

ATTITUDES AND PRACTICES OF HEALTH CARE WORKERS TOWARDS HIV POSITIVE PATIENTS AT THE FEDERAL MEDICAL CENTRE OWO ONDO STATE NIGERIA

A Case Study by Mr. Ebenezer Obi Daniel, Nigeria

(MPH Student of Texila American University)

Email id:- dannypressy@yahoo.com

ABSTRACT

PROBLEM: Nigeria has an estimated 3.6 million people with HIV/AIDS and is home to one out of every 11 people with HIV/AIDS worldwide. In Nigeria, as elsewhere, AIDS is perceived as a disease of “others” – of people living on the margins of society, whose lifestyles are considered “perverted” and “sinful.” Discrimination, stigmatization, and denial are the expected outcomes of such values, affecting life in families, communities, workplaces, schools, and health care settings.

OBJECTIVE: The study was designed to determine the attitude and practices of health care workers towards HIV positive patients at the Federal Medical Centre Owo, Ondo State, Nigeria.

METHODS: The study was carried out at Federal Medical Centre Owo in Ondo State, Nigeria. A descriptive cross sectional survey of all seven categories of health-care workers in the centre was conducted. Each category of health care workers; Doctors, Nurses, Pharmacists, Physiotherapists, Medical Laboratory Scientists, Health Information Managers and Medical Imaging Scientists was taken as a sample unit. Sample size proportional to the size of each unit was selected using simple random sampling in order to make the calculated overall sample size. Data was obtained through the use of structured, self-administered questionnaire. Summated scores were used to assess respondents’ attitudes and practices towards HIV positive patients. Data analysis was done using the Statistical package for Social Science (SPSS) version 17. Data were presented using descriptive statistics of frequencies, percentages, pie and bar charts. Inferential statistics of Chi-square was used to test for associations between various factors and the attitude and practices of health care workers towards care for patients with HIV. Statistical level of significance was set at P-value <0.05.

An approval to conduct the study was obtained from Research Ethics Committee of Federal Medical Centre, Owo. Participants were allowed to give their consent in writing before participating in the study.

OUTCOME: A considerable percentage (31.8%) of 252 respondents has varying degrees of poor attitude, while almost half (48.8%) have poor practices towards HIV positive patients. Exposure to blood and other body fluids or injury as a result of work in the last one year, was found to be significantly associated with the attitude of health care workers towards HIV positive patients ($P<0.05$). It was also revealed in this study that, there is a statistically significant association between sex, professional status of health care workers and practices towards HIV positive patients ($P<0.05$). This study also showed that 37.7% gave varying degrees of poor responses to the preventive measures towards discrimination against HIV positive patients.

This study recommended the inclusion of HIV/AIDS education in the training curriculum of schools attended by all health care workers, continuous education/counsel of health care workers on HIV/AIDS, creation of HIV/AIDS policies in all hospitals, further research on the study, and that all health care workers should serve as examples in the crusade against discrimination of HIV positive patients.

KEYWORDS

Healthcare workers, Federal Medical Centre, Ondo State, AIDS, HIV, Patients.

INTRODUCTION

AIDS is an abbreviation for Acquired Immune Deficiency Syndrome. Acquired means something you get, Immune-Deficiency stands for lack of defense against infections agents, and Syndrome means a set of conditions or illnesses. AIDS develops in people who are infected with a virus called Human Immuno-deficiency Virus (HIV). AIDS is caused by a virus which belongs to the family of retroviruses, now called the Human Immune deficiency Virus (HIV). When HIV infects the body, it causes the natural immune system (defence against disease) which normally enables a person to fight off diseases. This is achieved by attacking helper/inducer L-lymphocytes directly, thus preventing them from stimulating the B-cells which function in producing white antibodies (T and B cells are immune-competent cells that cooperate to produce anti-bodies for natural self defence).

The Human Immune Deficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) are posing a serious challenge to mankind. No one precisely knows when it first afflicted humans, nor can anybody predict how soon there will be a breakthrough in finding a solution to the problem. Sitverman (1993) noted that the AIDS epidemic has placed unprecedented demands and severe strains on health care providers of all disciplines. Nigeria has an estimated 3.6 million people with HIV/AIDS and is home to one out of every 11 people with HIV/AIDS worldwide. In Nigeria, as elsewhere, AIDS is perceived as a disease of “others” – of people living on the margins of society, whose lifestyles are considered “perverted” and “sinful.” Discrimination,

stigmatization, and denial are the expected outcomes of such values, affecting life in families, communities, workplaces, schools, and health care settings.

The spread of HIV has increased significantly in Nigeria since the official report of the first case in 1986. The results of periodic national surveys showed a progressive increase in the adult HIV sero-prevalence rate from 1.8% in 1991 to 4.6% in 2008 (NPC and ICF Macro, 2009).

Currently, there are a total of 3.6 million people living with HIV/AIDS (PLWHA) in Nigeria (UNICEF, 2012) and may be subjects of discrimination and stigmatization in the health facilities, and work place and by family and communities (Alubo et al., 2002). These discriminatory or unethical behaviors by health care practitioners against PLWHA have been documented in some countries and may create an atmosphere that interferes with effective prevention and treatment by discouraging individuals from being tested or seeking information on how to protect themselves and others from HIV/AIDS (Tirelli et al., 1991; Danziger, 1994; Aisien and Shobowale, 2005; Sadoh et al., 2006).

RATIONALE OF THE STUDY

A search was conducted using search engines (such as Google and Google Scholar), academic databases (such as PubMed/Medline, Sociological Abstracts, academic search premier, education full text), and Government of various countries' reports. The search of the literature was carried out starting with combinations of the following search terms: HIV/AIDS, Patients living with HIV, health care workers, attitudes and practices towards HIV positive patients, stigma and discrimination, consequences on HIV/AIDS patients, the scope of knowledge, limitation of study, delimitation of study etc... (all words, anywhere in article).

Critical analysis of all the papers/articles reveals that, health-care professionals in Nigeria may engage in discrimination against, and stigmatization of People Living With HIV/AIDS (PLWHA) (Alubo et al 2002, Adelekan et al 1995). However, it was discovered that, the target population in the previous studies had been mostly limited to Doctors and Nurses, while the prevalence, character of, and factors contributing to these practices are, however, largely undocumented. The study was therefore designed to address the knowledge gap, with an extension of the study population to other health-care professionals who are directly or indirectly involved in the clinical activities surrounding the management of HIV positive patients.

GENERAL AND SPECIFIC OBJECTIVES OF THE STUDY

GENERAL OBJECTIVE OF THE STUDY

To determine the attitudes and practices of health care workers towards HIV positive patients at Federal Medical Centre Owo Ondo State Nigeria.

SPECIFIC OBJECTIVES OF THE STUDY

1. To determine the attitude of health care workers towards HIV positive patients
2. To identify the practices of health care workers towards HIV positive patients
3. To assess factors associated with good attitude of health care workers towards HIV positive patients
4. To determine the predictors of appropriate practices of health care workers towards HIV positive patients

REVIEW OF LITERATURE

As of 2012 in Nigeria, the HIV prevalence rate among adults ages 15–49 was 3.1 percent. Nigeria has the second-largest number of people living with HIV (World fact book, 2012). The HIV epidemic in Nigeria is complex and varies widely by region. In some states, the epidemic is more concentrated and driven by high-risk behaviors, while other states have more generalized epidemics that are sustained primarily by multiple sexual partnerships in the general population. Youth and young adults in Nigeria are particularly vulnerable to HIV, with young women at higher risk than young men. There are many risk factors that contribute to the spread of HIV, including prostitution, high-risk practices among itinerant workers, high prevalence of sexually transmitted infections (STI), clandestine high-risk heterosexual and homosexual practices, international trafficking of women, and irregular blood screening (US. DS, 2008)

Stigma has been identified as a complex, diverse and deeply rooted phenomenon that is dynamic in different cultural settings. As a collective social process rather than a mere reflection of an individual's subjective behaviour, it operates by producing and reproducing social structures of power, hierarchy, class and exclusion and by transforming difference (class, race, ethnicity, health status, sexual orientation and gender) into inequality (POLICY Project, 2003). Fear and moral judgement are considered to be the root sources of HIV/AIDS stigma. HIV/AIDS is associated with many different fears. People may fear the casual transmission of the virus, the loss of productivity of people living with HIV, that resources may be wasted on people living with HIV, living with the disease, or imminent death. Similarly, moral judgement may cause stigma. People living with HIV are often seen as self-blaming and convinced that they deserve it because the transmission of the virus is linked to stigmatized behavior, which allows people to understand HIV/AIDS in terms of the concept of blame. It is important to note that HIV/AIDS stigma can be experienced not only by people living with HIV/AIDS but also by people who are suspected to be living with HIV/AIDS (POLICY Project, 2003).

Discrimination is an action based on a pre-existing stigma; a display of hostile or discriminatory behavior towards members of a group, on account of their membership to that group. Stigma and discrimination impede both willingness and ability to adopt HIV preventive behavior, to access treatment and to provide care and support for people living with HIV. Fear of stigma impedes prevention efforts, including discussions of safer sex and preventing mother-to-child

transmission. Because of the separation between 'us' and 'them', people avoid confronting their own risk and adopting preventive behaviors (POLICY Project, 2003).

Since the beginning of the HIV epidemic, stigma and discrimination have been identified as the major obstacles in the way of effective responses to HIV. HIV related stigma and discrimination is a complex social process that interacts with, and reinforces, the preexisting stigma and discrimination associated with sexuality, gender, race and poverty (Herek et al 2004; Niang et al 2003; Parker & Aggleton 2003; Pilot 2006). HIV/AIDS-related stigma and discrimination occur everywhere, but they may have more serious consequences in healthcare settings (Banteyerga et al 2005).

A disadvantage stemming from stigma goes beyond what are often understood as discriminatory actions. For People Living with HIV/AIDS (PLWHA), they can include internalized stigma, lowered self-esteem, depression, and changes in behavior (e.g., not using the available services) because of the fear of stigma (Deacon & Boulle 2006; Kinsler et al 2007). It was indicated that higher perceived HIV stigma scores amongst clients with HIV/AIDS were significantly and negatively correlated with the quality of life (Holzemer et al 2009). Stigma reduced participation in programs to prevent mother-to-child transmission of HIV (PMTCT). (Deacon & Boulle 2006; Kinsler et al 2007; Nyblade & Macquarrie 2006; Letemo 2005; Adebajo et al 2003; Sadoh et al 2006; Mahendra et al 2007; Banteyerga 2004; Li et al 2007).

