EMRO/TDR SGS (2018-2019)

Final Report Draft

Feasibility of Provider-initiated HIV testing and counseling (PITC) in private healthcare sectors, Sudan 2018-2019

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Contents

No.	Subject	Page No.
I	Contents	**1**
II	Acknowledgement	**2**
III	List of abbreviations	**3**
VI	Abstract	**4**
CHAPTER ONE		
1-1	Introduction	**5**
1-2	Justification	**7**
1-3	Objectives	**8**
CHAPTER TOW		
2	Literature review	**9**
CHAPTER THREE		
3	Methodology	**20**
CHAPTER FOUR		
4	Results	**24**
CHAPTER Five		
5-1	Conclusion	**41**
5-2	Recommendations	**42**
	References	**43**

Acknowledgement

First of all, praise is due to Almighty ALLAH with his compassion and mercifulness to allow me finalizing this study.

I would like to thank EMRO-TDR for the financial support for this study , guidance and support and for providing me with guidelines for doing the health system researches which helped me to achieve this study.

List of abbreviations

AIDS:	Acquired Immune-Deficiency Syndrome
ANC	Antenatal Care
ART:	Anti Retroviral Therapy
CT:	Counseling and Testing
ELISA:	Enzyme-Linked Immune Sorbent Assay
FMOH:	Federal Ministry of Health
FP:	Family Planning
HIS:	Health Information System
HIV:	Human Immune Deficiency Virus
HTC:	HIV testing and counseling
MOH:	Ministry of Health
MSM	Men who have Sex with Men
OIs:	Opportunistic Infections
NSP	National Strategic Plan
PHPs:	Private Health Providers
PITC:	Provider Initiating Testing and Counseling
PLHIV:	Peoples Living With HIV
PMPs:	Private Medical Providers
PMTCT:	Prevention of Mother to Child Transmission
PPPs:	Public Private Partnerships
PWID	People Who Inject Drugs
SHHS:	Sudan Household Survey
SNAP:	Sudan National AIDS control Program
STIs:	sexually transmitted infections
SW	Sex Worker
TB:	Tuberculosis
TBMUs:	Tuberculosis Management Units
UNAIDS:	Joint United Nations Program on HIV/AIDS
VCT:	Voluntary Counseling and Testing
WHO:	World Health Organization

Abstract

Background: The private healthcare sector is growing in Sudan; but it is not involved in the provision of provider initiating HIV testing and counseling services yet. The private health sector inclusion in providing this service could play a considerable role in scaling up HIV prevention and control toward achievement of Sustainable Development goals (SDGs).

Objective: To study the Feasibility of Provider-initiated HIV testing and counseling in private healthcare sector, in Sudan.

Methodology: Between May and December 2019 a descriptive cross- sectional quantitative and qualitative hospital based study was conducted in 38 private hospitals, 56 private clinics in Khartoum state, Sudan. It involved 38 medical directors, 269 healthcare providers and 92 heads of laboratories, who were interviewed by structured questionnaire for quantitative data. For qualitative data 8medical directors were interviewed by in depth interview.

Results: These showed that there was no form of linkage between private health sector and the Ministry of Health. All Medical directors agreed on the importance of HIV PITC. 91.9% of them agreed on providing PITC at Private hospitals, 94.6% of medical directors will allow their healthcare provider to attend training to on HIV/AIDS topics. The results also showed that most medical directors would like to see more involvement of private hospitals in providing HIV testing and counseling services, but as part of an overall national policy. The result also showed that, although78.5% heard about HIV PITC, there is a poor knowledge about steps and guidelines of it.

Conclusion: The study demonstrated that it is feasible to provide HIV PITC IN private health care sector. Most of medical directors accept to provide the service, but the mechanism of providing this service need coordination with ministries of health. HIV testing is widely implemented in private health care sector, but poorly follows the WHO and national guidelines. Compact of stigma toward HIV/AIDS patients, and provision of qualified health care providers and counselors are the main challenges. Study recommended Federal Ministries of Health and Disease Control Directorate to draw up HIV policies for the private health sector regarding HIV testing and counseling services, expand the umbrella of training to involve healthcare providers in private care sector , increase efforts to overcome stigma, and ensure that all national guidelines on HIV/AIDS are available and followed in private health care sector.

