reported these were their partner's decisions sometimes, 2.3% (N=1) that they were their partner's decisions always, 2.3% (N=1) reported that they did not know.

**Table 15: Respondents' decision about sexual activities and condom use.**

Decision maker	Number of respondents	Percentages
Self, always	7	15.9
Partner, always	1	2.3
Self, sometimes	4	9.1
Partner, sometimes	2	4.5
Both (self & partner), always	24	54.5
Don't know	1	2.3
Refuse to disclose	5	11.4
<b>Total</b>	<b>44</b>	<b>100%</b>

#### 4.19 General sexual activities

The study participants were asked to describe their sexual orientation, their sexual activities and characteristics of their partners for the past 12 months.

#### 4.20 Sexual orientation

The table below represent participants' best description of their sexual orientation.

**Table 16: Sexual orientation of respondents**

<b>Sexual orientation</b>	<b>Number of respondents</b>	<b>Percentage</b>
Bisexual man	0	0
Bisexual woman	2	4.5
Gay man	1	2.3
Heterosexual	19	43.2
Lesbian	0	0
Refused to disclose	22	50
<b>Total</b>	<b>44</b>	<b>100%</b>

#### 4.21 Sexual activities for the past 12 months

Most participants had had sex with someone in the past 12 months 54.5% (N=24), while 29.5% (N=13) of them denied having sex in the past 12 months. Some participants however 16% (N=7) refused to disclose this information.

**Table 17: Sexual activities of respondents**

<b>Sexual activity</b>	<b>Number of respondents</b>	<b>Percentages</b>
YES	24	54.5
NO	13	29.5
Refuse to disclose	7	16
<b>Total</b>	<b>44</b>	<b>100%</b>

#### 4.22 Gender of sexual partners

31 study participants who admitted that they had sex in the past 12 months responded when asked if they had sex with males only 77.4% (N=24), females only 9.7% (N=3), none with both males and females. 12.9% (N=4) participants refused to disclose this information. 13 study participants abstained to answer the question.

**Table 18: Gender of sexual partners**

<b>Gender of sexual partners</b>	<b>Number of respondents</b>	<b>Percentages</b>
Only males	24	77.4
Only females	3	9.7
Both males and females	0	0
Refuse to disclose	4	12.9
<b>Total</b>	<b>31</b>	<b>100%</b>

#### **4.23 Sex and condom use with main partner**

All the participants in the study were also asked questions about their sexual activities and condom use with their main sexual partners.

#### **4.24 Main sexual partner**

Out of 31 respondents, 71% (N=22) reported a main sexual partner, while 9.7% (N=3) did not have a main sexual partner, and 19.3% (N=6) refused to report.

**Table 19: Presence or absence of a main sexual partner of respondents**

<b>Main sexual partner</b>	<b>Number of respondents</b>	<b>Percentages</b>
YES	22	71
NO	3	9.7
Refuse to disclose	6	19.3
<b>Total</b>	<b>31</b>	<b>100%</b>

#### **4.25 Gender of main sexual partner**

Amongst those who reported a main sexual partner, 28 participants disclosed the gender of their partner. 85.7% (N=24) reported a main male sexual partner, while 7.1% (N=2) reported a main female sexual partner, and another 7.1% (N=2) refused to disclose. All those who had a main male sexual partner were females, and vice versa for those who had a main female sexual partner, even though one gay man and two bisexual women were part of the 44 study participants. The gay man



participant refused to disclose information pertaining to this question as well as questions related to clauses 3.7.6.3/4/5

**Table 20: Gender of main sexual partner**

Gender of partner	Number of respondents	Percentages
Male	24	85.8
Female	2	7.1
Refuse to disclose	2	7.1
<b>Total</b>	<b>28</b>	<b>100%</b>

#### 4.26 Type of last sex with main sexual partner

Out of 31 respondents who reported having sex in the past 12 months, 28 reported the type of sex they had. 89.3% (N=25) had vaginal sexual intercourse, while others 10.7% (N=3) refused to disclose the type of sex they had. 3[three] participants, part of those who reported vaginal sexual intercourse also reported oral sex.

The following table describes the type of sex that respondents had the last time.

**Table 21: Type of last sex**

Type of sex	Number of respondents	Percentage
oral	[3(included in vaginal sex)]	
Vaginal	25	89.3
Anal	0	0
Other (Specify...)	0	0
Refused to disclose	3	10.7
<b>Total</b>	<b>28</b>	<b>100%</b>

#### 4.26 Condom use with main sexual partner

Participants who reported a main sexual partner were asked if they or their partner used a condom the last time they had sex. Out of 28 respondents 46.4% (N=13) admitted the use of a condom, against another 46.4% (N=13) who denied using a condom and 7.1% (N=2) who refused to disclose.

**Table 22: condom use with main sexual partner**

<b>Condom use</b>	<b>Number of respondents</b>	<b>Percentages</b>
YES	13	46.4
NO	13	46.4
Can't remember/don't know	0	0
Refuse to disclose	2	7.1
<b>Total</b>	<b>28</b>	<b>100%</b>

#### **4.27 Use of condom with a non main sexual partner**

All participants were also asked if they had sex in the past 12 months with someone that was not, or they did not consider as their main partner.