Service providers in healthcare institutions are expected to provide social and psychological support to persons living with HIV/AIDS in order to help them cope with stress and to reduce the stigma directed against PLWHA. However, HIV/AIDS-related stigma and discrimination have been extensively documented amongst healthcare providers. There have been many reports from healthcare settings of HIV testing without consent, breaches of confidentiality, labeling, gossip, verbal harassment, differential treatment and even denial of treatment (Banteyerga et al 2005; Nyblade & Macquarrie 2000; Nyblade & Macquarrie 2006; Letemo 2005; Adebajo et al 2003). People who feel stigmatized by healthcare providers face problems getting tested for HIV and accessing optimal healthcare services. The fear of stigma impedes prevention efforts, including discussions of safer sex and PMTCT (Banteyerga et al 2005; Adebajo et al 2003; Banteyerga 2004; Ford et al 2004; Sayles et al 2009; Gari et al 2010; Ayene 2010; Maru 2008; Wolfe et al 2006; Obermeyer & Osborn 2007; Calin et al 2007; Davey & Teklu 2006).

Utilization of voluntary counseling and HIV testing (VCT) services and disclosure of HIV status are constrained because of the anticipated stigma and the actual experiences of people living with HIV. Resources like medicine, transport to health services, food and other amenities may be withheld because of a perception that people living with HIV are hopeless cases and will die anyway. These represent just some of the barriers created by stigma and discrimination. On the positive side, the process of disentangling stigma reveals many opportunities for interventions. (Munaaba & Owor, 2004).

In many countries, stigmatization is expressed through laws and policies directed at those living with HIV that claim to protect 'the general population'. Examples of such discriminatory

legislation include limitations on international travel and migration, compulsory screening and testing for HIV, compulsory notification of AIDS cases, prohibition of people living with HIV from certain occupations, and even isolation of people living with HIV from the general population.

In most cases discriminatory practices, such as the compulsory screening of 'risk groups', both further the stigmatization of these groups and create a false sense of security among individuals who are not considered members of such groups or who are at high-risk of contracting HIV. Conversely, enabling programmes and laws can have an unintended discriminatory effect on the beneficiaries rather than an enabling one. For example, healthcare workers may perpetuate stigma during treatment, counselling and care of people living with HIV. (Adebajo et al 2003; Munaaba & Owor et al., (2004).

People living with HIV/AIDS (PLWHA) in Nigeria have been found to be subject to discrimination and stigmatization in the work place, and by family and communities (CRH 2001, Alubo et al 2002). PLWHA may also face discrimination from those employed in the health-care sector (CRH 2001). Discriminatory or unethical behavior by health-care professionals against PLWHA, as documented in other countries (JUNPH 2001; Danziger 1994; Tirelli et al 1991; Devroey et al 2003; Richter 2001), may create an atmosphere that interferes with effective prevention and treatment by discouraging individuals from being tested or seeking information on how to protect themselves and others from HIV/AIDS (Mann et al 1994; IRIN 2002; Parker & Aggleton 2002). Furthermore, discriminatory practices and violations of international principles of medical ethics may serve to legitimize other forms of discrimination against people living with HIV/AIDS.

METHODOLOGY

STUDY AREA

Federal Medical Centre, Owo is located in the Owo Local Government Area of Ondo State in Nigeria. The hospital provides health care services at the primary, secondary and tertiary levels to the people within its catchment areas which are Ondo, Kogi, Edo, Ekiti and Osun States and its surrounding States. It also receives patients from all states of the Federation because it is situated a stone's throw from the highway that links Abuja to Lagos. It is also an approved training centre by both the West African Postgraduate College and National Postgraduate College to train Resident Doctors in some specialist area of Medicine. It is a 250 bed tertiary health centre with average monthly attendance, by all groups, at the outpatient department put at 5,200 and the bed occupancy not less than 80% at every point in time.

STUDY POPULATION

All Doctors, Nurses, Medical Laboratory Scientists, Pharmacists, Physiotherapist, Health Information Managers and Medical Imaging Scientists who are in the employment of Federal Medical Centre Owo, and were available at the time of data collection excluding those on leave (annual, study, leave of absence, etc.) during the period. The target population is health care workers who have direct or indirect involvement in the management of patients with HIV positive patients.

Doctors are medical practitioners who are directly involved in various phases of care for HIV/AIDS patients, which include diagnosis and treatment including counseling. The Nurses equally have direct contact with such patients and are deeply involved the administration of drugs, bed-side nursing and psycho-social care.

The Medical Laboratory Scientists are health professionals who are concerned with the collection of various tissues samples (including blood) from patients for laboratory investigation in order to arrive at a diagnosis or to monitor treatment progress, and their role in the management of HIV/AIDS patients is conspicuous. The Pharmacists also have a role to play in the correct pharmacotherapy of HIV/AIDS patients. They play a vital role in the correct dispensing of drugs and to ensure that the drugs are taken at correct dosages and at correct intervals. Pharmacy-counseling is equally an indispensable role they play in such HIV/AIDS patients.

Physiotherapists are health professionals who specialize in the management of patients with non-invasive physical modalities/techniques (including the use of hands to touch patients) to treat, prevent complications and rehabilitate patients for the purpose of restoring functions. The basis of their role is hinged on patho-kinesiology. They are, most of the time invited to treat HIV/AIDS patients at the chronic stage of the condition.

Health Information Managers (also known as Health Records Officers), are health professionals who are trained in the area of collecting, keeping, storing and retrieving of patients confidential health information. Their role in the information management of patients with HIV/AIDS cannot be over-emphasized. Medical Imaging Scientists (also known as Radiographers) are involved in the radio-diagnostic/imaging procedure of patients with various conditions. They are involved in the management of HIV/AIDS patients in conditions like pulmonary tuberculosis, a co-morbid disease commonly associated with HIV/AIDS, when there is a necessity to screen the patients for the condition All the above-highlighted health workers participated in the study.

STUDY DURATION

The chronological order of activities and the time frame within the **year 2014** for the project work are as summarized in the table below. The total time period required for the completion of

the study as deducible from the activity chart below was seven months (March 2014 to September 2014).

S/N	ACTIVITY	March	April	May	June	July	August	September	Who did the Activity
1	Conceptualization	←-- →							Researcher
2	Drafting of concept paper		↔	← →					Researcher
3	Drafting of proposal		↔	← →					Researcher & Supervisor
4	Revision of proposal			← →					Researcher & Supervisor
5	Pretesting of research instrument				← →				Researcher & Assistants
6	Data collection				← →	← →			Research Assistants
7	Data entry and analysis				← →	← →			Researcher & Supervisor
8	Report Writing					← →	↔		Researcher & Supervisor
9	Review and correction					←- →	↔		Supervisor
10	Final report writing						↔	↔	Researcher & Supervisor
11	Submission to the faculty						↔	↔	Researcher

SAMPLE SIZE DETERMINATION

The minimum sample size was calculated using the Leslie and Kish formula for descriptive studies

$$N = P (1-P) Z^2/D^2$$

- Where N is the minimum sample size needed
- D is the level of error that can be tolerated (0.05 chance of error)
- P is the estimated prevalence rate (0.2) of good attitude among health care workers
- Z is the standard variate corresponding to confidence level. At confidence level of 95%, Z= 1.96

$$N = 0.2(1-0.2) 1.96^2/0.05^2$$

$$N= 246$$

To allow for a non-response rate of 10% (25 respondents), the sample size was increased by 25 to make 271 respondents. The Head of clinical services’ records of Federal Medical Centre Owo, was consulted; in conjunction with the Heads of Departments’ records in order to be well informed about the number of staff in each professional group working in the hospital. The sample size is consistent and realizable when compared with the target population.

SAMPLING METHOD

S/N	PROFESSIONAL GROUP	NUMBER OF STAFF	REFERENCE
1	Doctors	200	Clinical services record
2	Nurses	350	Clinical services/Director of Nursing record
3	Medical Laboratory Scientists	50	Clinical services/HOD Laboratory services record
4	Pharmacists	39	Clinical services/HOD Pharmaceutical services record
5	Physiotherapists	16	Clinical services/HOD Physiotherapy services record
6	Health Information Managers	75	Clinical services/HOD Health records
7	Medical Imaging Scientists	11	Clinical services/HOD Radiology records
	Total	741	

The total staff strength at Federal Medical Centre Owo is about **1200** (as recorded in the staff record in Medical Director's office), out of which **741** are involved in clinical activities. The sample size proportional to each professional group was calculated using the formula–

$$\frac{\text{Number of staff in each profession}}{\text{Total number of staff in professional groups}} \times \text{Estimated sample size}$$

The sample size of each professional group was therefore calculated thus:

$$\text{Doctors} = 200/741 \times 271$$

=73 Doctors

$$\text{Nurses} = 350/741 \times 271$$

= 128 Nurses

$$\text{Medical Laboratory Scientists} = 50/741 \times 271$$

=18 Medical Laboratory Scientists

$$\text{Pharmacists} = 39/741 \times 271$$

=14 Pharmacists

$$\text{Physiotherapists} = 16/741 \times 271$$

= 5 Physiotherapists

$$\text{Health Information Managers} = 75/741 \times 271$$

= 27 Health Information Managers

$$\text{Medical Imaging Scientists} = 11/741 \times 271$$

= 4 Medical Imaging Scientists

The above calculations implies that, from the hospital staff list, 73 Doctors, 128 Nurses, 18 Medical Laboratory Scientists, 14 Pharmacists, 5 Physiotherapists, 27 Health Information Managers and 4 Medical Imaging Scientists were selected using simple random sampling method.

PROBLEMS OF SAMPLING PLAN

Random sampling that was adopted in this study refers to that method of sample selection which gives each possible sample combination an equal probability of being picked up and each item in the entire population to have an equal chance of being included in the sample. This applies to sampling without replacement i.e., once an item is selected for the sample, it cannot appear in the sample again. However, the problem encountered is associated with the replication of the random sampling in seven categories of sample units which was spread across seven categories of health care workers (Doctors, Nurses, Medical Laboratory Scientists, Pharmacists, Physiotherapists, Health Information Managers and Medical Imaging Scientists). The problem was also compounded by duty schedule of some health care workers (like Nurses and Health Information Mangers) who run shift duty, in which the random sampling was constrained with associated stress, due to the fact that, not all the intended participants of such departments were easily available at the same time for easy random sampling/questionnaire administration. The duo constraints demanded more time to combat and solve, and this caused a little extension in the time required to collect data of the required sample size.

STUDY METHODS AND DATA COLLECTION

The data for this cross-sectional descriptive survey/study were obtained through the use of structured, self-administered health-care professional survey questionnaire which include questions on respondent demographics; practices regarding informed consent, testing, and disclosure; treatment and care of patients with HIV/AIDS; and attitudes and practices about treatment and care of HIV positive patients, including informed consent, testing, and disclosure. Risk of exposure of health care workers was assessed with responses of “Not at all,” “Moderately so and “Very much so”. Attitudes, practices, and suggested discrimination-preventive measures were assessed by a response of “Yes”, “No” and “Don’t know” with statements regarding testing, treatment, and care of patients with HIV.

