

# **Knowledge, perceptions and attitudes of industrial class workers of Princess Marina Hospital in Gaborone toward routine HIV testing**

by  
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## **Abstract**

This study, first of its kind in Princess Marina Hospital and conducted from 12<sup>th</sup> to 19<sup>th</sup> of January 2012, was aimed at determining the knowledge, attitudes and perception of routine HIV testing by the industrial class workers of Princess Marina Hospital.

This study has shown that awareness of HIV and AIDS and HIV testing is universal in the study population. It has also shown that routine HIV testing is not practiced as it should be at the staff clinic of Princess Marina Hospital. It has revealed that a significant number of respondents have knowledge gaps with regards to the transmission of HIV and this could lead to risky behaviors and the resulting spread of HIV. Voluntary Counseling and Testing Centres seem to be the preferred HIV testing places. The study has also determined that HIV test results taking long, lack of confidentiality, fear of stigma and discrimination were the most important reasons for not testing at Princess Marina Hospital. Appropriate measures need to be taken to correct identified gaps and ensure a successful implementation of routine HIV testing in order to strengthen the fight against HIV/AIDS at the workplace.

## **Opsomming**

Hierdie studie was 'n eerste-in-sy-soort in die Princess Marina Hospitaal en het ten doel gehad om die kennis, houding en persepsies van gewone werkers in die hospitaal teenoor die roetine toetsing MIV/Vigs te bepaal.

Resultate toon dat die situasie nie voldoen aan die vereistes wat gestel word nie. 'n Beduidende aantal van die werkers wat in die steekproef ingesluit is, het 'n ernstige kennisgaping en hierdie gebrek aan kennis kan nadelige gevolge inhou vir die verspreiding van MIV/Vigs.

Die studie het ook gevind dat roetine MIV-toetse baie lank neem en dat 'n gebrek aan vertroulikheid en vrees vir stigma die vernaamste oorsake is waarom werkers hulle nie laat toets nie.

Daar word voorgestel dat die nodige stappe geneem moet word om hierdie situasie reg te stel en sekere voorstelle in hierdie verband word aan die hand gedoen.

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## **Chapter 1 Introduction**

The human immunodeficiency virus (HIV) pandemic continues to be the most serious of infectious disease challenges that the public health sector has ever faced and AIDS remains a leading cause of mortality worldwide and the primary cause of death in sub-Saharan Africa. According to UNAIDS (2010), a total of 2.7 million people acquired HIV infection in 2010 contributing to the total number of 34 million people living with HIV. Access to HIV testing and counseling is increasing but the majority of people living with HIV in low- and middle-income countries still do not know their serostatus.

Botswana is one of the sub-Saharan African countries that are hit hard by HIV/AIDS. According to the BAIS III survey (2008) the national prevalence rate was 17.6% compared to 17.1% in the BAIS II Survey (2004). The new HIV infection rate was estimated at 2.9%. By January 2004, 2 years after the establishment of universal access to antiretroviral treatment (ART) in Botswana, enrollment in HIV treatment was still slow and thought to be partly due to underutilization of HIV testing. Only 70,000 tests in total had been performed in Botswana by mid-2003, for a population of 1.7 million. HIV stigma was identified by government and press sources as one possible impediment to HIV testing and hence to the success of the new ART program. It was previously reported that social stigma and fear of positive test results significantly delayed testing among a group of patients treated in the private sector in 2000 (Weiser et al 2006).

In an attempt to increase the uptake of HIV testing and ART, the Botswana government introduced the policy of routine HIV testing in early 2004. This is a provider-initiated approach to testing whereby nearly all patients would be tested as a routine part of medical visits unless they explicitly refused. All patients should receive essential information about HIV testing and be informed of their right to refuse. Greater emphasis is on post-test rather than pre-test counseling. This has contributed to the increase of HIV testing uptake as shown by a study at the referral hospital in Francistown (Creek and al, 2007).

Princess Marina Hospital (PMH) is the biggest referral hospital in Botswana located in Gaborone, the capital city and it is one of the government institutions where routine HIV

testing is being implemented. It has an establishment of 1400 staff members. The industrial class workers represent 25% of the work force. The incidence of HIV and the prevalence among Princess Marina Hospital's employees is not known. Despite the provision of a broad spectrum of HIV related services like routine HIV testing, treatment of opportunistic infections and antiretroviral therapy (ART), it has been observed that many members of staff test for HIV late and some of them access treatment quite late. About one into every four patients attended to at the at the Princess Marina Hospital staff clinic do not know their HIV status; the hospital HIV testing services have been underutilized by members of staff. How do Princess Marina Hospital's industrial class workers perceive and react to routine HIV testing remains to be answered.

This study aims at determining the knowledge, attitudes and perception of routine HIV testing by the industrial class workers of Princess Marina Hospital. Specifically its aims at determining among the Princess Marina Hospital industrial class workers (a) the knowledge about HIV/AIDS, (b) the knowledge about HIV testing and routine HIV testing (c) the perception of routine HIV testing and (d) the proportion of workers who have tested for HIV.

This study is to our best knowledge the first research initiative of the kind among industrial class in Princess Marina Hospital. It will provide information that could help improve routine HIV testing at the Princess Marina Hospital Staff Clinic.

## Chapter 2 Literature review

Limited detailed epidemiologic data exist regarding the impact of HIV infection on the workplace in the developing world. In addition, most HIV surveys examine only prevalence, without data on incidence or disease severity (Riviello et al, 2007).

The United Nations is committed to achieving universal access to HIV care, treatment, and prevention. Although the gateway to HIV care and secondary prevention is the knowledge of serostatus, use of voluntary counseling and testing in resource-limited settings with the highest burden of HIV infection and AIDS has been limited. In *Critical Review and Analysis of Voluntary Counseling and Testing Literature in Africa*, Solomon, Van Rooyen, Griesel, Gray, Stein and Nott (2004), referring to a study conducted by Fylkesnes, Haworth, Rosensvard and Kwapa (1999) stated that these researchers explored the uptake of Voluntary Counseling and Testing (VCT) in a general population sample of selected urban and rural areas of Zambia. Of those stating that they wanted testing, only 9.4% actually came forward to be tested.

Furthermore less than half of those who did get tested returned for their test results. They also stated that studies that have used return rates as an indicator, have on the whole found low rates of return for test results. On the basis of evidence of increased patient uptake and the opportunity to avoid missed HIV testing opportunities in health care facilities, in 2007, the World Health Organization recommended provider-initiated HIV testing as a standard part of medical care in settings with generalized HIV epidemics (Basset & Walensky 2010).

Following an announcement in October 2003 by President Festus Mogae, routine testing for HIV (RHT) was introduced in Botswana in January 2004. It was assumed that RHT would reduce the stigma associated with the "exclusivity" of HIV testing, enable earlier testing, allow more timely access to treatment, and ultimately reduce the rate of infection (Kenyon, 2005). Since the beginning of 2004, HIV tests have been offered as a routine part of checkups in public and private clinics in Botswana. The testing is part of the standard routine but people who do not want to be tested can 'opt out'. The approach chosen is an opt-out policy, meaning that the patient is informed that an HIV test is going to be done but that he or she has a right to refuse. There is no written consent. If the patient opts out and the health worker thinks there is a strong reason for HIV testing (for example, pregnancy and/or AIDS-defining illness), the

patient may be referred to a trained counselor for ordinary pretest counseling. No patient may be tested against his or her wish, however (Steen & al. 2007).