Out of 31 respondents, 19,3% (N=6) admitted having sex with someone who was not their main sexual partner, while 61.3% (N=19) denied it, and another 19.3% (N=6) refused to disclose this information.

**Table 23: Sex with non-main sexual partner**

<b>Sex with non-main sexual partner</b>	<b>Number of respondents</b>	<b>Percentages</b>
YES	6	19.3
NO	19	61.3
Refuse to disclose	6	19.3
<b>Total</b>	<b>31</b>	<b>100%</b>

However, 13 people amongst those who admitted having sex with a partner whom they did not consider their main sexual partner (probably including those 6[six] who really admitted in the preceding questions and another seven from those who did not admit it/refused to disclose), 53.8% (N=7) admitted using a condom during their sexual activity, while 7.7% (N=1) did not use a condom, and another 38.5% (N=5) refused to disclose this information.

**Table 24: Condom use with non-main sexual partner**

Condom use	Number of respondents	Percentages
YES	7	53.8
NO	1	7.7
Can't remember/Don't know	0	0
Refuse to disclose	5	38.5
<b>Total</b>	<b>13</b>	<b>100%</b>

#### 4.28 Type of sex with a non main sexual partner

All 13 participants who had sex with a non main partner were asked the type of sex they had. The following table describes information that was collected.

**Table 25: Type of sex with a non main sexual partner**

Type of sex	Number of respondents	Percentage
oral	1	7.7
Vaginal	5	38.5
Anal	1	7.7
Other (Specify...)	0	0
Refused to disclose	6	46.1
<b>Total</b>	<b>13</b>	<b>100%</b>

#### 4.29 Sex partner risks

All participants were asked if they have ever had sex in exchange for money, drug or shelter. Questions were also asked about the possible use of alcohol and/or drugs for sexual reasons, as well as their possible exposure to high sexual risk factors for HIV transmission such as uncircumcised partner, drug user partner, and a partner diagnosed with HIV and/or sexually transmitted disease (STD).

#### 4.30 Sex in exchange for money, drug or shelter

Most participants denied having sex in exchange for money, drug or shelter 88.6% (N=39), while the remainder refused to disclose 11.4% (N=5).

**Table 26: Sex in exchange for money, drug on shelter**

<b>Sex for money, shelter or drug</b>	<b>Number of respondents</b>	<b>Percentages</b>
YES	0	0
NO	39	88.6
Can't remember/Don't know	0	0
Refused	5	11.4
<b>Total</b>	<b>44</b>	<b>100%</b>

#### 4.31 Sex with a known or suspected HIV positive partner

91% of respondents (N=40) denied having sex with someone they had known or suspected HIV positive. However, 4.5% (N=2) of respondents admitted having sex with someone they knew or suspected HIV positive. The remainder 4.5% (N=2) refused disclosure.

**Table 27: Sex with known/suspected HIV positive partner**

<b>Sex with HIV+ partner</b>	<b>Number of respondents</b>	<b>Percentages</b>
YES	2	4.5
NO	40	91
Don't know	0	0
Refuse to disclose	2	4.5
<b>Total</b>	<b>44</b>	<b>100%</b>

#### 4.32 Sex with an injecting drug user

Most respondents had never had sex with an injecting drug user 95.4% (N=42), while 2.3% (N=1) did not know, and 2.3% (N=1) refused disclosure.

**Table 28: Sex with a drug user.**

<b>Sex with a drug user</b>	<b>Number of respondents</b>	<b>Percentages</b>
YES	0	0
NO	42	95.4
Don't know	1	2.3
Refuse to disclose	1	2.3
<b>Total</b>	<b>44</b>	<b>100%</b>

#### 4.33 Drug or alcohol use for sexual purpose

Out of 44 respondents, 91% (N=40) denied the use of alcohol or drugs for sexual purposes. The remainder 4.5% (N=2) admitted to this, and another 4.5% (N=2) refused disclosure.

**Table 29: Alcohol or drug use for sexual purpose**

<b>Drug or alcohol use</b>	<b>Number of respondents</b>	<b>Percentages</b>
YES	2	4.5
NO	40	91
Can't remember	0	0
Refuse to disclose	2	4.5
<b>Total</b>	<b>44</b>	<b>100%</b>

#### 4.34 Sex with someone diagnosed with STD

Respondents reported 97.7% (N=43) of participants who denied having sex with someone who was diagnosed with a sexually transmitted disease. The remainder 2.3% (N=1) refused to disclose this information.

**Table 30: Sex with partner with STD**

<b>Sex with partner with STD</b>	<b>Number of respondents</b>	<b>Percentages</b>
YES	0	0

NO	43	97.7
Don't know	0	0
Refuse to disclose	1	2.3
<b>Total</b>	<b>44</b>	<b>100%</b>

#### 4.35 Partner with STD

Most participants 97.7% (N=43) denied being diagnosed with a sexually transmitted disease in the past 12 months, while 2.3% (N=1) admitted to it.