All responses were coded appropriately in order to ensure easy measurement of outcomes. The maximum score attainable under questions related to attitudes of health care workers towards HIV positive patients was 5. Maximum score attainable under questions related to health workers’ practices towards HIV positive patients was 10, while the maximum score attainable under questions related to responses of participants towards preventive measures was 4. All participants were scored in each question segment according to the stated scoring standard using summated scoring system; hence, measurement of outcome is determined using the defined procedure. The research assistants were properly trained on the data collection procedure and the necessary explanation on how to collect data without bias was clearly explained (to ensure study result of high validity and general acceptability). The questionnaires were written in English. Medical experts reviewed the questionnaire for content validity. The instrument underwent pilot testing among 20 participants in the facility and suggestions regarding clarity and appropriateness were incorporated.

RESEARCH QUESTIONS

The study was designed to answer four research questions. They include;

- (1) What is the attitude of health care workers to HIV positive patients at Federal Medical Centre, Owo?
- (2) Is the practice of health care workers towards HIV positive patients similar to that of non-HIV patients?
- (3) Is there need for improvement in the attitude and practice of health care workers towards HIV positive patients?
- (4) What are the factors associated with the attitude of health care workers towards HIV positive patients?

DATA ANALYSIS

Data analysis was done using the Statistical package for Social Science (SPSS) version 17. Data were presented using descriptive statistics of frequencies, percentages, pie and bar charts. Respondents answered “yes” “no” and “don’t know” to questions on attitude of health care workers towards HIV patients. Each right response was scored 1, while each wrong response was scored 0. Summated scores were used to arrive at each respondent’s attitude with a possible score range of 0 to 5. Higher scores indicate higher level of good attitude with score of 5 as the highest score for good attitude.

Equally, respondents answered “yes” “no” and “don’t know” to questions on practices of health care workers towards HIV positive patients. Each right response was scores 1 while each wrong response was scored 0. Summated scores were used to arrive at each respondent’s practice with a possible score range of 0 to 10. Higher scores indicate higher level of good practice with score of 10 as the highest score for good practice.

Respondents also answered “yes” “no” and “don’t know” on questions about preventive measures against discrimination. Each right response was scored 1 and the wrong response was scored 0. Summated scores were used to determine respondent’s response with range from 0 to 4. Higher scores indicate good acceptance of the suggested preventive measures with score of 4 as the highest score. The study’s principal objective was to describe health care workers’ attitudes and practices towards HIV positive patients. However, inferential statistics of Chi-square was used to test for associations between various factors and the attitude and practices towards care for patients with HIV. Statistical level of significance was set at P-value <0.05.

STUDY DESIGN

A descriptive Cross-Sectional design was used. Each category of health care workers; Doctors, Nurses, Pharmacists, Physiotherapists, Medical Laboratory Scientists, Health Information Managers and Medical Imaging Scientists in the employment of Federal Medical Centre, Owo, participated in the study. They involved those who were available and consent to participate in the study. Each professional group was taken as sampling unit, and sample size proportional to the size of each sample unit was selected using simple random sampling.

INCLUSION CRITERIA

The inclusion criteria were health care professionals who are directly or indirectly involved in the management of HIV positive patients. This includes all health care professionals whose professional duties are required in the management of HIV positive patients

EXCLUSION CRITERIA

The exclusion criteria include health care professionals who are on leave, National Youth Service Corp (NYSC) members, industrial attachment students and those who did not give their consent to participate in the study.

ETHICAL CONSIDERATIONS

CONSENT

An approval to conduct the study was obtained from Health Research Ethics Committee of Federal Medical Centre, Owo. Participants in the study were informed in writing about the study. They were also guaranteed the confidentiality of whatever information given by them in the study tool. A statement of informed consent was clearly written on the questionnaire, which was signed by the respondent before filling the questionnaire.

CONFIDENTIALITY

Data collected was used only for research purposes and were kept confidential on a password-protected computer. Names and addresses were not included in the data collection- instrument, and thus collected data was not being leaked to any person. Research assistants were also trained to keep information confidential. Serial number and codes by which the data components can be traced were generated for the purpose of revisiting. This was maintained throughout the period of the study, and the data will be kept for a period of three years after the submission of the project to the faculty.

BENEFICENCE

Findings were communicated to the host management. Advocacy efforts will be instituted at departmental level.

NON-MALFICENCE TO THE PARTICIPANTS

No harm was done to participants as a result of this study

LIMITATIONS

1. The principal investigator is a known co-worker with many of the respondents' health care workers. This might have led to respondents' bias in the study
2. Not all the health care workers that participated in the study are directly/equally exposed to the treatment procedures of HIV positive patients.

In order to reduce the bias that may arise from (1) above, two trained research assistants who are not well-known to the health care professionals were incorporated, to distribute and collect the questionnaires.

PRESENTATION OF RESULTS

A total of two hundred and seventy one (271) respondents were interviewed out of which two hundred and sixty one (261) questionnaires were recovered giving a response rate of 96.3%.

Table 1: Socio-demographic characteristics of respondents

CHARATERISTICS N=261	FREQUENCY	PERCENTAGE
Age (years)		
<30	28	10.7
30-34	85	32.6
35-39	71	27.2
≥40	77	29.5
Sex		
Male	101	38.7
Female	160	61.3
Marital Status		
Single	57	21.8
Married	204	72.2
Religion		
Christianity	248	95
Islam	13	5
Ethnic group		
Yoruba	222	85.4
Igbo	17	6.5
Others	21	8.1

Table 1 above shows the socio-demographic distribution of the respondents. As regards age, 28 (10.7%) were below 30 years, while 71 (27.2%) were 40 years old. The mean age of the respondents was 36.3678 ± 6.63519 . The median age was 35 while it ranged from 23 to 59 years. In all, 101 (38.7%) of the respondents were males, 248 (95%) were Christians and 222 (85.4%) were Yoruba.

Table 2: Occupational characteristics and risk of contracting HIV of respondents

CHARACTERISTICS	FREQUENCY N =261	PERCENTAGE
Professional status		
Doctor	65	24.9
Health Information Management	27	10.3
Medical Imaging Scientist	4	1.5
Medical Laboratory Scientists	18	6.9
Nursing services	128	49.0
Pharmacists	14	5.4
Physiotherapists	5	1.9
How long have you worked in this hospital in years		
≤5	132	50.6
≥6	129	49.4
My risk of contracting HIV infection at work		
High	101	38.7
Moderate	100	38.3
Low	53	20.3

In table 2 above, Doctors, 27 (10.3%), and nurses 128 (40.0%), represents the highest percentage while Medical Imaging Scientists 4 (1.5%) represents the least percentage of respondents. The table also shows that above average, 132 (50.6%) have worked for less than five years in the hospital. Almost equal percentage exists for high risk 101 (38.7%) and moderate risk 100 (38.3%) of exposure to HIV

infection.

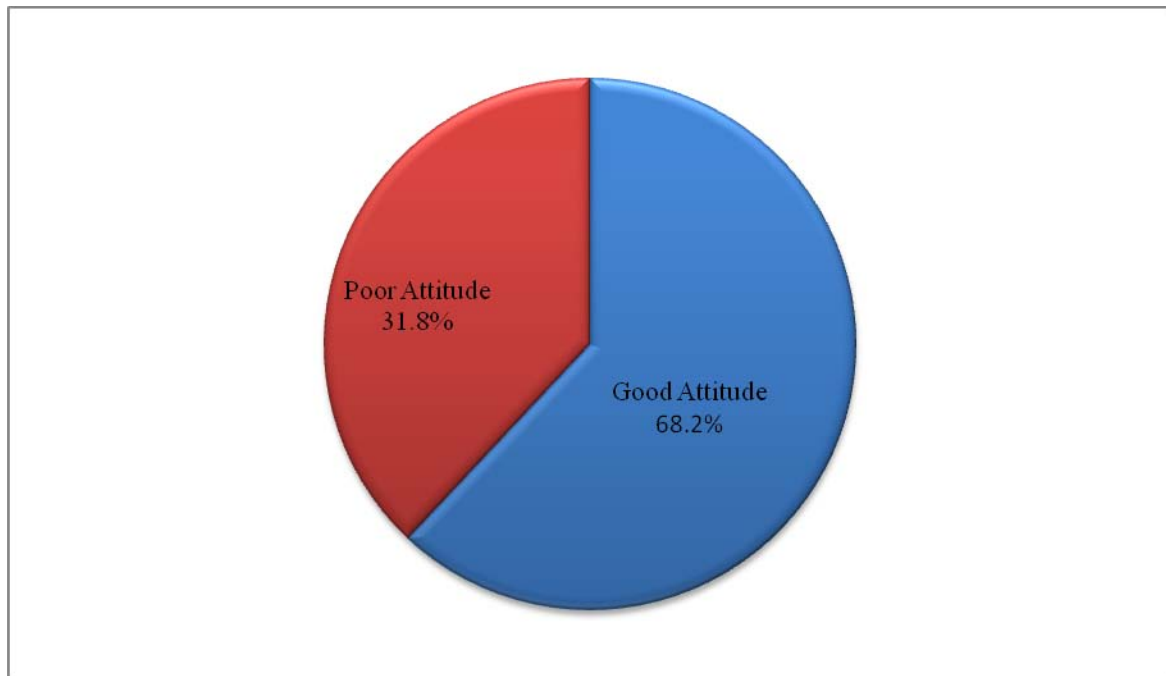
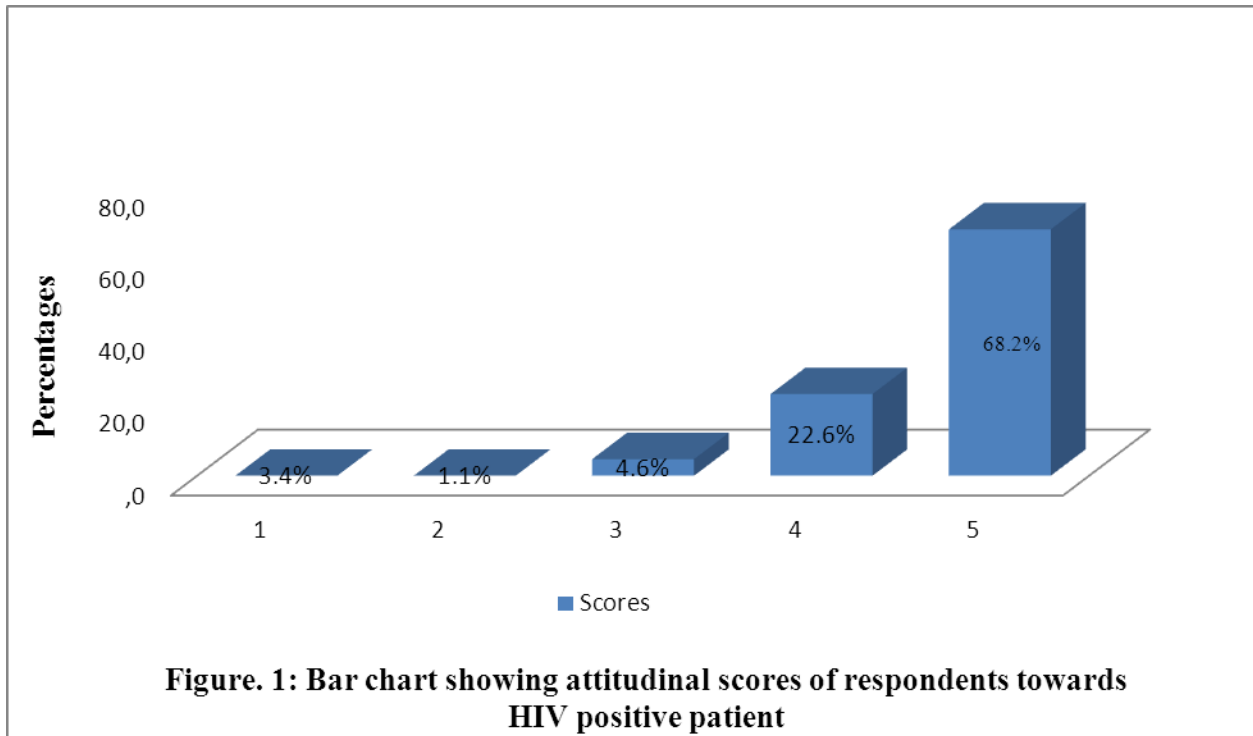