Botswana was the first country in Africa to have a national policy of routinely offering an HIV test in clinics. Health officials believe that routine testing is a good way to help prevention programs and to enable people to access treatment at an earlier stage of disease. There is still a lot of stigma attached to sexually transmitted diseases in Botswana and officials believe this stigma can be reduced by treating the HIV test like any other routine medical procedure (Avert).

In a study on routine HIV testing in Botswana, Weiser and al (2006), concluded that routine testing appears to be widely supported and reduces barriers to testing in Botswana. As routine testing is adopted elsewhere, measures should be implemented to assure true informed consent and human rights safeguards, including protection from HIV-related discrimination and protection of women against partner violence related to testing. According to Creek and al, the routine use of on-site rapid HIV tests in ANC clinics, starting in 2005, ensured that nearly all tested women received their results, and intervention uptake increased even further, with 75% of women receiving AZT in 2005 and increasing numbers of women receiving NVP and ARV therapy. It is worth mentioning routine HIV testing has significantly contributed to increasing the uptake of the antiretroviral program and at the end of December 2011, 96.1% of the projected 185,963 adults and children in need of ART were on treatment (Masa, 2012).

Despite the fact that HIV testing is routine now, some individuals still do not know their HIV status in Botswana. According to Buttò, Raimondo, Fanales-Belasio and Suligo (2008), approximately one-fourth of all HIV infections in adults remain undiagnosed in Italy and close to 60% of individuals diagnosed with AIDS discovered their seropositivity at the time of diagnosis. Late diagnosis of HIV infection is associated with increased mortality and morbidity and increased cost to healthcare services. From a public health perspective, knowledge of HIV status is associated with a reduction in risk behavior. Thus, a routine screening for HIV infection is important for both a better prognostic outcome, and control of HIV spreading in the population.

### **Chapter 3 Research methodology**

This was a quantitative study of the knowledge, perception and attitudes toward routine HIV testing among Princess Marina's industrial class workers conducted in Princess Marina Hospital from 12<sup>th</sup> to 19<sup>th</sup> of January 2012.

#### **3.1 Sampling method and sample size**

The proposed sample size for this study was 50 respondents, conveniently selected out of the population of 350 Princess Marina Hospital industrial class workers.

#### **3.2 Inclusion criteria**

Industrial class workers, who have been working at Princess Marina Hospital for at least 6 months, are Botswana citizen and who voluntarily consented to participate in the study were included in this study.

#### **3.3 Data collection tool**

Data was collected using an anonymous questionnaire developed on the basis of literature review. The questionnaire included 34 closed and open ended questions to assess knowledge about HIV and HIV testing and participants attitude towards HIV testing in general and routine HIV testing in particular. It was self-administered. This approach was chosen because of the sensitivity of the subject and because people tend to be more open when they know that personal information they will give will not be linked to them.

#### **3.4 Data analysis and validation**

Quantitative data was analyzed using Epi info 7. Quantitative data underwent familiarization, developing a thematic framework, coding, charting and interpretation. The following variables were analyzed: knowledge of industrial class workers about HIV/AIDS, knowledge about HIV testing and routine HIV testing, attitudes and practice with regards to HIV testing.

### **3.5 Ethical considerations and confidentiality**

The participation to the study was voluntary and a written consent was signed by each participant. The subject of this study being sensitive and delicate, ethical considerations appropriate for this kind of studies were considered in the study design and all the required authorizations were obtained. Confidentiality was maintained by:

- 1) The anonymous character of the questionnaire
- 2) Not linking the information collected to the respondent
- 3) Keeping answered questionnaires in a locked filing cabinet.
- 4) Keeping the electronic data accessible only to the researcher and her assistant.

## Chapter 4 Results of the study

### 4.1 Age and sex

The age and gender of the respondents are given in Table 4.1 below.

**Table 4.1 Age by sex**

	21-24 years	25-29 years	30-34 years	35-39 years	40-44 years	45-49 years	50-54 years	≥ 55 years	Total (%)
<b>Males</b>	1	3	5	3	1	0	1	1	15 (30)
<b>Females</b>	1	3	9	11	4	6	1	0	35 (70)
<b>Total (%)</b>	2 (4)	6 (12)	14(28)	14(28)	5(10)	6(12)	2(4)	1(2)	50 (100)

Of the 50 respondents, 30 % were male and 70 % female.

The mean age is 36.14 years [23-55]. Ninety percent of the respondents were aged between 25 and 49 years. The mean age for males was 20.17 years and 29.64 for female.

### 4.2 Marital status, level of education, religion, profession, and length of work at PMH

Of the respondents, 20% were married, 68 % of the participants were single and 82 % had attained a secondary school level of education. 86 % were Christians and 10 % reported that they have no religion.

Cleaners and laborers represented 40% of the respondents while the rest of the group was made of hospital orderlies, gardeners, laundry hands, seamstresses, kitchen hands, cooks, drivers, an ECG attendant, a Sterilization and Disinfection Unit attendant, a theatre attendant and a gate keeper.

Amongst the 50 respondents, 56% reported to have been working at Princess Marina Hospital for more than 5 years and 36% less than a year.