**Table 31: Respondents diagnosed with STD**

STD positive	Number of respondents	Percentages
YES	1	2.3
NO	43	97.7
Can't remember	0	0
Refuse to disclose	0	0
<b>Total</b>	<b>44</b>	<b>100%</b>

Furthermore, 75% (N=33) of participants denied their partners being diagnosed with STD in the past 12 months, some participants reported the contrary 2.3% (N=1), while the others did not know or could not remember 11.4% (N=5), and another 11.4% (N=5) did not disclose.

**Table 32: Partners diagnosed with STD**

Partner STD positive	Number of respondents	Percentages
YES	1	2.3
NO	33	75
Don't know	5	11.4
Refuse to disclose	5	11.4
<b>Total</b>	<b>44</b>	<b>100%</b>

#### 4.36 Partner's circumcision

Participants were asked if they or their partners were circumcised. Out of 44 respondents, 63.6% (N=28) admitted to it, while 18.2% (N=8) were not/or their partners were not circumcised. Another 18.2% (N=8) of participants refused to disclose.

**Table 33: Partners' circumcision**

<b>Circumcised partner</b>	<b>Number of respondents</b>	<b>Percentages</b>
YES	28	63.6
NO	8	18.2
Don't know	0	0
Refuse to disclose	8	18.2
<b>Total</b>	<b>44</b>	<b>100%</b>

#### 4.37 HIV status of respondents

Most respondents reported that they were never told that they were infected with HIV or that they have AIDS 93.2% (N=41), while 6.8% (N=3) refused to disclose this information.

**Table 34: HIV status of respondents**

<b>HIV-positive/AIDS-positive</b>	<b>Number of respondents</b>	<b>Percentages</b>
YES	0	0
NO	41	93.2
Don't know	0	0
Refuse to disclose	3	6.8
<b>Total</b>	<b>44</b>	<b>100%</b>

#### 4.38 Injection drug use and other drug related risks

It was asked to the participants if they had ever, even once, used a needle to inject a drug that was not prescribed for them. 77, 3% (N=34) of participants did not.

However, 4, 5% (N=2) agreed to the use of a needle to inject themselves with a drug that was not prescribed to them, while 2,3% (N=1) stated that they could not remember or did not know, and 16% (N=7) refused to answer the question.

**Table 35: Use of non-prescribed needle**

<b>Use of non prescribed needle</b>	<b>Number of respondents</b>	<b>Percentages</b>
YES	2	4.5
NO	34	77.3
Can't remember/Don't know	1	2.3
Refuse to disclose	7	16
<b>Total</b>	<b>44</b>	<b>100%</b>

On the same note, participants were asked about the use of a used needle to inject themselves with a drug that was not prescribed to them in the past 12 months. 97, 7% of participants (N=43) denied the use, while 2,3% (N=1) agreed to it.

**Table 36: Use of a needle for non-prescribed drug**

<b>Use of needle for non-prescribed drug</b>	<b>Number of respondents</b>	<b>Percentages</b>
YES	1	2.3
NO	43	97.7
Can't remember/Don't know	0	0
Refuse to disclose	0	0
<b>Total</b>	<b>44</b>	<b>100%</b>

Furthermore, 77, 3% (N=34) denied smoking, sniffing or taking drugs that they did not inject, while 2, 3% (N=1) agreed to it, and 20,4% (N=9) refused to disclose.



**Table 37: Use on non-injecting drug**

Use of non injecting drug	Number of respondents	Percentages
YES	1	2.3
NO	34	77.3
Can't remember/Don't know	0	0
Refuse to disclose	9	20.4
<b>Total</b>	<b>44</b>	<b>100%</b>

The use of alcohol as a non-injecting drug in these circumstances was admitted by 2,3% (N=1) participants. None of the participants responded to questions related to the use of all other commonly known non-injecting and injecting recreational drugs, and the way the drug would have been used. Equally, none of the participants answered questions about the following:

- The sources of the drug(s) used;
- The suspicion or certainty that prior to themselves (Participants), someone else could have used the same needle that they used to inject themselves with a drug that was/ or was not their prescription;
- The eventual use of bleach or other solutions to clean the needle before use;
- The possibility that someone else could have later, used the needle used by a participant;
- Having sex whilst high on drugs;

#### **4.39 Use of hospital universal precautions**

In this section, participants were asked questions concerning their awareness about their workplace HIV policies and programs, their participation in these programs, as well as their impression on the effectiveness of these policies and programs.

As illustrated in the table below, most participants 79.5% (N=35) were aware of their workplace HIV policies and programs.

**Table 38: Participants' Awareness of their workplace HIV policies and programs**

Awareness	Number of respondents	Percentages
yes	35	79.5
No	5	11.4
Don't know	1	2.3
Refuse to disclose	3	6.8
<b>Total</b>	<b>44</b>	<b>100%</b>

Most participants 68.2% (N=30) also perceived these policies and programs effective, while very few 2.3% (N=1) considered them ineffective.

**Table 39: Participants' perception of effectiveness of their workplace HIV policies and programs.**

Effectiveness	Number of respondents	Percentages
Effective	30	68.2
Ineffective	1	2.3
Don't know	8	18.2
Refuse to disclose	5	11.3
<b>Total</b>	<b>44</b>	<b>100%</b>

Equally, most of the participants 70.5% (N=31) were aware of the HIV testing, education and counselling (HTC) strategies in their workplace, while 22.7% (N=10) were not, and 6.8% (N=3) declined to answer the question.