CHAPTER ONE

1-1Introduction

HIV continues to be a major global public health issue, having claimed more than 35 million lives so far. In 2016, 1.0 million people died from HIV-related causes globally. There were approximately 36.7 million people living with HIV at the end of 2016 with 1.8 million people becoming newly infected in 2016 globally. It is estimated that currently only 70% of people with HIV know their status. To reach the target of 90%, an additional 7.5 million people need to access HIV testing services. [(1)]

People reach HIV treatment, care, and the full range of prevention options through the gateway of HIV testing and counseling (HTC). [(2)] A successful public health response to HIV requires robust HTC services. At the same time, HTC requires successful linkages to HIV care and treatment. [(2)]

Health facilities represent a key point of contact with people with HIV who are in need of HIV prevention, treatment, care and support. Evidence from both developed and underdeveloped countries suggests that many opportunities to diagnose and counsel individuals at health facilities are being missed. [(3)]

The health sector response to HIV as being critical to the achievement of universal health coverage – one of the key health targets of the Sustainable Development Goals. The strategy guides health sector efforts to accelerate and focus HIV prevention, enable people to know their HIV status, provide antiretroviral therapy and comprehensive long-term care to all people living with HIV, and challenge pervasive HIV-related stigmatization and discrimination.[(4)]

To achieve these targets, the engagement of other sectors in the expansion of HTC services must be a strategy. The private health sector is seen as complementary to the public health sector, and it is crucial for building a healthy nation, and contributing to the overall social and economic development of the country.[(5)]In the poorest countries, the regulatory and legislative framework which underpins the state's approach to working with private providers is inadequate, dealing with

only the most basic requirements, such as practice entry and facility registration.[6]HIV testing in the private medical sector is accompanied by inappropriate practices and inadequate knowledge, reflecting deficiencies in the implementation of policy guidelines.[7]

The effort to engage the private health sector has shown considerable success in the scaling-up of HIV services.(8) So there is a clear need for the private health sector, given its breadth, scope and size, to play a more significant role in supporting governments, communities and partners to develop and implement national health policies and strategic plans in order to strengthen health systems capacities.[9]

In Sudan, the involvement of the private health sector in the national response is minimal,[10]Despite the increased reliance on it, this sector is neglected by the Federal Ministry of Health (FMOH), and the opportunities for universal access to HIV testing and counseling are untapped. Levels of stigma and discrimination, the inability of health care providers to implement HIV testing and counseling under conditions of confidentiality and informed consent, and the lack of adequate resources are all issues constituting barriers to the full involvement of the private health sector. Public private partnerships (PPPs) present a good way of overcoming such barriers. and private medical providers (PMPs) must be supported by appropriate research, along with political commitment and leadership from both public and private sectors.[11] So there is need for advocacy and capacity building of the private sector to play a role in the national response.([10]

1-2 Justification

Private healthcare provision is growing in Sudan, and private healthcare facilities play a significant role in providing health services. [12]

Most of the services of the private health sector are concentrated in Khartoum state (70% of all private institutions in Sudan). [5]

The Sudan Household Health Survey (2006) showed that 19% of the health services users chose the private sector.[13]A similar result (18%) was reported by the Utilization of Health Services Survey(2006).[14]

Engagement of the private health sector in providing HTC services could achieve universal access to comprehensive HIV/AIDS prevention, treatment, care and support.