Figure 2: Pie chart showing percentage distribution of good and poor attitude

The pie chart above shows that **68.2%** of the respondents have good attitude while **31.8%** have varying degrees of poor attitude towards HIV positive patients

TABLE 3: Attitudes of health care workers towards HIV positive patients.

Variables	Attitude		Chi-square X ²	P-value
	Good n(%)	Poor n(%)		
Age				
<30	19 (67.9)	9 (32.1)	1.634	0.652
30-34	62 (72.9)	23 (27.1)		
35-39	48 (67.6)	23 (32.4)		
40 and above	49 (63.6)	28 (36.4)		
Sex				
Male	68 (67.3)	33 (32.7)	0.058	0.457
Female	110 (68.8)	50 (31.3)		
Marital Status				
Single	40 (70.2)	17 (29.8)	0.131	0.424
Married	138 (67.6)	66 (32.4)		
Religion				
Christianity	168 (67.7)	80 (32.3)	0.480	0.361
Islam	10 (76.9)	3 (23.1)		
Exposure to blood and other body fluids or injury as a result of work in the last one year				
Yes	85 (63.9)	48 (36.1)	3.395	0.044*
No	91 (74.6)	31 (25.4)		

The table 3 above shows that, among respondents aged less than 30 years, 19 (67.9%) and among respondents aged between 35-39 years, 48 (67.6%) have good attitude towards HIV positive patients. The table also reveals that, 40 (70.2%) among singles have good attitude while 168 (67.7%) among Christians and 10 (76.9%) among Muslims have good attitude towards HIV positive patients. There was no significant association between age, sex, marital status, religion of health care workers and attitude towards HIV positive patients.

Considering the accidental exposure to blood and body fluids, 85 (63.9%) of those who reported to have had accidental exposure to blood and other body fluids or injury as a result of their work in the last one year, and 91 (74.6%) among those who reported not to have had any accidental exposure to blood and other body fluids have good attitudes.

There was a statistically significant association between exposure to blood and other body fluids in the last one year and the attitude of health care workers (X² = 3.395, P=0.044).

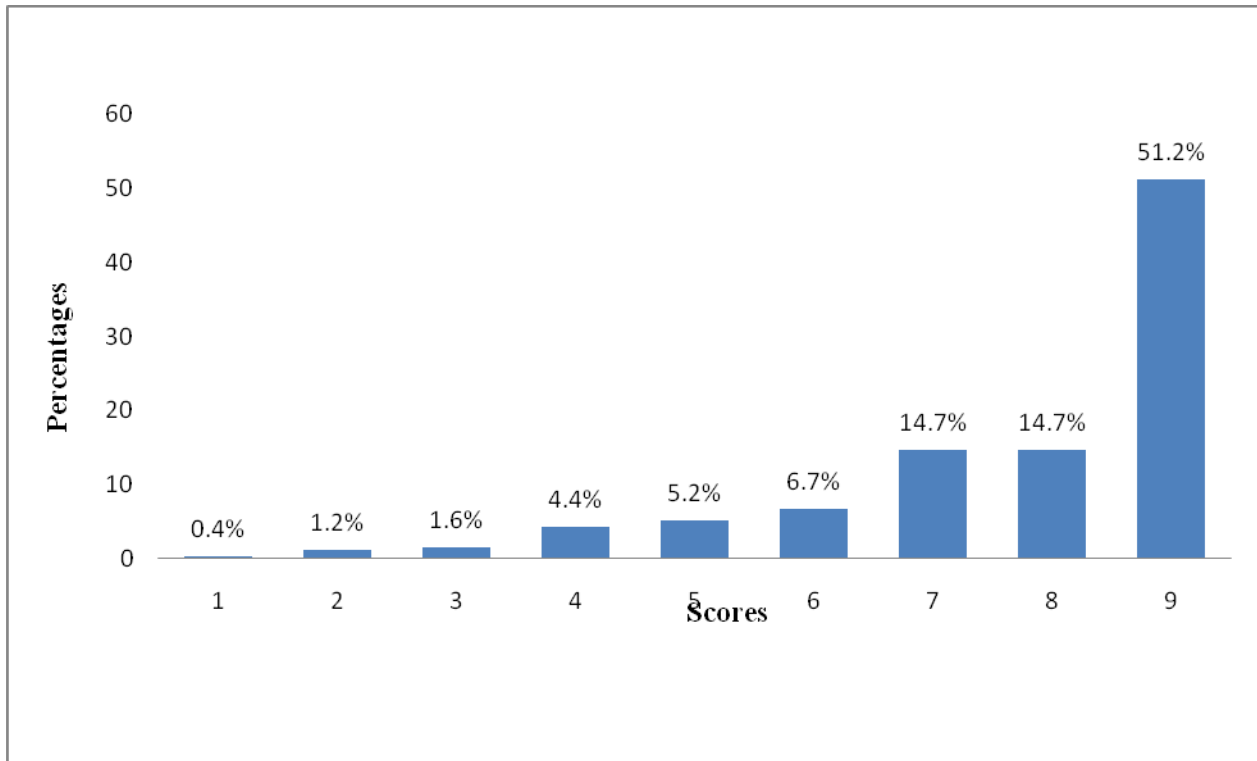


Figure 3: Bar chart showing the practice scores of respondents towards HIV positive patients

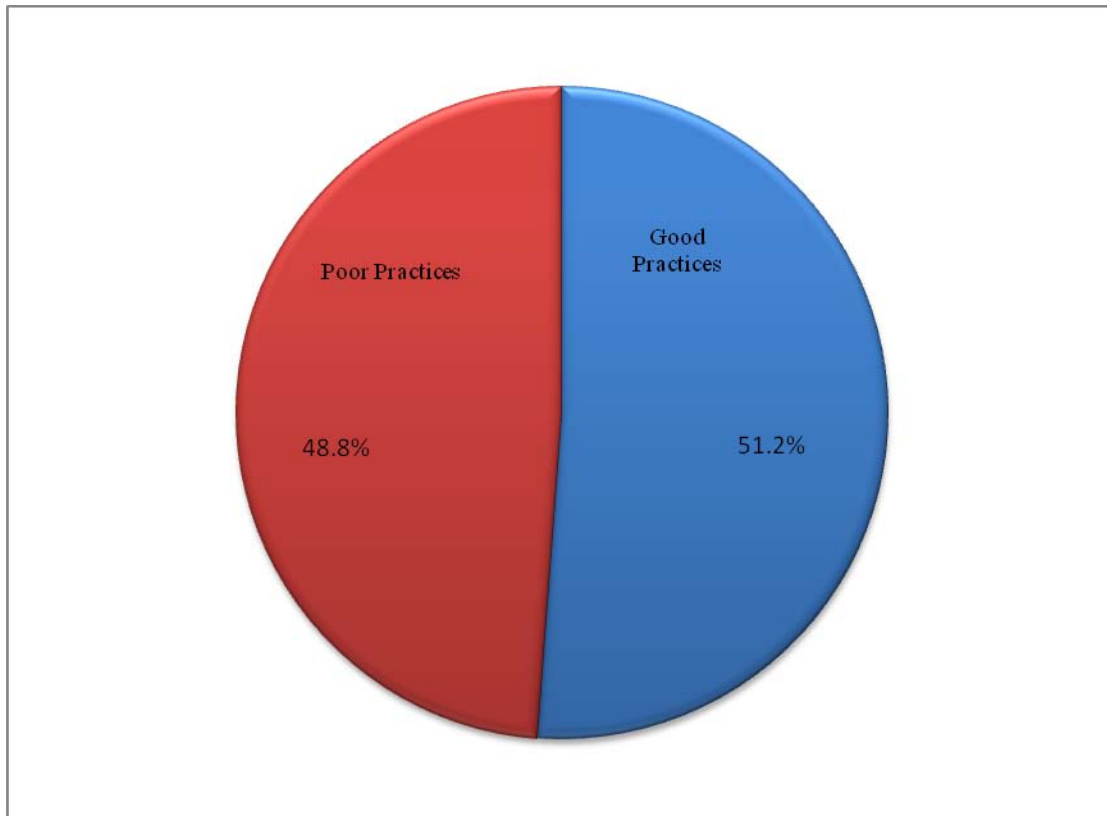


Figure 4: Pie chart showing the percentage distribution of good and poor practices towards HIV positive patients

Considering the figure 3 above, out of 252 respondents, above average, (**51.2%**) have good practices; while **48.8%** has varying degrees of poor practices towards HIV positive patients.