**Table 40: Participants awareness of HTC strategies**

HTC awareness	Number of respondents	Percentages
YES	31	70.5
NO	10	22.7
Don't know	0	0
Refuse to disclose	3	6.8
<b>Total</b>	<b>44</b>	<b>100%</b>

However, 42 respondents shared their perception about the effectiveness of these strategies, while 2 participants did not respond to the question. Out of all the respondents 64.3% (N=27) of participants perceived these strategies effective, 9.5% (N=4) of participants perceived them as ineffective, while 16.7% (N=7) did not know, 9.5% (N=4) of participants refused to disclose their view.

**Table 41: Participants' perception of effectiveness of HTC strategies**

<b>Effectiveness</b>	<b>Number of respondents</b>	<b>Percentages</b>
Effective	27	64.3
Ineffective	4	9.5
Don't know	7	16.7
Refuse to disclose	4	9.5
<b>Total</b>	<b>42</b>	<b>100%</b>

Participants were also asked about their participation in an HIV educational program for the past 12 months.

Most participants 45.5% (N=20) were never offered to participate in such programs, while some 31.8% (N=14) were offered to participate 1 to 3 times, 2.3% (N=1) were offered to participate 4 to 5 times, 13.6% (N=6) were offered participation more than 5 times, and 6.8% (N=3) could not remember or did not know.

**Table 42: Participants' offer to participate in an HIV educational program**

<b>Offer to participate in HIV program</b>	<b>Number of respondents</b>	<b>Percentages</b>
Never	20	45.5
1 to 3 times	14	31.8
4 to 5 times	1	2.3
More than 5 times	6	13.6
Can't remember	3	6.8
<b>Total</b>	<b>44</b>	<b>100%</b>

For the past 12 months, out of 44 participants to the study, 47,7% (N=21) never participated in an HIV educational program in their workplace, 29.5% (N=13) participated 1 to 3 times, 11.4% (N=5) participated 4 to 5 times, and another 11.4% (N=5) could not remember or did not know.

**Table 43: Respondents' participation in HIV program**

<b>Participation in HIV program</b>	<b>Number of respondents</b>	<b>Percentages</b>
Never	21	47.7
1 to 3 times	13	29.5
4 to 5 times	5	11.4
More than 5 times	0	0
Can't remember	5	11.4
<b>Total</b>	<b>44</b>	<b>100%</b>

Also, those who participated in such programs outside their workplace were 40.9% (N=18), while 52.3% (N=23) did not and 6.8% (N=3) could not remember or did not know about it.

**Table 44: Respondents' participation in HIV program outside their workplace**

<b>Participation in HIV program outside workplace</b>	<b>Number of respondents</b>	<b>Percentages</b>
YES	18	40.9
NO	23	52.3
Can't remember	3	6.8
<b>Total</b>	<b>44</b>	<b>100%</b>

Most participants 59, 1% (N=26) found perceived these educational program a significant contribution to their HIV risk behaviour modification, while 11.4% (N=5) perceived a little contribution to their HIV behaviour modification, 4,5% (N=2) did not

perceive any contribution at all, 9.1% (N=4) did not know and 15,9% (N=7) refused to disclose.

**Table 45: Respondents' perception of contribution of the HIV educational programs to their HIV risk behaviour modification.**

<b>Contribution of HIV programs to behavior modification</b>	<b>Number of respondents</b>	<b>Percentages</b>
Yes, significantly	26	59.1
Yes, little bit	5	11.4
Not at all	2	4.5
Don't care	0	0
Don't know	4	9.1
Refuse to disclose	7	15.9
<b>Total</b>	<b>44</b>	<b>100%</b>

Regarding the recommended universal hospital standard precautions against HIV and AIDS transmission, most participants 77.3% (N=34) were aware of them as illustrated in the table below:

**Table 46: Participants' awareness of the recommended universal hospital standard precautions against HIV and AIDS transmission.**

<b>Awareness</b>	<b>Number of respondents</b>	<b>Percentages</b>
Yes	34	77.3
No	6	13.6
Can't remember	1	2.3
Refuse to disclose	3	6.8
<b>Total</b>	<b>44</b>	<b>100%</b>

Furthermore, for the past 12 months, most participants 72.7% (N=32) have applied these precautions when handling patients with HIV infection, while 16% (N=7) have

done so only sometimes, another 2.3% (N=1) have not at all, 4.5% (N=2) could not remember, and another 4.5% (N=2) refused to disclose this information.

**Table 47: Practice of the recommended universal hospital standard precautions against HIV and AIDS transmission.**

<b>Practice of precautions</b>	<b>Number of respondents</b>	<b>Percentages</b>
Yes, always	32	72.7
Yes, sometimes	7	16
No	1	2.3
Can't remember/Don't know	2	4.5
Refuse to disclose	2	4.5
<b>Total</b>	<b>44</b>	<b>100%</b>

## CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

General sexual activity of participants demonstrated that, although most Nurses in the study never married or were married, they were generally sexually active in the past 12 months, and an equal number did/ or did not use a condom in their sexual encounters with their partner 46.4% (N=13) each. The reason for not using condoms seems to be related to the fact that most were in a steady relationship with one main partner and trust would have been the key element to this behaviour.