To reach the 90-90-90 case detection has to be improved through, Improve linkage to care through active referrals, improve quality of care particularly counseling, patient monitoring and tracking systems, early detection and initiation of Antiretroviral drugs (ARVs) besides increasing accessibility to HIV care services.[15]

The 2014 European Guideline on HIV Testing provides advice on testing for HIV infection in individuals aged 16 years and older who present to sexually transmitted infection, genito-urinary or dermato-venereology clinics across Europe. It may also be applied in other clinical settings where HIV testing is required.[16]

As there is a lack of studies in this area, this research was undertaken to provide information about the current situation of HIV/AIDS in private healthcare facilities and the way HTC services are provided, and to suggest appropriate means to attract the private health sector to collaborate in HIV prevention.

1-3 Objectives:

General objective:

To study the Feasibility of Provider-initiated HIV testing and counseling in private healthcare sector, in Sudan, 2018-2019

Specific objectives:

1. To assess the current situation of HIV and other HIV high risk patients management and reporting to the MOH at private healthcare sector
2. To assess HIV testing availability and quality at private health care sectors
3. To determine the factors affecting the provision of PITC services at private health care sectors
4. To measure knowledge, attitude and practice toward PITC by healthcare providers at private health care sectors

CHAPTER TOW

Literature Review

Provider-initiated HIV testing and counseling refers to HIV testing and counseling which is recommended by health care providers to persons attending health care facilities as a standard component of medical care. The major purpose of such testing and counseling is to enable specific clinical decisions to be made and/or specific medical services to be offered that would not be possible without knowledge of the person's HIV status. (17)

Current levels of HIV testing in most countries are low. So in light of steady advances in prevention, treatment and care, WHO and UNAIDS have advocated for an increase in provider-initiated HIV testing and counseling (PITC) in addition to client-initiated testing and counseling (CITC). Following a series of consultations, WHO/UNAIDS jointly released the Guidance on Provider-Initiated Testing and Counseling in Health Facilities (May 2007). The summary guidance on PITC recommends that HIV testing and counseling should be offered:

• To all patients irrespective of epidemic setting, whose clinical presentation might result from underlying HIV infection (e.g. Tuberculosis (TB) or medical symptoms possibly indicating HIV);

• As a standard part of clinical care in Sexually Transmitted Infections(STI), family planning and antenatal services in all settings;

• As a standard part of medical care for all patients (adults and children) attending health facilities in generalized HIV epidemic settings;

• Selectively in concentrated and low epidemic settings.

When implementing provider-initiated testing, the traditional pre-test counseling components used in CITC are adapted to simply ensure informed consent, without a full education and counseling session. However, every effort should be made to identify additional support within the health care setting for education and emotional support as part of the HIV testing interaction. (18)

The provider-initiated model has the potential to result in higher uptake of testing.(18)

PITC has been shown to play a crucial role in health facilities to improve HIV-related diagnosis, treatment, and care.(19) It appears to have resulted in considerable increases in testing uptake in the United States, United Kingdom, Hong Kong, Singapore, Norway, and Canada, where the majority of clients (4/5 or more in most studies) agreed to be tested[20]

In Kenya, many staff of private facilities lack formal training in HIV diagnosis and management, and those who have been trained need refresher courses. Kenya has one of the most developed private health sectors in the region. The private sector plays a large role for Kenyans in many disease areas, including HIV testing and counseling.

Several successes emerged from the involvement of private sector providers in PITC. Extending PITC through private providers has proven to be a mutually beneficial system for both the private and public sectors: private providers gain access to MOH resources, including supplies, training, and supervision, while the government expands access and moves toward reaching national HIV testing targets. [21]

In Australia, a review of records at a Canberra sexual health centre showed that more than half of HIV-positive patients with delayed diagnoses had earlier been in touch with health services, and almost all of those had at least one factor that should have prompted health care providers to consider the need for HIV testing and counseling. [22]

A study in Uganda showed that, among adults who were offered HIV testing at a hospital (about half of whom were subsequently found to be HIV-positive), 83% were unaware of their HIV status, even though 88% had been to a health unit in the previous six months. [23]

Laboratory services for HIV diagnosis

Adequate quantities of high-quality laboratory services, skills and commodities are required to meet increased demand for HIV testing. The WHO laboratory recommendations for HIV testing cover are:

- Selection of affordable technologies;
- Strategies and algorithms for HIV testing protocols suited to different purposes, e.g. for blood transfusion safety, surveillance or clinical care;
- Quality assurance and good management of testing and laboratory systems.