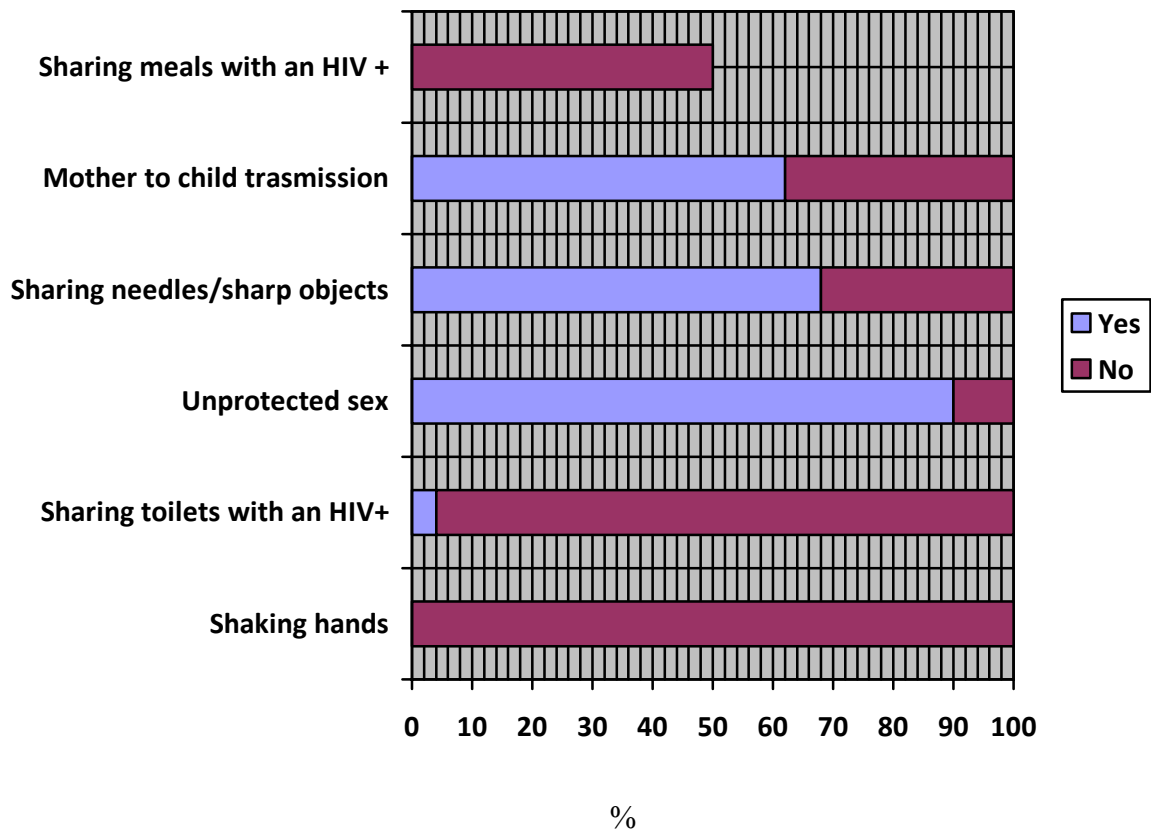


### 4.3 Knowledge about HIV

#### Awareness about HIV

All the respondents stated to have heard about HIV. Amongst them 90 % said HIV is a virus and AIDS is a disease.

#### HIV transmission



**Figure 4.1 Mode of transmission of HIV**

For 90 % of the respondents, HIV is transmitted through unprotected sex, 32 % stated that it is not transmitted through sharing needles or sharp objects, 38% that is not transmitted from mother to child.

Eighty two percent of cleaners and hospital orderlies together stated that HIV can be acquired through sharing needles and sharp objects.

## Cure for AIDS

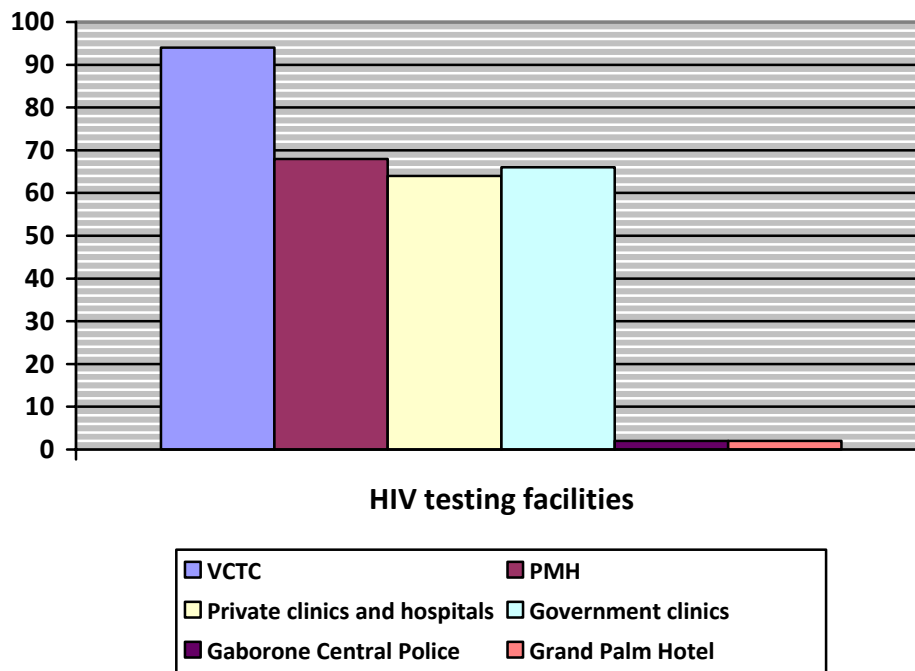
Twenty percent of the respondents stated that AIDS has a cure and 8 % didn't know.

Forty three over 50 participants (86 %) stated that a health looking person can be HIV infected and 10 % either said no or had no idea.

### 4.4 Knowledge about HIV testing and routine HIV testing

All the respondents mentioned to have heard about HIV testing and routine HIV testing.

Where one can get an HIV test



**Figure 4.2** Places where one can get tested for HIV

VCTCs were identified by 94% of the respondents as places where they can get tested for HIV, Princess Marina Hospital by 68%.

Eighty four percent of the respondents were of the opinion that the staff clinic is the place where they can get tested and 6% had no idea of where they can get tested for HIV in Princess Marina Hospital.

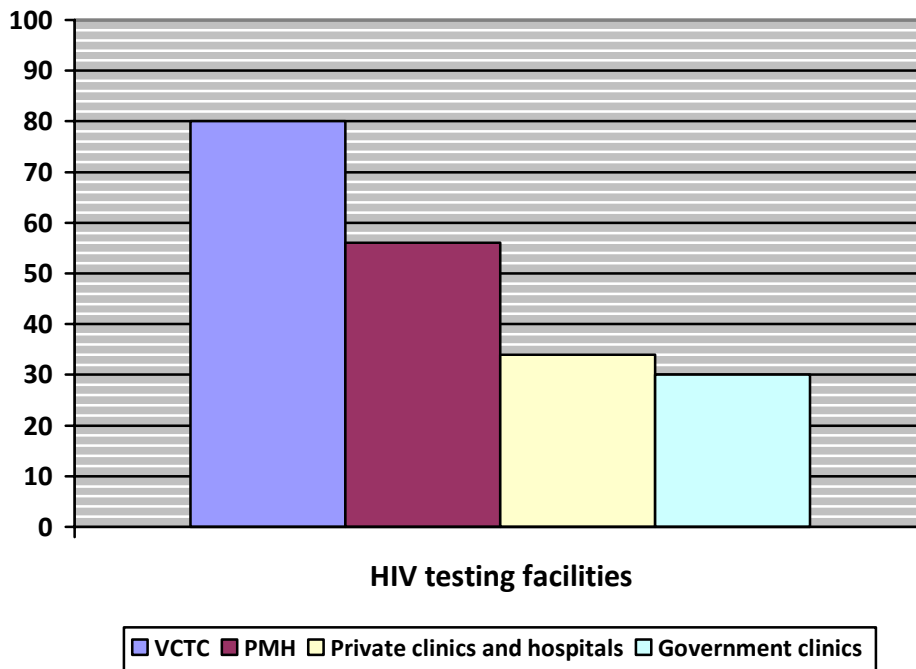
Time to get HIV results and confidentiality

Amongst the respondents, 96 % mentioned that HIV results are received within the same day and confidentiality is required for HIV testing.

#### 4.5 Attitudes toward HIV testing

All the respondents stated that they were interested in HIV testing.