Although some nurses admitted having a sexual encounter with someone who was not their main partner 19.3% (N=6), the majority did not. Those who admitted having sex with someone who was not their main partner had generally had a vaginal penetration and used a condom.

Intriguing is the fact that there was a number of participants who refused to disclose information regarding their sexual activities and condom use with non-main sexual partners. This may give way to speculations about their attitudes and presume that the observed numbers of participants in the category of those practicing unprotected sex with non-main partners may be higher if adjusted.

The practice of circumcision amongst the participants seems to be highly observed. Most participants were either circumcised themselves, or had circumcised partners. Current literature advocates circumcision as one of the protective factors against HIV transmission.

The majority of participants claimed that they were never told that they were infected with HIV or that they had AIDS. Equally, most respondents denied sexually transmitted diseases for the past 12 months. The reason to this could be attributed to the fact that either they never tested for HIV and did not therefore possess the information, or they were indeed HIV negative, exception done to those who refused to respond to this question during the study.

This section clearly demonstrated that regardless of their age, sex and religious beliefs, nurses in this community are aware of risky sexual behaviour and that their perception of HIV transmission through sexual risk behaviour is unquestionable.

However, even though the results of the study may imply that nurses in this community are aware of HIV and HIV transmission, knowledge about HIV sexual behaviour modification remains an element of concern, given the high number of participants who choose not to use condoms in their sexual relationship.

Also, the high number of participants who refused to disclose their sexual orientation 50% (N=22) may indicate that either most did not understand the question, or a number of participants may be engaging in bisexual or same sex activities, exposing them to HIV transmission and therefore raising another area of concern in the community of study.

Most nurses were never away from home and although some did not disclose their monthly income, the majority were high income earners (more than R10000 per month) 31.8% (N=14). This factor may have contributed to the fact that most of the respondents did not trade sex for money, and therefore avoiding one of the risky behaviours for HIV transmission, confirming the role played by socio-economic background in HIV transmission.

As much as most nurses revealed that they had never had sex with someone known or suspected of having HIV/AIDS, the majority also denied exposure to partners known or suspected of using non-injecting and/or injecting drugs.

This demonstration of a low risk of HIV transmission through injecting drug use and a minimal exposure to personal drug use; even though they live and work in a community that is reputable for drug trade, indicate that demographic factors did not play a significant role in HIV transmission amongst nurses in this community.

Furthermore, most Nurses perceived themselves as equal to the opposite sex and empowered to make decision about condom use in their relationship (both males and females). The participants perceive themselves as equal to the opposite sex and capable of making decisions about their general sexual activities, together with their partners, confirming once again the importance of the role of gender equality and sexual attitudes in HIV transmission.

Participants have demonstrated an appreciable awareness of the use of hospital universal standard precautions against HIV transmission 72.7% (N=32). Most of them also appreciated the effectiveness of these measures in the combat against



HIV transmission, together with the important role that these measures have contributed to their occupational behaviour modification.

The reason to the above may have been the remarkable awareness in HIV testing, education and counselling demonstrated in their place of work, as well as the awareness and recognition of the effectiveness of the policies and programs implemented in their workplace, as demonstrated in the study.

However, there seem to be a need to the enforcement of these policies and programs in order to increase awareness about HIV risk transmission, given the high number of those who claimed that they were never offered to participate in an HIV educational program, and as a result, never participated in such program in their workplace.

Even though it is necessary to increase and improve the health of the work force, it is equally vital to train them for self protection to personal and occupational exposures, and the protection of patients against HIV infection. This training must be regularly supervised to encourage the practice of universal guidelines to infection and other diseases prevention, such as tuberculosis, hepatitis, sexually transmitted infections....

However, despite their logical basis and relative ease of implementation, universal precautions have not been used routinely by many health care providers. Recent studies have shown that > 50% of health care workers engage in inadequate infection control practices, even in high-impact AIDS centers, and up to 40% of the needle stick exposures were judged to be preventable. Although lack of adequate education may partly explain these findings, implementation of infection control practices has been generally poor historically. Between 200 and 400 health care workers die each year as a result of hepatitis B infection acquired on the job. The use of universal precautions helps minimize the transmission of many transmissible diseases in addition to HIV (Scott, 2011).

According to the CDC (1999), although the most important strategy for reducing the risk for occupational HIV transmission is to prevent occupational exposure, plans for post-exposure management of HCWs should be in place. The administration of antiretroviral drugs as post-exposure prophylaxis should be considered.

Furthermore, building a better prevention program for Health Care Workers needs:

- Continued administrative efforts, involving all health organisations in support of infection control measures that prevent HCWs from becoming exposed to blood and other body fluids, together with training and monitoring HCWs and reporting any occupational exposure;
- Development and promotion of the use of safety devices;
- Monitoring the effects of PEP, especially regarding their effectiveness and tolerability.

Support services such as centres for education and counselling must be provided to those who have exposed themselves to HIV in their sexual and occupational activities.