Table 4: Practices of health care workers towards HIV positive patient

Variables	Practices		Chi-square X ²	P-value
	Good n (%)	Poor n (%)		
Age				
<30	14 (53.8)	12 (46.2)	0.315	0.957
30-34	44 (52.4)	40 (47.6)		
35-39	33 (48.5)	35 (51.5)		
40 and above	38 (51.4)	36 (48.6)		
Sex				
Male	38 (38.0)	62 (62.0)	11.545	0.001*
Female	91 (59.9)	61 (40.1)		
Marital Status				
Single	31 (56.4)	24 (43.6)	0.754	0.237
Married	98 (49.7)	99 (50.3)		
Religion				
Christianity	124 (51.9)	115 (48.1)	0.889	0.256
Islam	5 (38.5)	8 (61.5)		
Professional status				
Doctors	24 (37.5)	40 (62.5)	14.756	0.022*
Health Information Managers	18 (66.7)	9 (33.3)		
Medical Imaging Scientists	1 (25.0)	3 (75.0)		
Medical Laboratory Scientists	12 (75.0)	4 (25.0)		
Nurses	65 (52.8)	58 (47.2)		
Pharmacists	8 (61.5)	5 (38.5)		
Physiotherapists	1 (20.0)	4 (80.0)		

The table 4 above shows the distribution of frequencies, percentages, Chi-square values and the P-values of health care workers with good and poor practices for various factors. There was no significant association between age, marital status, religion and practices of health care workers towards HIV positive patients ($P > 0.05$). However, there was a statistically significant association between sex, professional status of health care workers and practices towards HIV positive patients ($P < 0.05$).

Table 5: The frequencies of respondent's suggestions towards preventive measures against discrimination.

	PREVENTIVE MEASURES	FREQUENCY N= 252	
		YES	NO
1.	Education/Counsel/Advice to HCWs.	252	0
2.	Policies on HIV and AIDS at health facilities.	240	12
3.	Stronger laws against discrimination.	222	30
4.	Punishment of health personnel if they discriminate	164	88

Table 5 above shows that all the respondents (252) who answered questions on preventive measures agree that education/counsel/advice should be given to health care workers while 88 disagree with the punishment of health personnel if they discriminate.

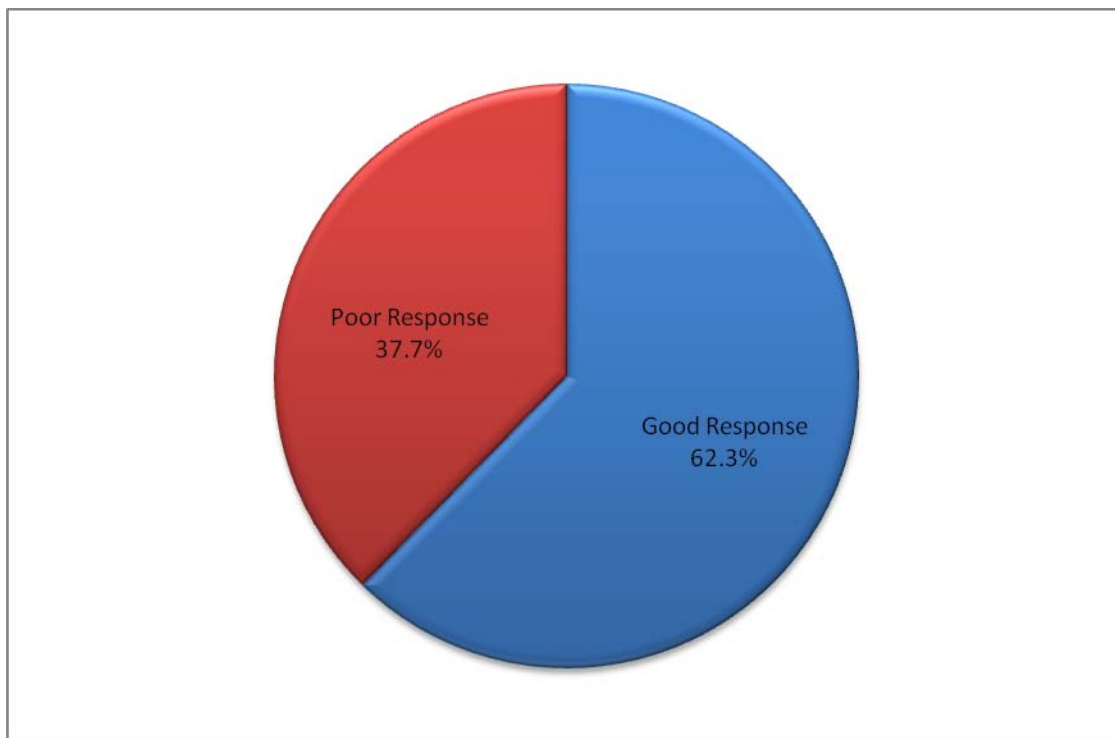


Figure 5: Pie chart showing the percentage distribution of good and poor responses to the preventive measures.

The pie chart above shows that, **62.3%** gave good responses towards measures against discrimination, while **37.7%** gave varying degrees of poor responses to the preventive measures against discrimination.

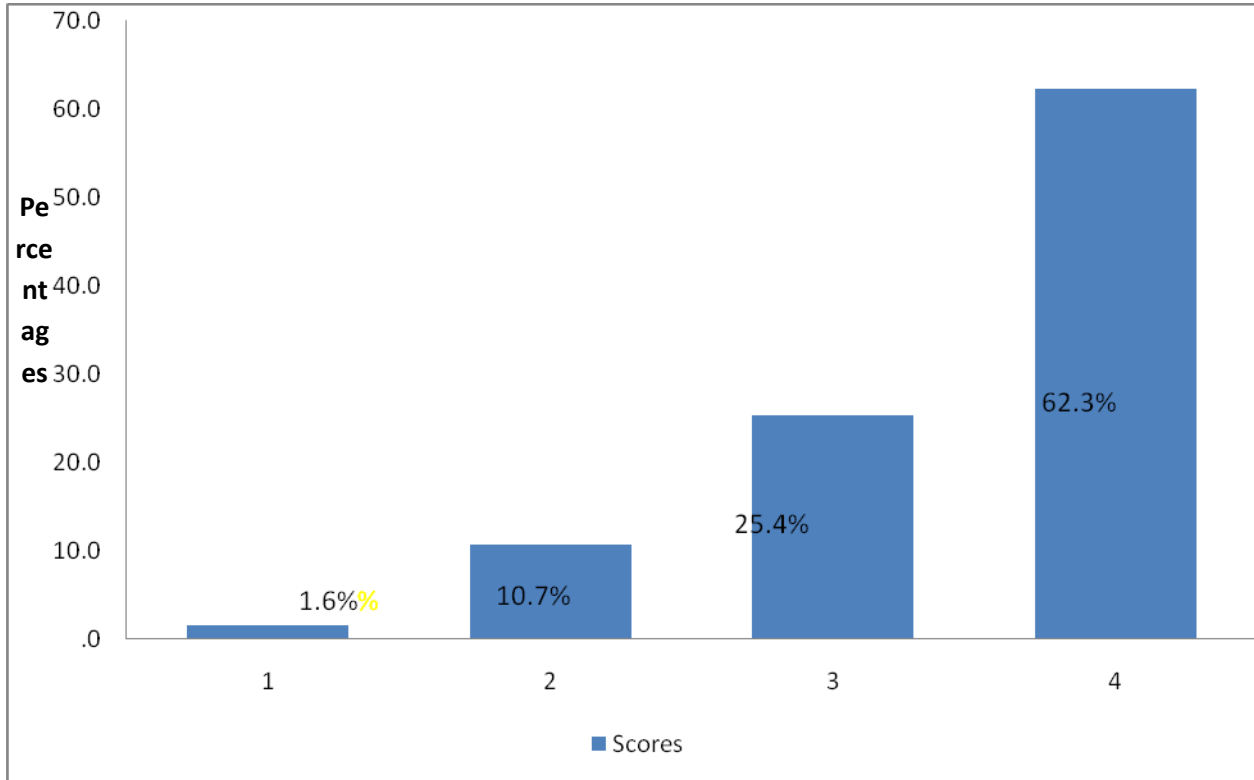


Fig.6: Bar chart showing response scores of respondents towards preventive measures against discrimination.

DISCUSSION

In this study, a total of 271 respondents were interviewed out of which 261 questionnaires were recovered giving a response rate of 96.3%. Majority (32.6%) of the respondents fell within the age of 30-34. The age range was 23 to 59 with a mean of 36.4 ± 6.6 years, and 160 were females. There were 204 married respondents and majority (95%) were Christians while 85.4% were Yoruba by tribe.

Occupational characteristics and the risk of contracting HIV of the respondents revealed that, most of the respondents (49%) were nurses while Medical Imaging Scientists have the lowest number (1.5%). Over half (50.6%) of the respondents have worked in the hospital for less than 5 years while 49.4% have worked for more than 6 years. Almost equal percentage exists for high risk (38.7%) and moderate risk (38.3%) of contracting HIV infection at work.

Attitude of health care workers revealed that statistically significant association exists between exposure to blood and other body fluids or injury as a result of work in the last one year, and their attitude towards HIV positive patients. This is in agreement with the findings of Maria-Rosa et al (2005) which reported similar result. This may be as a result of occupational experiences of such health workers which have given them the orientation that, not all exposure to blood and other body fluids can result to contracting of HIV. But there was no significant association between ages, sex, marital status, religion and attitude towards HIV positive patients among health care workers which disagrees with the findings of Muhammad et al (2010), which reported that the level of discriminatory attitude increases with age, and importance of religion, and also reported that sex, religion and marital status were significantly related to discriminatory attitudes. The differences in the results may be as a result of cultural differences in the study locations.

This study also revealed that, there was statistically significant association between sex, professional status and practices of health care workers towards HIV positive patients ($P < 0.05$). This corroborates the findings of Umar et al, 2012, which reported that professional status demonstrated significant association, influencing respondent's behavior to People Living with HIV/AIDS (PLWHA), and the findings of Muhammad et al (2010) which reported an association between sex and practices towards HIV positive patients. This work did not show any significant association between age, marital status, religion of health care workers and practices towards HIV positive patients.

It was also revealed in the study that 31.8% of 252 respondents have varying degrees of poor attitudes toward HIV positive patients. This is analogous to the findings of Sadoh et al, 2006 which reported that health care workers manifested certain degrees of attitude that are potentially discriminatory of People Living with HIV/AIDS. This may be as a result of their bias knowledge of HIV/AIDS which culminates to their wrong attitude towards HIV positive patients.

From this study, almost half (48.8%) of 252 respondents showed varying degrees of poor practices towards HIV positive patients. This is in tandem with the research findings of Amoran (2011) which reported similar varying degrees of discriminatory practices among health care workers in tertiary health care facilities of Northern Nigeria. This anomaly may be as a result of fear associated with health workers' risk of contracting HIV while managing HIV positive patients.

Considering the respondents' responses towards the preventive measures against discrimination, the result revealed that 37.7% of 252 respondents gave varying degrees of poor responses. This implies that, this group of people may not likely agree with all the measures that may be put in place in order to eradicate or at least, reduce discrimination against HIV positive patients to the barest minimum. This is in agreement with the findings of Reis et al, (2005) which showed similar degree of responses to the preventive measures adoptable by health care workers towards discrimination against HIV/AIDS patients in Nigeria. The reason for this may be attributed to the skepticism of health care workers that some of the preventive measures against discrimination may have negative consequences on their personality.