Preferred facilities for HIV testing



**Figure 4.3 Preferred testing facilities for HIV**

Amongst the respondents, 80% reported preferring to test at Voluntary Counseling and Testing Centres and 56% at Princess Marina Hospital.

### Reasons for preferring to be tested in a particular facility

Forty eight percent of the respondents reported preferring to go and test at a particular facility because it will not take long to get results, 46 % because their results will be kept secret and 28% because better services are offered there. Among the reasons given for preferring to take the HIV test elsewhere than Princess Marina Hospital, 36 % stated that it was because it will take long to get results, 28% because if they are HIV positive colleagues at the testing place will look down upon them, 24 % because their results will not be kept confidential and 12% because of fear of discrimination.

#### 4.6 Practice about HIV testing

Ever been tested for HIV, main reasons for testing, when the last HIV test was done

All the respondents mentioned that they had taken an HIV test, testing was voluntary and they got the results.

**Table 4.2 Main reasons for testing for HIV by sex**

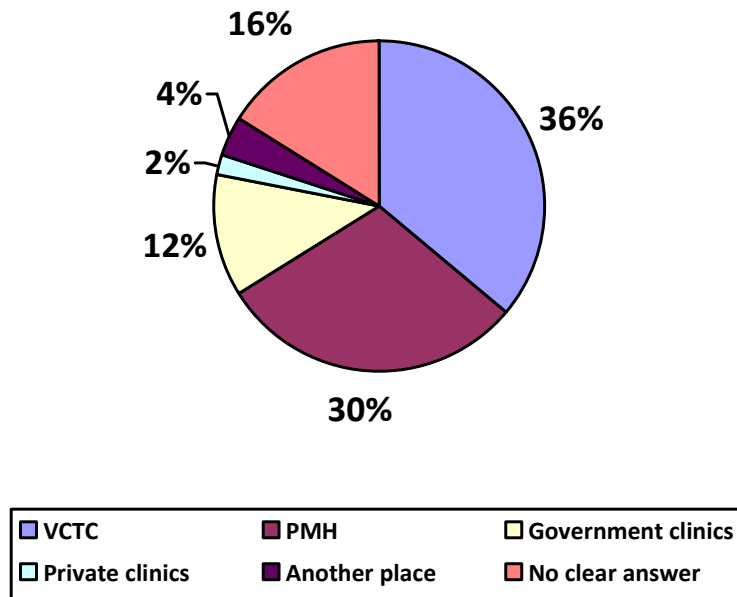
Main reason for the last HIV test	Male	Female	Total (%) N=50
Just to find out/worry that you are HIV infected	5	13	18 (36)
Because you were sick	2	9	11 (22)
Because a doctor, a nurse or other health professional asked you to	2	1	3 (6)
Because the health department asked you to	2	3	5 (10)
Because your sexual partner asked you to	3	1	4 (8)
To apply for health insurance or life insurance	2	3	5 (10)
To comply with guidelines for health workers	2	3	5 (10)
To apply for a new job	1	0	1 (2)
For military induction, separation or during military service	1	0	1 (2)
Pregnancy	0	8	8 (16)
Other reason	3	9	12 (24)

From Table 4.2 it is clear that the main reasons for testing included just to find out/worry that you are HIV infected (36%), sickness (22 %), pregnancy (16%), request from the health department (10%), to apply for health insurance or life insurance (10%) and to comply with guidelines for health workers (10%).

Of the 50 respondents, 56% reported to have been tested for HIV less than 1 year ago, 18% between 1-2 years and 14% more than 4 years ago.

#### Places of last HIV test

All the respondents stated that they were interested in HIV testing.



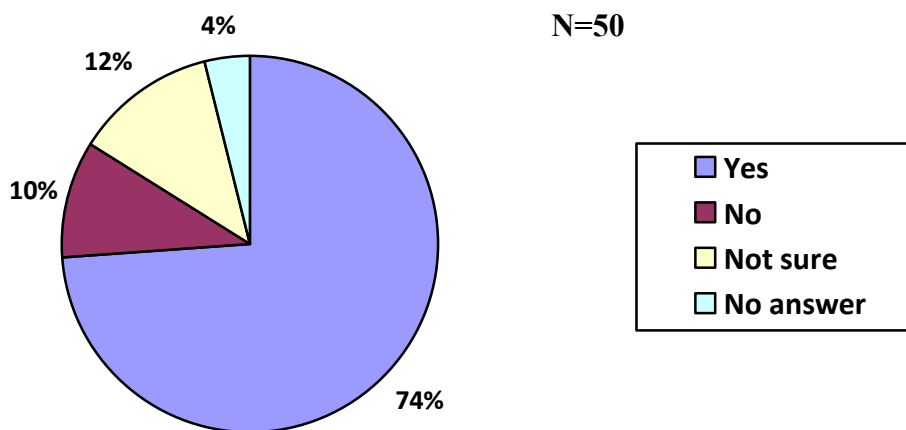
**Figure 4.4** Distribution of places where the last HIV test was done

Thirty six percent of the respondents were tested for HIV in a VCTC, 30 % in Princess Marina Hospital and 12% in Government’s clinics.

**Table 4.3 Reasons for preferring to test in a particular place by sex**

	Male	Female	Total (%)
It will take long to get results	2	8	10 (34)
If I am HIV positive, colleagues at the testing place will look down upon me	2	4	6 (21)
Fear of discrimination if I am HIV positive	2	1	3 (10)
My results will not be kept confidential	0	2	2 (7)
I will lose my employment if I am HIV positive	1	0	1(3)
Other reason	2	5	7 (24)
Total	9	20	29 (100)

Table 4.3 shows that 34% of the respondents mentioned that they preferred to test elsewhere than Princess Marina Hospital because it will take long to get results, 21% because if they are HIV positive colleagues at the testing place will look down on them and 10 % because of the fear of discrimination if they are HIV positive.



**Figure 4.5 Distribution of responses about recommending HIV testing in PMH to another PMH staff member.**

Seventy four percent of the respondents stated that they would recommend to another PMH staff to get tested at PMH and 10 % stated that they would not.

## Chapter 5 Discussion

All the respondents have heard about HIV.

Concerning knowledge of the transmission of HIV, 90 % of the respondents stated that HIV is transmitted through unprotected sex, 32 % that it is not transmitted through sharing needles or sharp objects and 32% that it is not transmitted from mother-to-child during pregnancy, labor or through breastfeeding. The finding about transmission through unprotected sex is similar to the one from the BIAS III survey: 86.6% of the population 10-64 years demonstrated that they have heard of the virus HIV or an illness called AIDS by identifying condom use as a way of preventing HIV infection. This finding shouldn't be surprising because since the eighties, there have been several sensitization campaigns clearly outlining the various modes of HIV transmission. Abstinence, Be faithful and Condomise (ABC) have been the core of the prevention messages. Recently Botswana has embarked on large scale safe male circumcision. Though part of prevention measures against the spread of HIV, it is also being made clear that circumcision just reduces the risk of getting HIV infected and condom use, safer sex and abstinence still need to be practiced. It is feared that people might think that after circumcision, they can indulge in unprotected sex and not get HIV.