The WHO recommendations describe various testing strategies appropriate for different HIV testing purposes, such as HIV diagnosis in clinical care settings, research and surveillance, or ensuring blood transfusion safety. These strategies take into consideration the characteristics of the epidemic and HIV prevalence in the populations to which the people being tested belong. A testing algorithm describes the combination and sequence of specific HIV assays used for a given HIV testing strategy.

WHO recommended that: National HIV testing guidelines should provide specific testing algorithms for each of the testing purposes and specify which test kits should be used and in what order. Selection of test kits and the order in which they are used are critically important for the good performance of the testing algorithm.

Serial testing is recommended for most HIV testing purposes. For clinical care, serial testing is usually recommended; if the result of the first HIV antibody test is negative, then the test is reported as negative. If the initial test result is positive, the specimen is tested with a second test using different antigens and/or platforms. In populations with an HIV prevalence of 5% or more, a second positive test result is considered to indicate a true positive result. In low prevalence settings where false positive results are more likely, a third test is usually recommended. WHO and UNAIDS recommend serial testing in most settings because it is cheaper than parallel testing, since a second test is required only when the initial test is positive.

Parallel testing is more costly because of the number of assays and the labour required (particularly in low prevalence settings), but it may reduce the time needed to obtain a final test result. Parallel testing strategies can be considered in special circumstances such as, for example, the onset of labour, to determine a mother's HIV status and whether or not there is need for antiretroviral prophylaxis to prevent mother-to-child transmission of HIV.[24]

Private health sector and HTC services:

The fact that the enormous potential of the private sector to deliver healthcare solutions in Africa is untapped represents a missed opportunity of epic proportions.[25]

It has a pivotal role in providing normative and policy guidance*;* the strengthening of health systems based on the Primary Health Care approach; putting the health of mothers and children first; accelerating actions on HIV/AIDS. [(26)]

It offers a wide range of needed resources such as skilled staff, infrastructure and equipment, finances, technical expertise and innovation, as evidenced by their strong presence in each of the WHO health systems building blocks.

Regulation of HIV testing practice in private facilities is a challenge for some countries and private providers often do not conform to national policies on voluntary HIV testing and counseling. The four country case studies(Sudan, Pakistan, Oman and Egypt) showed that information, education and communication material is usually not on display, counseling for risk reduction is usually not available in private facilities,[(27)]and training programs and educational material are rarely available to staff.[(28)] A well-functioning health information system (HIS) is vital to generate reliable demand-side and supply side data that reflect all HIV/AIDS activities in both the public and private sectors, which are needed for planning for and implementing HIV/AIDS-related services as well as for monitoring and evaluating their impacts[(29)]However, although all of the private health facilities had a medical record system, the records did not include HIV-specific data[(28)]

Private sector actors who can make an important contribution to HIV/AIDS are as diverse as the types of PPPs. The most important private sector stakeholders include formally trained and licensed private providers, as well as insurance companies financing health care, private corporations offering HIV/AIDS services, pharmaceutical companies that produce critical drugs and medical products and distributors that ensure broad access to medicines.

There are three common levels of private sector engagement:

• **Public-Private Dialogue** to prioritize and identify solutions to address health system gaps

• **Public-Private Interaction** on policy and other regulatory issues to create a favorable environment

• **Public-Private Partnerships** to operationalize programs that improve access to HIV/AIDS services and products to underserved groups.