Regardless of the number of participants who are aware and practice the universal hospital standard precautions against HIV transmission, it should be emphasized that most healthcare workers practice in a stressful environment, exacerbated by heavy work load due to the HIV epidemic and in some instances the lack of protective materials. These workers need to be educated in the need of conforming and adhering strictly to all guidelines for protection against occupational exposures.

Furthermore, policies and programs encouraging self testing, education and counselling for HIV should be reinforced, because as demonstrated in previous studies in Rwanda and Zambia, most healthcare workers are reluctant to take up counselling and testing for HIV (Rahlenbeck 2004; Kiragu et al. 2007).

Data from published literature also show that prevalence rates amongst healthcare workers are not different from the general population (Shisana, Hall, Malueke, Stker, Schwabe, Colvin et al. (2002).

However, this study demonstrates that there are a number of factors influencing healthcare worker's risky behaviours, both sexual and occupational. For example, some healthcare workers may have traded sex in exchange for money, a number of them do not use condom in their sexual relationship, and some are ignorant and do not adhere to the guidelines of the universal standard precautions against HIV transmission.

When Nurses are exposed to HIV infection in their line of duty, testing of patient and testing of the nurse for HIV and other blood born agents such as hepatitis B virus, management of the exposed healthcare worker and exposures (needle stick and cut or mucous membrane and body fluid...) must be mandatory (CDC, 1987).

Community awareness against sex trade for money should be enforced by discouraging healthcare workers in taking advantage of the community in exchanging sex for services and/or money.

Although most respondents denied the use of injecting/ and or non-injecting drugs, monitoring systems for addictive drugs should be encouraged in healthcare facilities, given that addictive drug abuse is a common problem which does not spare the nursing community in general.

Organisations such as Nursing Associations should be encouraged to join the fight against HIV/AIDS by their direct involvement in raising awareness, education, and promoting the welfare of Nurses.

The Government, spiritual and religious bodies, as well as non-profit organisations must also take part in supporting efforts related HIV prevention policies and programs.

Condoms distribution and availability must improve. Equally, abstinence amongst those who are not married and faithfulness amongst married couples remain of utmost importance.

These results may be an indication that because of the AIDS epidemic, nurses in this community have changed their sexual and occupational behaviour toward HIV transmission, concurring with the results of the Kenyan study where 27% of health care workers changed their sexual behaviour (Rogstad et al., 1993).

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**APPENDIX: RESEARCH QUESTIONNAIRE**

<b>SOCIO-DEMOGRAPHIC BACKGROUND</b>	
<p>1. What is your date of birth? -----/------/------</p> <p style="text-align: center;">-----</p> <p style="text-align: center;">Year <span style="margin-left: 200px;">Day</span> <span style="margin-left: 50px;">Month</span></p>	
<p>2. Do you consider yourself Black, White, coloured, Indian or Asian? (check only one)</p> <p>[1] <span style="float: right;">White</span></p> <p>[2] <span style="float: right;">Black</span></p> <p>[3] <span style="float: right;">Coloured</span></p> <p>[4] Indian/Asian</p> <p>[5] Others (specify)....</p>	
<p>3. Do you consider yourself?</p> <p>[1] <span style="float: right;">Male</span></p> <p>[2] Female</p> <p>Transgender</p> <p>[3] <span style="margin-left: 100px;">Male</span> <span style="margin-left: 100px;">to</span> <span style="float: right;">female</span></p> <p>[4] Female to male</p>	
<p>4. What is your residential area?</p> <p>[1] City of Johannesburg</p> <p>[2] Other Urban area</p> <p>[3] Suburban area</p> <p>[4] In the location</p>	



[5] Rural area

5. Are you now... (choose one):

- [1] Married
- [2] Separated, not divorced
- [3] Divorced
- [4] Living with a partner
- [5] Widowed
- [6] Never married

---

6. What is your religion?

- [1] Protestant
- [2] Catholic
- [3] Muslim
- [4] Traditional
- [5] No religion
- [6] Other.....

7. What ethnic group do you belong to?

- [1] Zulu
  - [2] Sotho
  - [3] Xhosa
  - [4] Afrikaans
  - [5] English
  - [6] Others.....
- 
-

8. Where were you born?

- [1] City of Johannesburg
  - [2] Other Urban area
  - [3] Rural area
  - [4] Other country than South Africa
  - [9] Refuse to disclose
- 

9. How long have you practiced as a nurse?

- [1] 0 to 1year
- [2] 1,1 to 3years
- [3] 3,1 to 5years
- [4] 5,1 to 10years
- [5] More than 10years
- [8] Can't remember/Don't know
- [9] Refused to disclose

## **SOCIO-ECONOMIC BACKGROUND**

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1. Do you consider yourself:

- [1] Single parent
- [2] Married partner
- [8] Do not know

[9] Refuse do disclose

2. What is your monthly net income?

[1] R1000 to R2500

[2] R2501 to R5000

[3] R5001 to R7500

[4] R7500 to R10000

[5] More than R10000

[9] Refused to disclose

---

3. Do you live:

[1] alone

[2] With a sexual Partner

[3] With a sexual Partner and siblings

[4] With a sexual Partner, siblings and child(ren)

[5] With siblings and child(ren)

[6] With chid(ren)