Findings about the role of sharing needles and sharp objects in the transmission of HIV and transmission of HIV from mother to child are worrisome. With regards to the sharing of needles or sharp objects, the respondents work in a hospital where they handle sharp objects like needles and surgical blades and they are exposed to the risk of needle stick injury and therefore the risk of getting infected with HIV. It is worth mentioning amongst cleaners and clinic orderlies who are the cadres responsible for waste disposal in the facility, knowledge that HIV can be acquired through sharing needles and sharp objects is high (82%). Despite the fact that in all facilities infection control measures have been put in place and workshops about waste management were organized, there has not been consistency in emphasizing on a regular basis on how to handle sharp objects. It is not surprising that some of the respondents reported that HIV cannot be transmitted that way. This is a serious gap. Concerning the mother to child transmission of HIV (PMTCT), the findings are in line with those of the

BIAS III survey. In a country with a successful PMTCT program, it is inconceivable that there are still adults who don't know that HIV cannot be transmitted from an infected mother to her child during pregnancy, labor or breastfeeding.

The above issues are a clear indication of deficiencies in the HIV/AIDS programs at workplace especially in a health facility.

On a positive note, 86 % of the respondents stated that a healthy looking person can be HIV infected. This is consistent with the findings of the BIAS III survey regarding the age group of our study population. However, 10 % of the respondents reported either a healthy looking person cannot be HIV infected or they had no idea. The number cannot be ignored and this lack of knowledge can lead one to adopt risky behaviors and new HIV infections. People may continue disseminating the infection unknowingly.

All the respondents stated that they have heard about HIV testing. Ninety four percent of the respondents stated that HIV test results are obtained the same day and 96 % were of the opinion that confidentiality is required for HIV testing. Most respondents (94%) mentioned Voluntary Counseling and Testing centers as a place where they can go and test for HIV against 68% for Princess Marina Hospital. This is a significant gap in a facility that is providing all the HIV services and is the work place of the respondents. Concerning where one can go to test for HIV in Princess Marina Hospital, 84 % rightfully mentioned the staff clinic. The staff clinic has been set up in order to meet the needs of staff members. At the staff clinic all patients are offered an HIV test when they come for consultation and those who agree to the test are sent to the laboratory for the blood sample to be taken and the test to be performed. They are also counseled after the test. The patients get their results back the next day or the next time they come for check-up. If the results are positive, the patient is referred to the Infectious Disease Care Centre (IDCC) for further management. As much as the opt-out approach is used at the staff clinic of Princess Marina Hospital, failure to test onsite and give results the same day explains why staff members would prefer to go and access the service elsewhere.



Though all the respondents said to be interested in testing for HIV, only 56 % chose Princess Marina as the place where they would go for HIV testing. Main reasons driving the choice to test elsewhere than in Princess Marina Hospital include it will take long to get results (36%), if they are HIV positive colleagues at the testing place will look down upon them (28%), the results will not be kept secret (24%) and fear of discrimination (12%). Since the introduction of routine HIV testing in Botswana in 2004, people who test for HIV get results the same day except when for a reason or another like the need to use a test other than a rapid HIV test, like the Elisa, the Western Blot and the PCR (Polymerase Chain Reaction) tests. However there has been a peculiar situation at PMH Staff clinic where if the client is agreeable to the HIV test, he is sent to the laboratory where blood sample will be collected for the test. Clients are asked to come for results the following day or at the next appointment. A lay counselor used to come every Thursday afternoon for those coming for voluntary counseling and testing, but this has stopped because of low turnout of clients. As much as the doctor for example is trained in doing HIV testing, he/she can't do it there because they are no HIV test kits. They lay counselor used to come with kits. Another point is that not every doctor or nurse is trained in routine HIV testing. This means that even if there were HIV test kits available at the staff clinic, if the doctor or the nurse attending to patients does not know how to do rapid test, the RHT will not be done.

When it came to practice, all the participants acknowledged to have tested for HIV and the test was voluntary. Rates of HIV testing are much better than in the general population since only 56% of Botswana's population aged 10-64 years had tested for HIV at least once (BIAS III). All the respondents reported to have obtained their results. Only 36% tested just to find out if they were HIV infected or because of the worry that they were HIV infected. Others had a more compelling reason to test like pregnancy and sickness. Only 30 % of the 29 respondents to the appropriate question mentioned that they tested at Princess Marina Hospital. They gave various reasons for testing elsewhere than Princess Marina Hospital: it will take long to get results (34 %), if they are HIV positive colleagues at the testing place will look down upon them (21%) and fear of discrimination if they are HIV positive (10 %). Stigma was considered to be the main reason why many people were reluctant to go and test

for HIV. In our study population stigma and discrimination were among the main reasons why some staff members preferred to get tested for HIV elsewhere than Princess Marina Hospital.

Seventy four percent of the respondents stated that they would recommend to another PMH staff to get tested at PMH and 10 % stated that they would not. A satisfied customer is more likely to refer to you other customers. Despite the fact that 56% cited Princess Marina Hospital as the place where they would go to test for HIV, it is only 10% of the respondents in our sample who would recommend to others to test in Princess Marina Hospital.

## **Chapter 6 Conclusion and recommendation**

This study has shown that (i) awareness of HIV and AIDS and HIV testing is universal in the study population, (ii) routine HIV testing is not practiced as it should be at Princess Marina Hospital, (iii) a significant number of respondents have knowledge gaps with regards to the transmission of HIV and this could lead to risky behaviors and the resulting spread of HIV, (iv) Voluntary Counseling and Testing Centres are the preferred HIV testing places for almost all the respondents in our sample and (v) HIV test results taking long, lack of confidentiality, fear of stigma and discrimination were the most important reasons for not testing at Princess Marina Hospital.

### **Recommendation**

The Management of Princess Marina Hospital in collaboration with the HIV/AIDS Committee should take appropriate measures to correct identified gaps and ensure a successful implementation of routine HIV testing in order to strengthen the fight against HIV/AIDS at the workplace.

### **Study limitations**

The sample chosen for this study is not representative of the entire population of Princess Marina's industrial class workers. Because of that results cannot be generalized.