CONCLUSION

Following the results obtained from this study, the following conclusions can be deduced;

- There is a considerable degree of poor attitude among health care workers towards HIV positive patients at Federal Medical Centre Owo.
- Exposure to blood and other body fluids or injury as a result of work, is a determinant of attitude of health care workers towards HIV positive patients at Federal Medical Centre Owo.
- The prevalence of poor practices among health care workers towards HIV positive patients is considerably high at Federal Medical Centre Owo.
- Sex and professional status are probable determining factors of good or poor practices of health care workers at Federal Medical Centre Owo, towards HIV positive patients.
- There exist divergent views among health care workers concerning the measures adoptable in combating discrimination against HIV positive patients.

RECOMMENDATIONS

1. It is imperative that HIV/AIDS education is included in the curriculum of schools attended by all health care workers to promote shared and better knowledge of the disease.
2. Continuous education and counsel to health care workers should be more effectively carried out in various hospitals where HIV positive patients are being managed.
3. It is recommended that all health facilities should have a policy on HIV and AIDS.
4. There is a need for the scale of research to be broadened in future with an extension to other hospitals in the state and the country at large, both private and public, to explore the prevalence of discrimination against HIV positive patients, and to find out the challenges faced by the health

care workers in the management of HIV positive patients with the motive of providing the necessary solutions.

5. All health care workers must see discrimination-free attitude and practices towards HIV positive patients as their obligations, knowing full well that, they are expected to be exemplary figures in the crusade to fight discrimination against HIV positive patients.

QUESTIONNAIRE

I am a student of Public Health at Texila American University Guyana. I am conducting a survey on Health Care Workers (HCWs). This study is designed to determine the attitude and practices of health care workers towards HIV positive patients at Federal Medical Centre Owo.

INFORMED CONSENT

- Your participation in this interview is completely voluntary.
- If some questions are difficult or make you uncomfortable, you can skip them. You may also decide to stop the interview at any point.
- All information that you provide for this study will be kept confidential. This questionnaire will not have your name on it. Your responses to the questions are identified only by number, and never by name.

Daniel Ebenezer Obi
Researcher	Respondent's
	Signature

SECTION A: SOCIODEMOGRAPHIC DATA (Please tick as appropriate)

- 1) Age (last birthday) in years
- 2) Sex
 1. Male ()
 2. Female ()
- 3). Marital Status
 1. Single ()
 2. Married ()
 3. Co-habiting ()
 4. Separated ()
 5. Divorced ()
6. Widowed ()

- 4) Level of education
 1. None ()
 2. Primary ()
 3. Secondary ()
 4. Tertiary ()

5. Religion
 1. Christianity ()
 2. Islam ()
 3. Others (please specify).....

6. Ethnic group
 1. Yoruba ()
 2. Igbo ()
 3. Hausa ()
 4. Others (please specify).....

SECTION B: OCCUPATIONAL DATA (Please tick as appropriate)

- 7) Department.....
- 8) Job description (tick as appropriate)
 1. Doctor (Consultant/CMO/PMO)
 2. Doctor (Senior Registrar/SMO)
 3. Doctor (Junior Registrar)
 4. Doctor (House officer)
 5. Assistant Director Nursing Services/Deputy Director Nursing Services.
 6. Chief Nursing Officer/Principal Nursing Officer
 7. Senior Nursing Officer/Nursing Officer
 8. Pharmacist

- 9. Physiotherapists
- 10. Chief Med Lab Scientist/Assistant Director MLS/Deputy Director MLS
- 11 Intern Med Lab Scientist/MLS 1/Senior MLS/Principal MLS
- 12 Health Information Managers
- 13 Medical Imaging Scientist

- 9) How long have you worked in this hospital (state actual number of years).....
- 10) How long have you worked in any hospital or health facility.....
- 11) What is your present post.....
- 12) Risk of Exposure of Health Care Workers (HCWs) to HIV

	Risk of exposure to HIV	Not at all	Moderately so	Very much so
1.	Doctors, nurses and other HCWs have a risk of contracting Blood Borne Viruses (such as HIV) while caring for patients			
2.	I worry about contracting HIV/AIDS at work			
3.	I feel I'm at risk of HIV infection outside my work environment			
4.	I feel I'm adequately protected against HIV infection in my workplace			
5.	My job involves use of needles			
6.	My job involves exposure to blood and body fluids			
7.	My job involves direct care of HIV patients			

13) My risk of contracting HIV infection at work is..... (Tick as appropriate)

- 1. High ()
- 2. Moderate ()
- 3. Low ()

14) Have you had accidental exposure to blood and other body fluids or injury as a result of your work in the last one year?

- 1. Yes ()
- 2. No ()

15. If yes, which type?

Type of exposure	Yes	No	No of times it occurred in the last one year	Procedure that led to injury listed below
1.Needle stick injury				
2.Splash of blood & body fluids on open wound				
3.Splash of blood & body fluid on mucosal lining				

4. Splash of blood and body fluid on intact bskin				
5. Cuts from broken bottle				
6.Cuts from scalpel				
7. Others (please specify)				

List of procedures

- | | | |
|----------------------------|----------------------|------------------------------------|
| 1. Recapping of needles | 4.Surgical operation | 7. While disposing of used needles |
| 2. Suturing of laceration | 5. Phlebotomy | 8. Leaking or torn gloves |
| 3. Setting of an I.V. line | 6. Taking delivery | 9. Others specify |

SECTION C: ATTITUDE OF HCWs TO HIV POSITIVE PATIENTS

16. Attitude of health care workers to HIV positive patients.

		Yes	No	Don't know
1.	The quality of life of patients HIV/AIDS can be improved with counseling			
2.	Patients with HIV/AIDS should be on separate ward in a hospital or clinic			
3.	I can refuse to treat a patient with HIV/AIDS to protect myself and my family			
4.	The treatment of opportunistic infections in patients in patients with HIV/AIDS wastes precious resources			
5.	Treatment with anti-retroviral drugs is a waste of resources			

17) Attitude of health care workers to HIV/AIDS

		Yes	No	Don't know
1.	Staff and health care workers should be told when a patient is HIV positive so they can protect themselves			
2.	There are instances when it is appropriate to test a patient for HIV without the patients knowledge			
3.	All prospective health care worker should submit to mandatory HIV testing			
4.	Relatives/sexual partners of patients with HIV/AIDS should be notified of patient's status even without his/her consent			
5.	The charts/beds of patients with HIV/AIDS should be marked so clinics workers know patients status			
6.	A health professional with HIV/AIDS should not be working in any area of health care that require patients' contact			
7.	All surgical patients should be routinely tested for HIV on			

	admission to hospital			
8.	All obstetric patients should be routinely tested for HIV on admission to hospital			
9.	All patients should be routinely tested for HIV on admission to hospital			

18) *Health workers' practice towards HIV positive patients*

		Yes	No	Don't know
1.	Have refused a patient with HIV/AIDS admission to hospital			
2.	Have observed others refuse a patient with HIV/AIDS admission			
3.	Have refused to care for a patient with HIV/AIDS			
4.	Have observed others refusing to care for a patient with HIV/AIDS			
5.	Have verbally mistreated a patient with HIV/AIDS			
6.	Have observed others verbally mistreat a patient with HIV/AIDS			
7.	Have given confidential information to a family member			
8.	Have observed others give confidential information to a family member			
9.	Have given confidential information to a non-family member			
10.	Have observed others give confidential information to a non-family member.			

19) *Protective measures taken when patient is known or suspected to be HIV positive*

		Yes	No	Don't know
1.	No extra protection, treated like any other patient			
2.	Extra gloves			
3.	Use of masks			
4.	Separated from other patients			
5.	Be careful			
6.	Wash/sterilize instruments after use			
7.	Use different instruments for HIV patients			
8.	Use only disposable instruments.			
9.	Invasive procedures not performed.			
10.	HIV status clearly marked on chart or file.			
11.	Others specify			

20) What should be done to prevent discrimination against HIV positive patients by health care workers (HCWs)?

		Yes	No	Don't know
1.	Education/Counsel/Advice to HCWs.			
2.	Policies on HIV and AIDS at health facilities.			
3.	Stronger laws against discrimination.			
4.	Punishment of health personnel if they discriminate			
5.	Others (please specify)			

ANNEXURE

TABLE OF REVIEWED PAPERS/ARTICLES

TOPIC	FIRST AUTHOR	YEAR	COUNTRY	TYPE OF STUDY	MAIN RESULTS	CRITICAL COMMENTS
.Attitudes of Healthcare Providers to Persons Living with HIV/AIDS in Lagos State, Nigeria	Adebajo SB	2003	Nigeria	Descriptive Study	The results show discriminatory attitude towards PLWHA	It affects the attitudes of PLWHA towards accessing treatment
Caring for people with AIDS in a Nigerian teaching hospital: Staff attitudes and knowledge	Adelekan ML	1995	Nigeria	Descriptive study	Health professionals may engage in discriminatory attitude towards PLWHA	There is need for situation improvement
Acceptance and stigmatization of PLWA in Nigeria	Alubo O	2002	Nigeria	Descriptive study	PLWHA are being stigmatized	None
Predictors of HIV Testing amongst	Ayene A	2005	Ethiopia	Case-control study	Fear of stigma prevents prevention	It causes discouragement of PLWHA

Patients in East Gojjam, Northwest Ethiopia-a case-control Study					efforts	
Perceived Stigmatization and Discrimination by Healthcare Providers towards Persons with HIV/AIDS	Banteyerga H	2005	Ethiopia	Descriptive study	Stigma impedes optimal health care services by PLWHA	Stigmatization is an impediment for persons with HIV/AIDS
Disclosure of HIV amongst Black African Men and Women Attending a London HIV Clinic	Calin T	2007	United Kingdom	Case-control study	Stigmatization impedes disclosure of status by PLWHA.	None
Discrimination against people with HIV and AIDS in Poland	Danziger R	1994	Poland	Descriptive study	Likelihood of discrimination against PLWHA	Significant result
Voluntary HIV Testing, Disclosure, and Stigma amongst Injection Drug Users in Bali, Indonesia	Ford K	2004	Indonesia	Case study	Stigmatization impedes going for HIV test	Stigmatization should be discouraged
HIV Positive	Gari T	2010	Ethiopia	Case study	Stigmatization is a social	None