[9] Refused to disclose

---

4. Altogether, how many days, weeks, months were you away from home in the last 12 months?

[1] Never been away

[2] 0 to 2 weeks

[3] 2 to 4 weeks

[4] 1 to 3 months

[5] 3 to 6 months

- [6] 6 to 9 months
  - [7] 9 to 12 months
  - [9] Refused to disclose
- 
- 

## **GENDER EQUALITY AND ATTITUDES**

---

1. Do you consider yourself

- [1] Equal to the opposite sex
- [2] Inferior to the opposite sex
- [3] Superior to the opposite sex
- [4] Don't Know
- [9] Refused to disclose

2. In your relationship, do you consider yourself as:

- [1] The main Income maker
- [2] The second Income maker
- [3] Both equal income makers
- [8] Don't know
- [9] Refused to disclose

3. In your relationship, who makes decisions about sexual activities and condom use?

- [1] Yourself, always
- [2] Your partner, always
- [3] Yourself, sometimes
- [4] Your partner, sometimes
- [5] Both of you, always
- [8] Don't know
- [9] Refused to disclose

<b>GENERAL SEXUAL ACTIVITIES</b>	
<p>1. Which of the following best describes your sexual orientation?</p> <p>[1] Bisexual man</p> <p>[2] Bisexual woman</p> <p>[3] Gay man</p> <p>[4] Heterosexual</p> <p>[5] Lesbian</p> <p>[6] Refused</p>	
<p>1. During the past 12 months, have you had sex with anyone?</p> <p>[1] Yes</p> <p>[2] No →→→→(Skip to Q 10)</p> <p>[3] Refused</p>	
<p>2. During the past 12 months, have you had sex with only males, only females, or both?</p> <p>[1] Only males</p> <p>[2] Only females</p> <p>[3] Both males and females</p> <p>[4] Refused</p>	
<b>SEX AND CONDOM USE WITH MAIN PARTNERS</b>	
<p>3. During the past 12 months, have you had a main sex partner?</p> <p>[1] Yes</p> <p>[2] No →→→→(Skip to Q 7)</p> <p>[3] Refused</p>	
<p>4. Is your main sex partner male or female</p>	

[1]		Male
[2]		Female
[3]	Refused	

  

5. The last time you had sex with your main partner, what type of sex did you have? (Check all that apply)

[1]		Oral
[2]		Vaginal
[3]		Anal
[4]	Other	(Specify_____)
[9]	Refused	

  

6. The last time you had sex with your main partner; did you or your partner use a condom?

[1]		Yes
[2]		No
[8]	Cannot	Remember/Don't
[9]		Know
[9]	Refused	

  

7. During the past 12 months, have you had sex with someone who is not your main partner or whom you did not consider your main partner at that time?

[1]		Yes
[2]	No	→→→→(Skip to Q 10)
[9]	Refused	

  

8. The last time you had sex with someone who is not your main partner, what type of sex did you have? (Check all that apply)

[1]		Oral
[2]		Vaginal

[3]			Anal
[4]	Other		(Specify_____)
[9]	Refused		
9. The last time you had sex with someone who is not your main partner; did you or your partner use a condom?			
[1]			Yes
[2]			No
[8]	Cannot	Remember/Don't	Know
[9]	Refused		
<b>SEX PARTNER RISKS</b>			
10. Have you ever had sex in exchange for money, drugs, or shelter?			
[1]			Yes
[2]			No
[8]	Cannot	Remember/Don't	Know
[9]	Refused		
11. Have you ever had sex with someone whom you knew had or suspected of having HIV/AIDS?			
[1]			Yes
[2]			No
[8]		Don't	Know
[9]	Refused		
12. Have you ever had sex with someone whom you knew was or suspected of being an injecting drug user?			
[1]			Yes
[2]			No
[8]		Don't	Know

[9] Refused	
13. The last time you had sex; did you use an injected drug or alcohol?	
[1]	Yes
[2]	No
[8]	Cannot Remember
[9] Refused	
14. The last time you had sex; did you use any non-injected drugs or alcohol?	
[1]	Yes
[2]	No
[8]	Cannot Remember
[9] Refused	
15. During the past 12 months, has anyone told you that you had a sexually transmitted disease, or STD, for example, herpes, gonorrhoea, chlamydia, genital warts?	
[1]	Yes
[2]	No
[8]	Cannot Remember/Don't Know
[9] Refused	
16. During the past 12 months, has your partner been diagnosed with a sexually transmitted disease?	
[1]	Yes
[2]	No



<p>[8] Can't remember/ Don't know</p> <p>[9] Refused to disclose</p> <hr/> <p>17. Are you or your partner circumcised?</p> <p>[1] Yes</p> <p>[2] No</p> <p>[8] Don't know</p> <p>[9] Refused to disclose</p>
<p>18. Have you ever been told by a doctor or other health professional that you were infected with HIV or that you have AIDS?</p> <p>[1] Yes</p> <p>[2] No</p> <p>[8] Cannot Remember/Don't Know</p> <p>[9] Refused</p>