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**Addendum A Tables of results****I. Demographic data****Table 1 Population distribution by age and sex**

<b>Age in years</b>	<b>Males</b>	<b>Females</b>	<b>Total</b>
23 years	0	1	1
24 years	1	0	1
25 years	1	0	1
26 years	0	1	1
27 years	1	1	2
28 years	1	0	1
29 years	0	1	1
30 years	3	3	6
31 years	0	2	2
32 years	2	2	4
33 years	0	1	1
34 years	0	1	1
35 years	0	3	3
36 years	2	2	4
38 years	0	4	4
39 years	1	2	3
40 years	0	1	1
41 years	0	1	1
42 years	0	1	1
44 years	1	1	2
45 years	0	2	2
46 years	0	1	1
47 years	0	3	3
50 years	1	1	2
55 years	1	0	1
<b>Total</b>	15	35	50

**Table 2 Marital status distribution by sex**

<b>Marital status</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
Married	0	10	10
Cohabiting	1	2	3
Single	13	21	34
Divorced	1	0	1
Widow(er)	0	2	2
<b>Total</b>	<b>15</b>	<b>35</b>	<b>50</b>

**Table 3 Distribution of population level of education by sex**

<b>Education level</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
Primary	2	7	9
Secondary	13	28	41
Total	15	35	50

**Table 4 Distribution of population religion by sex**

<b>Religion</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
Christians	12	31	43
Muslims	1	0	1
Others	0	1	1
No religion	2	3	5
<b>Total</b>	<b>15</b>	<b>35</b>	<b>50</b>

**Table 5** Distribution of population profession by sex

<b>Profession</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
Cleaner	1	12	13
Hospital orderly	0	4	4
Labourer	3	4	7
Gardener	4	0	4
Laundry hand	0	4	4
Seamstress	0	4	4
Kitchen hand	1	2	3
Cook	3	1	4
Driver	1	1	2
ECG attendant	0	1	1
SDU attendant	1	1	2
Theatre attendant	0	1	1
Gate keeper	1	0	1
<b>Total</b>	<b>15</b>	<b>35</b>	<b>50</b>

**Table 6** Distribution of population duration of work at PMH by sex

<b>Duration or work</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
< 1 year	8	10	18
1-2 years	2	2	4
>5 years	5	23	28
<b>Total</b>	<b>15</b>	<b>35</b>	<b>50</b>

**II. Knowledge about HIV****Table 7 Knowledge about HIV/AIDS**

	<b>Males</b>	<b>Females</b>	<b>Total</b>
<b>Heard of HIV</b>			
Yes	15	35	50
No	0	0	0
Don't know	0	0	0
<b>Total</b>	15	35	50
<b>What is HIV</b>			
A virus	12	33	45
A disease	3	2	5
<b>Total</b>	15	35	50
<b>What is AIDS</b>			
A virus	1	2	3
A disease	14	31	35
No answer	0	2	2
<b>Total</b>	15	35	50
<b>AIDS has a cure</b>			
<b>Yes</b>	4	6	10
<b>No</b>	10	24	34
<b>Don't know</b>	1	3	4
<b>No answer</b>	0	2	2
<b>Total</b>	15	35	50
<b>Thinks a healthy looking person can be HIV infected</b>			
<b>Yes</b>	15	28	43
<b>No</b>	0	2	2
<b>Don't know</b>	0	3	3
<b>No answer</b>	0	2	2
<b>Total</b>	15	35	50



**Table 8 Knowledge about the transmission of HIV**

	<b>Males</b>	<b>Females</b>	<b>Total</b>
<b>Transmission of HIV</b>			
<i>By unprotected sex</i>			
<b>Yes</b>	15	30	45
<b>No</b>	0	5	5
<b>Total</b>	15	35	50
<i>By sharing needles or sharp objects</i>			
Yes	7	27	34
No	8	8	16
<b>Total</b>	15	35	50
<i>By shaking hands</i>			
<b>Yes</b>	0	0	0
<b>No</b>	15	35	50
<b>Total</b>	15	35	50
<i>By sharing toilet with an HIV infected patient</i>			
<b>Yes</b>	0	2	2
<b>No</b>	15	33	48
<b>Total</b>	15	35	50
<i>By sharing meals with an HIV infected person</i>			
<b>Yes</b>	0	0	0
<b>No</b>	15	35	50
<b>Total</b>	15	35	50
<i>From mother to child during pregnancy, labor or breastfeeding</i>			
<b>Yes</b>	7	24	31
<b>No</b>	8	11	19
<b>Total</b>	15	35	50

**Table 9 Mode of Transmission of HIV by profession**

	Cleaner	Cook	Kitchen hand	Laundry hand	Labourer	Hospital orderly	E.C.G attendant	Gardner	Theatre attendant	SDU attendant	Driver	Gate keeper	Seamstress	Total
Using the toilet with HIV positive patients	1	1	0	0	0	0	0	0	0	0	0	0	0	2
Unprotected sex	10	3	3	4	7	4	1	4	1	1	2	1	4	45
Sharing needles and sharp objects	11	0	2	4	4	3	0	2	0	2	2	1	3	34
From mother to child	9	0	1	4	4	3	1	2	0	1	2	1	3	31

**III. Knowledge about HIV testing and routine HIV testing****Table 10 Heard about HIV and routine HIV testing**

<b>Heard about HIV</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
Yes	15	35	50
No	0	0	0
Total	15	35	50

**Table 11 Knowledge of where one can get tested for HIV**

<b>Place where one can get tested for HIV</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
Princess Marina Hospital	11	23	34
Voluntary testing and counselling centers	14	33	47
Government clinics	9	24	33
Grand Palm Hotel	0	1	1
Gaborone Central Police	0	1	1
Private clinics or hospitals	10	22	32

**Table 12 Knowledge of where one can get tested for HIV in Princess Marina Hospital**

	<b>Male</b>	<b>Female</b>	<b>Total</b>
<b>Place where one can get tested for HIV in PMH</b>			
Intensive Care Unit	0	4	4
X-ray department	0	0	0
At the staff clinic	14	28	42
In the wards	1	9	10
Accident and Emergency Department	3	10	13
No idea	1	2	3

**Table 13** Time to getting HIV test results

<b>Time to getting HIV test results</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
Same day	15	32	47
< 1 week	0	1	1
1 – 2 weeks	0	1	1
> 2 weeks	0	0	0
Don't know	0	1	1
<b>Total</b>	15	35	50

**Table 14** Confidentiality is required for HIV testing

	<b>Male</b>	<b>Female</b>	<b>Total</b>
Yes	15	33	48
No	0	0	0
Don't know	0	1	1
No answer	0	1	1
<b>Total</b>	15	35	50

#### IV. Attitudes towards HIV testing

**Table 15 Preferred places of testing, reasons for preferring to test somewhere, reasons to prefer another place than PMH**

	Male	Female	Total
<b><i>Preferred place for HIV testing</i></b>			
Princess Marina Hospital	8	20	28
Voluntary Counseling and Testing Centres	14	26	40
Government clinics	5	10	15
Grand Palm Hotel	0	0	0
Gaborone Central Police station	0	0	0
Private clinics or hospitals	8	9	17
Another place	0	0	0
<b><i>Reason to prefer the testing place</i></b>			
Better services are offered there	5	9	14
My results will be kept secret	8	15	23
Nobody knows me there	2	2	4
It will not take long to get results	7	17	24
Other reason	0	6	6
<b><i>Reasons for preferring to test elsewhere than PMH</i></b>			
My results will not be kept confidential	4	2	6
It will take long to get results	1	8	9
I will lose my employment if I am HIV positive	0	0	0
If I am HIV positive, colleagues at the testing place will look down upon me	3	4	7
Fear of discrimination if I am HIV positive	1	2	3
Other reason	0	0	0

**Table 16 Interest in HIV testing**

	<b>Male</b>	<b>Female</b>	<b>Total</b>
<b>Interested in testing for HIV</b>			
<b>Yes</b>	15	35	50
No	0	0	0
<b>Total</b>	15	35	50