Status Disclosure to Sexual Partner amongst Women Attending ART Clinic at Hawassa University Referral hospital, SNNPR, Ethiopia					problem for PLWHA to disclose status to partners	
HIV-related Stigma and Knowledge in the United States: Prevalence and Trends	Herek G	2002	United States	Case study	stigma and discrimination associated with sexuality, gender, race and poverty	Stigma and discrimination is a social process
Measuring the Degree of Stigma and Discrimination in Kenya: An Index for HIV/AIDS Facilities and Providers	Kamau J	2007	Kenya	Exploratory study	The degree of stigma and discrimination is considerably high	Significant result
Assessment of VCT Utilization and Willingness for Provider-Initiated HIV Counseling	Maru M	2008	Ethiopia	Masters Theses	The fear of stigma impedes prevention efforts, including discussions of safer sex and PMTCT	Fear of stigmatization impedes discussion of PMTCT

and Testing amongst Tuberculosis Patients in Addis Ababa						
Comparative studies of orphans and non-orphans in Uganda	Munaabao	2004	Uganda	Comparative studies	Disentangling stigma reveals many opportunities for interventions.	De-stigmatization i has positive impacts
"It's Raining Stones": Stigma, Violence and HIV Vulnerability amongst Men Who have Sex with Men in Dakar, Senegal	Niang CI	2003	Senegal	Case study	HIV related stigma and discrimination is a complex social process	Men who have sex with men are highly vulnerable
Field, Community Involvement in Prevention of Mother-to-Child Transmission (PMTCT) Initiatives. Women, Communities and the Prevention of Mother-to-Child Transmission of HIV: Issues and Findings	Nyblade LC	2000	Botswana & Zambia	Case study	Breaches of confidentiality, labeling, gossip, verbal harassment, differential treatment and even denial of treatment	Stigma and discrimination exist in various forms

from Community Research in Botswana and Zambia.						
Can we Measure HIV/AIDS- related Stigma and Discriminati on? Current Knowledge about Quantifying Stigma in Developing Countries.	Nyblade LC	2006	Unite d States	Descriptive	Stigma reduced participation in programs to prevent mother- to-child transmission of HIV (PMTCT)	Stigma and discrimination is of high significance in Developing countries
HIV/AIDS- related stigma and discriminati on: A conceptual framework and an agenda for action.	Parker R	2002	Unite d States	Exploratory study	Discriminatory or unethical behavior may create an atmosphere that interferes with effective prevention and treatment by discouraging individuals from being tested or seeking information on how to protect themselves and others from HIV/AIDS	Discriminatory attitudes are unhealthy
HIV/AIDS- related stigma: A literature review	Policy project	2003	South Africa	Literature review	Explanation of Stigma	None
Attitude of Healthcare	Sadoh AE	2006	Nigeri a	Descriptive study	Stigma reduced participation in	None

Workers to HIV/AIDS					programs to prevent mother-to-child transmission of HIV (PMTCT)	
Using Case Vignettes to Measure HIV-related Stigma amongst Health Professionals in China	Li L	2007	China	Case study	Stigma reduced participation in programs to prevent mother-to-child transmission of HIV (PMTCT).	Stigma should not be allowed among health professionals
Nature and extent of discrimination against PLWAs in South Africa: Interviews and a study of AIDS Law Project client files 1993– 2001	Ritcher M	2001	South Africa	Descriptive/Retro spective study	Discriminatory or unethical behavior by health-care professionals against PLWHA, exist in South Africa.	None
Commentary Factors Affecting HIV/AIDS-Related Stigma and Discrimination by Medical Professionals	Deacon H	2006	United States	Descriptive study	For People Living with HIV/AIDS(PL WHA), they can include internalized stigma, lowered self-esteem, depression, and changes in behavior (e.g., not using the available services) because of the fear of stigma	
HIV Stigma	Holzemer	2009	United	Correlational	It was indicated	A significant

and Quality of Life.	WL		d States	Study	that higher perceived HIV stigma scores amongst clients with HIV/AIDS were significantly and negatively correlated with the quality of life	study
Antiretroviral scheme draws poor response	IRIN	2002	Nigeria	Descriptive study	Discrimination prevents good attitude towards seeking information on HIV/AIDS	None
Report on the global HIV/AIDS epidemic	JUNH	2002	Switzerland	Descriptive study	Discrimination and unethical behavior exist among health care professionals	None
Epidemiological fact sheets on HIV/AIDS and sexually transmitted infections	JUNH	2004	Switzerland	Update study		None
HIV and discrimination	Tirelli U	1991	United States	Descriptive study	Discrimination is associated with HIV	None
Utilization of PMTCT Services amongst Pregnant Women in Western Region.	Worku T	2008	Western region	Case study	Stigma is a negative factor that discourages pregnant women from utilizing PMTCT	None

ANNEXURE

Table 1: List of identified literature from literature search

TOPIC	COUNTRY	AUTHOR	JOURNAL/ SOURCE	TYPE OF STUDY
Assessing responsiveness of health care services within a health insurance scheme in Nigeria: Users' perspective	Nigeria	Mohammed <i>et al.</i> , 2013	BMC Health Services Research	Cross-sectional study
Community based health insurance knowledge and willingness to pay; A survey of a rural community in North Central zone of Nigeria	Nigeria	Banwat <i>et al.</i> , 2012	Jos Journal of Medicine	Cross-sectional study
Community health insurance in Uganda: why does enrolment remain low? A view from beneath	Uganda	Basaza <i>et al.</i> , 2008	Health Policy	Case study
Community perceptions of health insurance and their preferred design features: implications for the design of universal health coverage reforms in Kenya	Kenya	Mulupi <i>et al.</i> , 2013	BMC Health Services Research	Cross-sectional household survey
Community Based Health Insurance Scheme in Anambra State, Nigeria: an analysis of policy development, implementation and equity effects	Nigeria	Uzochukwu <i>et al.</i> , 2009	The Consortium for Research on Equitable Health Systems (CREHS)	Case study
Community-based health insurance in low-income countries: a systematic review of the evidence	Sweden	Bjorn Ekman, 2004	Health Policy and Planning	Systematic review
Community-based health insurance knowledge, concern, preferences, and financial planning for health care among informal sector workers in a	Cameroon	Jean Jacques N Noubiap <i>et al.</i> 2013	PanAfrican Medical Journal	Descriptive Cross-sectional study

health district of Douala, Cameroon				
Do Community-based health insurance schemes improve poor people's access to health care? Evidence from rural Senegal	Senegal	Jutting, 2004	World Development	Cross-sectional study
Household perceptions and their implications for enrolment in the National Health Insurance Scheme in Ghana	Ghana	Jehu-Appiah <i>et al.</i> , 2012	Health policy and planning	Cross-sectional household survey
Knowledge, perceptions and expectations of capitation payment system in a health insurance setting: a repeated survey of clients and health providers in Kumasi, Ghana	Ghana	Agyei-Baffour <i>et al.</i> , 2013	BMC Public Health	Cross-sectional cohort survey
Understanding consumers' preferences and decision to enrol in community-based health insurance in rural West Africa	Burkina Faso	M. De Allegri <i>et al.</i> , 2006	Health Policy	Cross-sectional survey
Is community-based health insurance an equitable strategy for paying for healthcare? Experiences from southeast Nigeria	Nigeria	Onwujekwe <i>et al.</i> , 2009	Health Policy	Cross-sectional Survey
Estimating the Willingness to Pay for Community-Based Health Insurance Schemes in Nigeria: A Random Valuation Framework	Nigeria	Ichoku <i>et al.</i> , 2010	IUP Journal of Risk & Insurance	Case Study
Does Community- Based Health Insurance Protect Household Assets? Evidence from Rural Africa	Burkina Faso	Parmar <i>et al.</i> , 2011	Health Research and Educational Trust	Cluster randomized community-based trial
Do community-based health insurance schemes fulfil the promise of equity? A study from Burkina Faso	Burkina Faso	Parmar <i>et al.</i> , 2014	Health Policy and Planning	Descriptive household survey
Healthcare financing in the developing world: is Nigeria's National Health Insurance Scheme a	Nigeria	Falegan I.J. 2008	Jos Journal of Medicine	Case study

Viabile Option?				
Gender's effect on willingness to-pay for community-based insurance in Burkina Faso	Burkina Faso	Dong <i>et al.</i> , 2004	Health Policy	Cross-sectional Household survey
Approaches for scaling up community-based health financing schemes.	Mali	Gamble-Kelley <i>et al.</i> , 2006	PubMed	Systematic review
Ghana's National Health Insurance Scheme: a national level investigation of members' perceptions of service provision	Ghana	Dixon <i>et al.</i> , 2013	BMC International Health & Human Rights	Cross-sectional
Health insurance and health-seeking behavior: Evidence from a randomized community-based insurance rollout in rural Burkina Faso	Burkina Faso	Robyn <i>et al.</i> , 2012	Social Science & Medicine	Randomized household survey
Community-based health insurance programmes and the national health insurance scheme of Nigeria: challenges to uptake and integration	Nigeria	Odeyemi, AO 2013	BMC Health Services	Systematic review
Preferences for benefit packages for community-based health insurance: an exploratory study in Nigeria	Nigeria	Onwujekwe <i>et al.</i> , 2010	BMC Health Services Research	Cross-sectional Study
Community based health insurance schemes: Lessons from rural Kenya	Kenya	Kamau and Njiru, 2014	Journal of Health Care for the Poor and Underserved	Descriptive Cross-sectional survey.
Community-based health insurance and access to maternal health services: Evidence from three West African countries	Senegal, Ghana and Mali	Smith and Sulzbach, 2008	Social Science and Medicine	Cross-sectional household survey

REFERENCES

1. Adebajo, S.B., Bamgbala, A.O., & Oyediran, M.A., (2003): Attitudes of Healthcare Providers to Persons Living with HIV/AIDS in Lagos State, Nigeria. *Afr J Reprod Health*, 7(1):103–110.
2. Adelekan, M.L., Jolayemi, S.O., Ndom, R,J,E., Adegboye, J., & Babatunde, S., et. al., (1995) Caring for people with AIDS in a Nigerian teaching hospital: Staff attitudes and knowledge. *AIDS Care* 7: S63–S72.
3. Alubo, O., Zwandor, A., Jolayemi, T., & Omudo, E. (2002) Acceptance and stigmatization of PLWA in Nigeria. *AIDS Care* 14: 117–126.
4. Amoran, O,E. (2011): HIV-related stigmatizing attitude and practices among health care workers in Northern Nigeria. *Journal of infectious diseases and immunity*. Vol. 3(13) pp 226-232.
5. Ayene, A. (2010): Predictors of HIV Testing amongst Patients in East Gojjam, Northwest Ethiopia-a case–control Study. In *EPHA-Sponsored Master’s Theses Extracts on HIV/AIDS*:56–68. 10.
6. Banteyerga, H., Kidanu, A., & Abebe, F. (2005): Perceived Stigmatization and Discrimination by Healthcare Providers towards Persons with HIV/AIDS. Addis Ababa, Intra Health International, USAIDS:Miz-Hasab Research Center.
7. Banteyerga, H., Kidanu, A., Nyblade, L., MacQuarrie, K., & Pande, R. (2004): Yichalaliko! Exploring HIV and AIDS Stigma and Related Discrimination in Ethiopia: Causes, Manifestations, Consequences and Coping Mechanism in Ethiopia. Addis Ababa: Miz-Hasab Research Center.
8. Bond, V., Chase, E., & Aggleton, P. (2002): Stigma, HIV/AIDS and prevention of motherto-child transmission in Zambia. *EvalProgrPlann*, 25:347–356.
9. Calin, T., Green, J., Hetheron, J., & Brook, G. (2007): Disclosure of HIV amongst Black African Men and Women Attending a London HIV Clinic. *AIDS Care*, 19:385–391.
10. Center for the Right to Health- CRH (2001) Human rights and HIV/AIDS: Experiences of people living with HIV/AIDS in Nigeria. Lagos (Nigeria): Center for the Right to Health. Available: <http://www.crhonline.org/pubdetail.php?pubid%42>.
11. Cheis, Reis., Michele, H., Lyn, L, A., Scott, M., Jerome, O,M., & Chukwuemeka, A. (2005): Discriminatory attitude and practices by health workers towards patients with HIV/AIDS in Nigeria. *PLOS Medicine*.
12. Danziger, R. (1994) Discrimination against people with HIV and AIDS in Poland. *BMJ* 308: 1145–1147.