<b>INJECTION DRUG USE AND OTHER DRUG RELATED RISKS</b>	
<p>1. Have you ever, even once, used a needle to inject a drug that was not prescribed for you?</p> <p>[1] Yes</p> <p>[2] No →→→→(Skip to Q 11)</p> <p>[8] Cannot Remember/Don't Know</p> <p>[9] Refused →→→→(Skip to Q 11)</p>	
<p>2. In the past 12 months, have you ever used a needle to inject a drug that was</p>	

not prescribed for you?			
[1]			Yes
[2]	No	→→→→(Skip to Q	11)
[8]	Cannot	Remember/Don't	Know
[9]	Refused→→→→(Skip to Q 11)		
3. The last time you used a needle for injecting drugs, where did you get the needle from?			
[1]			Pharmacy
[2]	Needle		exchange
[3]			Street
[4]	Shooting		gallery
[5]			Friend
[6]			Dealer
[7]	Other (Specify_____)		
4. The last time you used a needle for injecting drugs, was it a new and unused needle? (A needle in an unopened package or with an intact seal)			
[1]			Yes
[2]			No
[8]	Cannot	Remember/Don't	Know
[9]	Refused		
5. The last time you used a needle to inject drugs, what drug did you inject?			
[1]			Heroin
[2]			Cocaine
[3]	Speedball	(heroin and cocaine	together)
[4]	Methamphetamine		
6. The last time you used a needle to inject drugs; did you know or suspect someone else had used it before?			

[1]			Yes
[2]			No
[8]	Cannot	Remember/Don't	Know
[9]	Refused		
7. Have you ever used a needle that you knew or suspected someone else had used before you?			
[1]			Yes
[2]			No
[8]	Cannot	Remember/Don't	Know
[9]	Refused		
8. Did you use bleach (or other solutions) to clean the needle before you used it?			
[1]			Yes
[2]			No
[8]	Cannot	Remember/Don't	Know
[9]	Refused		
9. The last time you used a needle for injecting drugs; did someone else use the needle after you?			
[1]			Yes
[2]			No
[8]	Cannot	Remember/Don't	Know
[9]	Refused		
10. The last time you used a needle for injecting drugs; did you have sex with someone while you were high?			
[1]			Yes
[2]			No
[8]	Cannot	Remember/Don't	Know

[9] Refused			
11. In the past 12 months, have you smoked, sniffed, or taken drugs that you did not inject?			
[1]			Yes
[2]	No		→→→→(Stop)
[8]	Cannot Remember/Don't	Know	→→→→(Stop)
[9]	Refused →→→→(Stop)		
12. The last time you used drugs that you did not inject, what did you use? (Check all that apply)			
[1]			Crack
[2]			Cocaine
[3]			Heroin
[4]	Amphetamine/Speed		(pills)
[5]	Downers/Tranquilizers	(Valium,	etc.)
[6]	Ecstasy		(methamphetamine)
[7]			Barbiturates
[8]	PCP	(Angel	dust)
[9]			Nitrites
[10]			LSD
[11]			Inhalants
[12]			Alcohol
[13]	Other	(Specify_____)	
[99]	Cannot Remember/Don't Know		
13. How did you use the drug? (Check all that apply)			
[1]			Snort
[2]			Sniff
[3]			Inhale
[4]	Smoke		
14. The last time you used a non-injected drug; did you have sex with someone			

while you were high?

[1] Yes

[2] No

[8] Cannot Remember/ Don't Know

[9] Refused

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**USE OF HOSPITAL UNIVERSAL PRECAUTIONS**

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1. Are you aware of the HIV policies and programmes in your workplace?

[1] Yes

[2] No

[8] Don't know

[4] Refused

2. In your view, do you consider these policies and programmes in your workplace:

[1] Effective

[2] Ineffective

[8] Don't know

[9] Refuse

---

3. Are you aware of the HIV testing, education and counselling strategies in your workplace?

[1] Yes

[2] No

[8] Don't know

[9] Refused

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4. In your view, do you consider these strategies:

[1] Effective

[2] Ineffective

[8] Don't know

[9] Refused

---

5. During the past 12 months, how often have you been offered to participate in an HIV educational programme in your workplace?

[1] Never

[2] 1 to 3 times

[2] 3 to 5 times

[3] more than 5 times

[8] Can't remember/Don't know

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6. During the past 12 months, how many times have you participated in an HIV educational programme in your workplace?

[1] Never

[2] 1 to 3 times

[3] 3 to 5 times

[8] Can't remember/ Don't know

---

7. During the past 12 months, have participated in an HIV educational programme outside your workplace?

[1] Yes

[2] No

[8] Can't remember/ Don't know

8. In your view, do these education programmes contribute to your HIV risk behaviour modification?

[1] Yes, significantly

[2] Yes, little bit

[3] Not at all

[4] Don't care

[8] Don't know

[9] Refuse to disclose

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9. Are you aware of the recommended universal hospital standard precautions against HIV and AIDS transmission?

[1] Yes

[2] No

[8] Can't remember/Don't know

[9] Refused

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10. During the past 12 months, have you applied these precautions when handling patients with HIV infection (e.g. cleaning of patients and



instruments, wound dressing, administration of injections, operating procedures...)

[1] Yes, always

[2] Yes, sometimes

[3] No

[4] Can't remember/Don't know

[9] Refuse to disclose