**V. Practice about HIV testing****Table 17 Ever tested for HIV, type of test take, whether results were obtained**

	<b>Male</b>	<b>Female</b>	<b>Total</b>
<i>Ever tested for HIV</i>			
Yes	15	35	50
No	0	0	0
Don't know	0	0	0
<b>Total</b>	15	35	50
<i>Type of test taken</i>			
Voluntary	15	35	50
Compulsory	0	0	0
<b>Total</b>	15	35	50
<i>Results obtained</i>			
Yes	15	35	50
No	0	0	0
Don't know	0	0	0
<b>Total</b>	15	35	50

**Table 18 Reason why some people have not been tested for HIV, main reason for the last HIV test, place where the last HIV test was taken.**

	<b>Male</b>	<b>Female</b>	<b>Total</b>
<i>Main reason for the last HIV test</i>			
Just to find out/worry that you are HIV infected	5	13	18
Because you were sick	2	9	11
Because a doctor, a nurse or other health professional asked you to	2	1	3
Because the health department asked you to	2	3	5
Because your sexual partner asked you to	3	1	4
For hospitalization or surgical procedure	0	0	0
To apply for health insurance or life insurance	2	3	5
To comply with guidelines for health workers	2	3	5
To apply for a new job	1	0	1
For military induction, separation or during military service	1	0	1
For immigration	0	0	0
Pregnancy	0	8	8
Other reason	3	9	12

**Table 19** When got tested for HIV

	<b>Male</b>	<b>Female</b>	<b>Total</b>
When got tested last			
< 1 year	7	21	28
1 – 2 years	3	6	9
2-4years	1	2	3
> 4 years ago	3	4	7
Don't know	1	1	2
<b>No answer</b>	0	1	1
<b>Total</b>	15	35	50

**Table 20** Place where one got tested for HIV

	<b>Male</b>	<b>Female</b>	<b>Total</b>
Princess Marina Hospital	3	12	15
Voluntary Counseling and Testing Centres	8	10	18
Government clinics	1	5	6
Grand Palm Hotel	0	0	0
Gaborone Central Police station	0	0	0
Private clinics or hospitals	0	1	1
Another place	1	1	2
No clear answer	2	6	8
<b>Total</b>	15	35	50



**Table 21 Reasons for preferring to test elsewhere than PMH**

	<b>Male</b>	<b>Female</b>	<b>Total</b>
My results will not be kept confidential	0	2	2
It will take long to get results	2	8	10
I will lose my employment if I am HIV positive	1	0	1
If I am HIV positive, colleagues at the testing place will look down upon me	2	4	6
Fear of discrimination if I am HIV positive	2	1	3
Other reason	2	5	7

**Table 22 Would recommend to another PMH staff to get tested at PMH**

	<b>Male</b>	<b>Female</b>	<b>Total</b>
Yes	9	28	37
No	4	1	5
Not sure	2	4	6
No answer	0	2	2
<b>Total</b>	15	35	50

**Addendum B**

**QUESTIONNAIRE**

Study on the Knowledge, perception and attitudes of industrial class workers of Princess Marina Hospital in Gaborone toward routine HIV testing.

**Information of the questionnaire**

Questionnaire number: \_\_\_\_\_

Date : \_\_\_\_\_

Mode of administration of questionnaire : self-administered \_\_\_ interview \_\_\_

If interview, interviewer's name: \_\_\_\_\_

**Respondent characteristics**

1. Age/sex (tick appropriately): \_\_\_ Male \_\_\_ Female \_\_\_
2. Level of education (tick appropriately and fill the last class attended)
  - a) Primary \_\_\_ Standard \_\_\_
  - b) Secondary \_\_\_ Form \_\_\_
3. Marital status:
  - a) Single    b) Married    c) Divorced    d) widow(er)    e) cohabiting
4. Religion
  - a) Christian    b) Muslim    c) Buddhist    d) Hindu
  - e) Other (name): \_\_\_\_\_    f) none
5. Profession : \_\_\_\_\_
6. How long have you been working at PMH?
  - a) Less than a year
  - b) 1 to 2 years
  - c) 2 to 3 years
  - d) 3 to 4 years
  - e) More than 5 years

a. **Assessing knowledge of the respondents about HIV.**

7. Have you ever heard of HIV?

- a) Yes    b) No    c) Don't know

8. What is HIV?

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9. What is AIDS?

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10. Can one get infected with HIV by (tick all that apply):

- a) By shaking hands?
- b) By using the same toilette as an HIV positive patient?
- c) By unprotected sex?
- d) Sharing needles and sharp objects?
- e) From mother to child during pregnancy, labor or through breast feeding?
- f) Sharing a meal with an infected person?

11. Is there a cure for HIV?

- a) Yes    b) No    c) Don't know d) No answer

12. How can one protect himself against HIV? (tick all that apply)

- a) Prayers    b) Condom use    c) Abstaining from sex    d) safer sex practices  
e) male circumcision

13. Do you think that a healthy looking person can be HIV infected?

- a) Yes    b) No    c) Don't know d) No answer

**b. Knowledge about HIV testing and routine HIV testing**

14. Have you ever heard about HIV testing?

- a) Yes
- b) No

15. Where can you get tested for HIV? (tick the all that apply)

- a) PMH
- b) Voluntary counseling and testing centers like Tebelopele
- c) Government clinics
- d) Grand Palm Hotel
- e) Gaborone Central Police station
- f) Private clinics or hospitals

16. Should you want to, where can you get tested for HIV in PMH?

- a) In the Intensive Care Unit (ICU)
- b) At X-RAY department
- c) At the staff clinic
- d) In the wards
- e) At accident and emergency department
- f) No idea

17. How long does it take to get the HIV test results back?

- a) Same day
- b) Less than a week
- c) One to two weeks
- d) More than two weeks
- e) Don't know

18. Is confidentiality required for HIV testing?

- a) Yes
- b) No
- c) No idea

**c. Attitude towards HIV testing**

19. Are you interested in testing for HIV? (If yes, go to question 21).

- a) Yes
- b) No

20. If you are not interested in testing for HIV, what would be the reason?

- a) Afraid to know you can be HIV infected
- b) You assume that you are HIV infected
- c) You assume that you cannot be HIV infected
- d) You don't see any benefit for testing
- e) Other reason \_\_\_\_\_

21. Should you want to be tested for HIV, where would you prefer to go?

(Tick the all that apply)

- a) PMH
- b) Voluntary counseling and testing centers like Tebelopele
- c) Government clinics
- d) Grand Palm Hotel
- e) Gaborone Central Police station
- f) Private clinics or hospitals
- g) Another place: \_\_\_\_\_