13. Davey, G., & Teklu, T. (2006): Which factors influence North Ethiopian adults' use of dual protection from unintended pregnancy and HIV/AIDS? *Ethiopian Journal of Health Development*, 22(3):226–231.
14. Deacon, H., & Boulle, A. (2006): Commentary Factors Affecting HIV/AIDS-Related Stigma and Discrimination by Medical Professionals. *Int J Epidemiol*, 36:185–186.
15. Devroey, D., Van, Casteren, V., Sasse, A., & Wallyn, S. (2003) Non-consented HIV testing by Belgian general practitioners. *AIDS* 17: 641–642.
16. Diaz, N.V., & Neilands, T.B. (2009): Development and Validation of a Culturally Appropriate HIV/AIDS Stigma Scale for Puerto Rican Health Professionals in Training. *AIDS Care*, 21(10):1259–1270.
17. Ford, K., Wirawan, D.N., Sumantera, G.M., Sawitri, A.A., & Stahre, M. (2004): Voluntary HIV Testing, Disclosure, and Stigma amongst Injection Drug Users in Bali, Indonesia. *AIDS EducPrev*, 16:487–498.
18. .Gari, T., Habte, D., & Markos, E. (2010): HIV Positive Status Disclosure to Sexual Partner amongst Women Attending ART Clinic at Hawassa University Referral hospital, SNNPR, Ethiopia. *Ethiop J Health Dev*, 24(1):9–14.
19. Health Policy Initiative, Task Order 1 (2007): Stigmatization and Discrimination of HIV Positive People by Providers of General Medical Services in Ukraine. Washington, DC: Futures Group, Health Policy Initiative, Task Order 1.
20. Herek, G., Capitanio, J.P., & Widaman, K.F. (2002) HIV-related Stigma and Knowledge in the United States: Prevalence and Trends, 1991–1999. *AJPH* 83:574–577.
21. Herek, G.M., Mitnick, L., & Burris, S. (1998): AIDS and Stigma: a Conceptual Framework and Research Agenda. *AIDS Public Policy J* 1998, 13:36–4.
22. Holzemer, W.L., Dcur, S.H., Arudo, J., Rosa, M.E., Hamilton, M.J., & Corless, I. (2009): HIV Stigma and Quality of Life. *J Assoc Nurses AIDS Care*, 20(3):161–168.
http://www.irinnews.org/AIDSreport.asp?ReportID%41331&SelectRegion%4West_Africa&SelectCountry%4NIGERIA
23. Integrated Regional Information Networks-IRIN (2002) Nigeria: Antiretroviral scheme draws poor response.
24. Joint United Nations Programme on HIV/AIDS (2001) India: HIV and AIDS-related discrimination, stigmatization, and denial. Geneva: Joint United Nations Programme on HIV/AIDS. 66 p.

25. Joint United Nations Programme on HIV/AIDS- JUNH (2002) Report on the globalHIV/AIDS epidemic. Geneva: Joint United Nations Programme on HIV/ AIDS. 229 p.
26. Joint United Nations Programme on HIV/AIDS- JUNPH (2004) Epidemiological fact sheets on HIV/AIDS and sexually transmitted infections: 2004 update. Available: http://www.who.int/GlobalAtlas/PDFFactory/HIV/EFS_PDFs/EFS2004_NG.pdf.
27. Kamau, J., Odundo, P., & Korir, J. (2007): Measuring the Degree of Stigma and Discrimination in Kenya: An Index for HIV/AIDS Facilities and Providers. Washington, DC: Futures Group, Health Policy Initiative, Task Order 1.
28. Kinsler, J, J., Wong, M,D., Sayles, J,N., Davis, C., & Cunningham, W,E. (2007): The Effect of Perceived Stigma from a Healthcare Provider on Access to Care amongst a Low-Income HIV Positive Population. *AIDS Patient Care Stud*, 21(8):584–592.
29. Letemo, G. (2005): The discriminatory attitudes of health providers against people living with HIV. *PLoS Med* , 2(8):e246 [PMC freearticle] [PubMed].
30. Li, L., Wu, Z., Zhao, Y., Lin, C., Detels, R., & Wu, S. (2007): Using Case Vignettes to Measure HIV-related Stigma amongst Health Professionals in China. *Int J Epidemiol*, 36:178–84.
31. Mahendra, V. S., Gilborn, L., Bharat, S. (2007): Understanding and measuring AIDS-related stigma in health care settings: a developing country perspective. *SAHARA J*, 4(2):616–625 [PubMed].
32. Mann, J., Gostin, L., Gruskin, S., Brennan, T., & Lazzarini, Z., et, al. (1994) Health and human rights. *Health Hum Rights* 1: 6–23.
33. Maria, R, R., Alcyone, A,M., & Marco, A, F. (2005): Health care workers and AIDS: A differential study of beliefs and affects associated with accidental exposures to blood. *Artigo Article* pp 283-291
34. Maru, M. (2008): Assessment of VCT Utilization and Willingness for Provider- Initiated HIV Counseling and Testing amongst Tuberculosis Patients in Addis Ababa. In *Extracts from EPH-Sponsored Masters Theses on HIV/AIDS:54–66*. 4.
35. Muhammad, B,H., Kippax, S. (2005). HIV-related discriminatory attitudes of health care workers in Bangladesh. *J.Health Popul Nutr* vol.28(2)
36. Munaaba, Owor., et, al., (2004). *Comparative studies of orphans and non-orphans in Uganda*. Boston: Center for International Health and Development, Boston University School of Public Health.

37. National Population Commission (NPC) [Nigeria] and ICF Macro. (2009). Nigeria Demographic and Health Survey 2008. Abuja, Nigeria/ Calverton, MD USA: National Population Commission and ICF Macro, pp. 197-233.
38. Niang, C.I., Tapsoba, P., & Weiss, E. (2003): "It's Raining Stones": Stigma, Violence and HIV Vulnerability amongst Men Who have Sex with Men in Dakar, Senegal. *Cult Health Sex* 5(6):499–512.
39. Nyblade, L., & MacQuarrie, K. (2006): Can we Measure HIV/AIDS-related Stigma and Discrimination? Current Knowledge about Quantifying Stigma in Developing Countries. Washington, DC: United States Agency for International Development.
40. Nyblade, L.C., & Macquarie, L. (2000): Field, Community Involvement in Prevention of Mother-to-Child Transmission (PMTCT) Initiatives. Women, Communities and the Prevention of Mother-to-Child Transmission of HIV: Issues and Findings from Community Research in Botswana and Zambia. Washington: International Center for Research on Women.
41. Obermeyer, C.M., & Osborn, M. (2007): The Utilization of Testing and Counseling for HIV: A Review of the Social and Behavioral Evidence. *Am J Public Health*, 97:1762–1774.
42. Parker, R., & Aggleton, P. (2002) HIV/AIDS-related stigma and discrimination: A conceptual framework and an agenda for action. New York: Population Council. Available: <http://www.popcouncil.org/pdfs/horizons/sdcncptlfrmwrk.pdf>.
43. Parker, R., & Aggleton, P. (2003): HIV and AIDS-related Stigma and Discrimination: A Conceptual Framework and Implications for action. *SocSci Med*, 57:13–24.
44. Piot, P. (2006): How to Reduce the Stigma of AIDS, Keynote Address. Symposium at the XVI International AIDS Conference, Toronto.
45. POLICY Project. (2003a). Siyam'kela. *HIV/AIDS-related stigma: A literature review*. Cape Town, South Africa: USAID; POLICY Project/South Africa; Centre for the Study of AIDS at the University of Pretoria; Chief Directorate: HIV, AIDS & TB, and Department of Health. www.policyproject.com
46. Richter, M. (2001) Nature and extent of discrimination against PLWAs in South Africa: Interviews and a study of AIDS Law Project client files 1993– 2001. Johannesburg: AIDS Law Project. 46 p.
47. Sadoh, A, E., Fawole, A,O., Sadoh, W,E., Oladimeji, A,O., & Sotiloye, O,S. (2006): Attitude of Healthcare Workers to HIV/AIDS. *Afr J Reprod Health* 2006, 10(1):39–46.

48. Sayles, J,N., Wong, M,D., Kinsler, J,J., Martins, D., & Cunningham, W,E. (2009): The Association of Stigma and Self-reported Access to Medical Care and Antiretroviral Therapy Adherence in Persons Living with HIV/AIDS. *J Gen Intern Med*, 24(10):1101–1108.
49. Silverman, D, C. (1993). Psychosocial impact of HIV related care giving on health providers: a review and recommendations for the role of psychiatry. *American Journal of Psychiatry*. 150, 705-712.
50. Tirelli, U., Accurso, V., Spina, M., & Vaccher, E. (1991) HIV and discrimination. *BMJ* 303: 582.
51. Umar, A,S., Oche, M,O., & Adeoso, A. (2012): Discriminatory practice of health workers towards People Living with HIV/AIDS in Sokoto Nigeria. *Journal of AIDS and HIV Research* Vol.4(9). pp 223-228.
52. UNICEF (2012).State of the world’s children 2012.Unicef, New York, USA.
53. Worku, T. (2008): Utilization of PMTCT Services amongst Pregnant Women in Western Region. In Extracts from EPHA-sponsored Masters Theses on HIV/AIDS: 1–8.