22. Why would you prefer to be tested there? (tick all that apply )
- a) Better services are offered there
  - b) My results will be kept secret
  - c) Nobody knows me there
  - d) I will not take long to get the results
  - e) Other reason: \_\_\_\_\_
23. If it is another place than PMH, why wouldn't you like to test in PMH?
- a) My results will not be kept confidential
  - b) It will take long to get the results
  - c) I will lose my employment if it turns out I am HIV positive
  - d) Colleagues at the testing place will look down upon me if it turns out that I am HIV positive
  - e) Fear to be discriminated if it turns out that I am HIV positive
  - f) Other reason: \_\_\_\_\_

**d. Practice about HIV testing**

24. Have you ever been tested for HIV? (if no, go to question 28)
- a) Yes
  - b) No
  - c) Don't know
25. The HIV test that you had, was it voluntary or compulsory?
- a) Voluntary
  - b) Compulsory
26. Did you get your HIV result?
- a) Yes
  - b) No

27. If no, what was the reason?

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28. Here is a list of reasons why some people have not been tested for HIV. Which one of these would you say is the MAIN reason why you have not been tested? (Select all that apply to you)

- a) It's unlikely you've been exposed to HIV;
- b) You were afraid to find out if you were HIV positive
- c) You didn't want to think about HIV or about being HIV positive
- d) You were worried your name would be reported to the government if you tested positive
- e) You don't like needles
- f) You don't trust the results to be confidential
- g) You are afraid of losing job, insurance, housing, friends, family, if people knew you was HIV positive
- h) You didn't know where to get tested or
- i) Some other reason (specify \_\_\_\_\_)

29. When was the last time you were tested for HIV?

- a) Less than a year
- b) 1 to 2 years ago
- c) 2 to 4 years ago
- d) More than 4 years ago
- d) Don't know

30. Which of these would you say was the main reason for your last HIV test? (Circle all that apply to you):

- a) Just to find out/Worried that you are infected
- b) Because you were sick
- c) Because a doctor, nurse or other health care professional asked you to
- d) Because the Health Department asked you to
- e) Because you sex partner asked you to
- f) For hospitalization or surgical procedure
- g) To apply for health insurance or life insurance
- h) To comply with guidelines for health workers
- i) To apply for a new job
- j) For military induction, separation, or during military service
- k) For immigration
- l) Because of pregnancy
- m) Other reason - specify \_\_\_\_\_.

31. Where did you get tested for HIV

- a) PMH
- b) Voluntary counseling and testing centers like Tebelopele
- c) Government clinics
- d) Grand Palm Hotel
- e) Gaborone Central Police station
- f) Private clinics or hospitals
- g) Another place: \_\_\_\_\_



32. If it is another place than PMH, why did you prefer to be tested there rather than PMH?

- a) My results will not be kept confidential
- b) It will take long to get the results
- c) I will lose my employment if it turns out I am HIV positive
- d) Colleagues at the testing place will look down upon me if it turns out that I am HIV positive
- e) Fear to be discriminated if it turns out that I am HIV positive
- f) Other reason: \_\_\_\_\_

33. Would you recommend to another PMH staff member to get tested at PMH?

- a) Yes
- b) No
- c) Not sure

34. If not, why? \_\_\_\_\_

## **Addendum C**

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STELLENBOSCH UNIVERSITY

### **CONSENT TO PARTICIPATE IN RESEARCH**

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#### **KNOWLEDGE, PERCEPTION AND ATTITUDES OF INDUSTRIAL CLASS WORKERS OF PRINCESS MARINA HOSPITAL IN GABORONE TOWARD ROUTINE HIV TESTING.**

You are asked to participate in a research study conducted by GERTRUDE MISHONI KAPINGA, DOCTOR IN MEDICINE, from the AFRICA CENTRE FOR HIV/AIDS MANAGEMENT at Stellenbosch University. You were selected as a possible participant in this study because you are a Motswana, you are part of the Princess Marina Hospital's industrial class workers who constitute the focus population for this study.

#### **1. PURPOSE OF THE STUDY**

The purpose of the study is to determine the knowledge, attitudes and the factors influencing the perception of routine HIV testing by the industrial class workers of Princess Marina Hospital, in order to suggest ways to adjust the implementation of the HIV testing program if necessary.

#### **2. PROCEDURES**

If you volunteer to participate in this study, we would ask you to do the following things: Answer all questions of the questionnaire provided to you by the researcher.

#### **3. POTENTIAL RISKS AND DISCOMFORTS**

Answering the questionnaire will take about 10 minutes of your time.

#### **4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY**

There will be no direct benefit from participating in the study.

The study will hopefully help in the fight against HIV/AIDS by bringing information that can be used to improve the implementation of the routine HIV testing program at Princess Marina Hospital. The participants will not be actively tested for HIV but they will be encouraged to and will also be informed about the counseling and other support services that are available in Botswana.

## **5. PAYMENT FOR PARTICIPATION**

The subject participating in the study will not receive any kind of payment.

## **6. CONFIDENTIALITY**

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of using anonymous questionnaire which will be self-administered or administered by an interviewer for the participants who can not read and/or write. The data will be kept in a locked cabinet where only the researcher and his/her assistant will have access. The electronic data will be protected from tempering and theft by use of user ID and password only known by the researcher and his/her assistant.

The results will be included and analyzed in the final document of the study which will then be submitted to the University for marking.

## **7. PARTICIPATION AND WITHDRAWAL**

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

## **8. IDENTIFICATION OF INVESTIGATORS**

If you have any questions or concerns about the research, please feel free to contact

DR. GERTRUDE M. KAPINGA (principal investigator)  
CELL. + 267-71490198  
EMAIL: [gmishek@yahoo.com](mailto:gmishek@yahoo.com)

Or Prof JCD AUGUSTYN (supervisor)  
TEL. +27 836263081  
EMAIL: [jcda@sun.ac.za](mailto:jcda@sun.ac.za)

## **9. RIGHTS OF RESEARCH SUBJECTS**

- You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Mr Pilate Khulumani, [pkhulumani@gov.bw](mailto:pkhulumani@gov.bw); 3632018 at the Health Research Unit, Ministry of Health.

**SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE**

The information above was described to [*me/the subject/the participant*] by [*name of relevant person*] in [*English/Setswana*] and [*I am/the subject is/the participant is*] in command of this language or it was satisfactorily translated to [*me/him/her*]. [*I/the participant/the subject*] was given the opportunity to ask questions and these questions were answered to [*my/his/her*] satisfaction.

[*I hereby consent voluntarily to participate in this study/I hereby consent that the subject/participant may participate in this study.*] I have been given a copy of this form.

\_\_\_\_\_

**Name of Subject/Participant**

\_\_\_\_\_  
**Name of Legal Representative (if applicable)**

\_\_\_\_\_

**Signature of Subject/Participant or Legal Representative**

**Date**

**SIGNATURE OF INVESTIGATOR**

I declare that I explained the information given in this document to \_\_\_\_\_ [*name of the subject/participant*] and/or [*his/her*] representative \_\_\_\_\_ [*name of the representative*]. [*He/she*] was encouraged and given ample time to ask me any questions. This conversation was conducted in [*English/Setswana*] and [*no translator was used/this conversation was translated into* \_\_\_\_\_ by \_\_\_\_\_].

\_\_\_\_\_

**Signature of Investigator**

**Date**