Public-private initiatives that hold the most potential to strengthen health systems often address more than one building block simultaneously and improve interactions between these building blocks. HIV/AIDS practitioners concerned with strengthening health systems should therefore consider the roles that the private sector can play in a given health system, identify context-specific

opportunities to engage the private sector, and implement PPPs that can effectively contribute to strengthening the health system while achieving HIV/AIDS objectives.[29]

HTC services have helped millions of people learn their HIV status and, for those testing positive, learn about options for long term care and treatment. In 2010, WHO estimated95 million people in low- and middle-income countries received HTC in the past 12 months and learned their test results.[30] As there is increased demand for private health sector HIV/AIDS services, they must be expanded to provide it.

According to the WHO Universal Access Progress report 2010, the coverage of HIV testing in the Eastern Mediterranean Region is only 3.6 tests per thousand adult populations, including those tests conducted without counseling. High levels of stigma among both the general public and local communities and, notably, among health care workers, political sensitivities and cultural constraints consistently emerge as barriers to accessing HIV prevention and care services in the Region. Information on locating HIV testing and counseling services is also lacking within countries. Within many countries low levels of literacy and of health care seeking are widespread [27]

The private health sector has not generated sufficient attention to its role in the overall global response to AIDS. Moreover, there is considerable interest in the role of the private for-profit sector.

The private health sector is active in HIV service delivery, and there are large variations in private utilization of HIV-related services in Africa. The use of the private health sector for HIV testing and STI care increases with wealth in some countries.[31] Thus in Tanzania private sector involvement in health care provision, specifically for ART, has been increasing rapidly With the exception of nevirapine and AZT for PMTCT, ARVs have been largely absent in the Tanzania public sector, and the private sector has stepped in to meet the growing demand for PMTCT and AIDS treatment. Fifty to 60 percent of all hospitals are for-profit, and the other 40 percent comprise government hospitals.[32]

In Uganda, among HIV/AIDS services, a good proportion of the private health provider(PHP) facilities offer voluntary counseling (60 percent) and condom distribution (62 percent), whereas only 29 percent offer voluntary testing. Just 12 percent of PHP facilities provide PMTCT and only 2 percent offer ART services.[33]

A study conducted in Ethiopia found that the private sector serves25% of those on ART.[34] PMPs are actively involved in diagnosing and managing patients with HIV/AIDS. Some of their

management practices are inappropriate and need to be remedied,[24] 75% of the PMPs had been consulted by HIV-infected clients for treatment. Of these, 14% had prescribed ART, sometimes without adequate knowledge of the guidelines for their use. Other supportive and symptomatic treatments were also frequently prescribed. Private practitioners commonly referred HIV-infected clients for management to other private doctors, or to public hospitals. [24]

A study conducted to assess the role of the private health sector in HIV/AIDS service delivery in Ethiopia found that private providers have received limited training on HIV/AIDS and related services, particularly antiretroviral treatment (ART) and prevention of mother-to-child transmission (PMTCT). Lack of opportunity and being unaware of training were the two major reasons cited for not receiving training. 55% of hospital workers had received training in diagnosis and treatment of STIs, at hospitals. The FMOH and nongovernmental organizations were major sources of training related to HIV/AIDS. There was strong interest in future training and a notable willingness to pay for training among providers across all levels of private facilities. HIV counseling and testing (CT) was universally provided in private hospitals. Rapid testing was the major method used by these facilities.

Survey results on indications for HIV testing, when compared with WHO guidelines, revealed multiple missed opportunities for testing. 100 % of private hospitals failed to follow WHO guidelines.

Treatment of other STIs was widely offered in all levels of private hospitals, while tuberculosis (TB) treatment was offered in only a few private hospitals, a finding in line with existing regulations.

82% of private hospitals were aware of standards for HIV testing whereas awareness of standards for TB diagnosis and treatment was 88 %. Awareness of STI standards was even higher. The majority of provider respondents reported that additional training and additional equipment would facilitate the provision of HIV and related services at their facility.

All Ethiopian private hospitals report service statistics to the appropriate government entity. Private facilities appear to be an important source for identifying HIV positive patients. According to facility records, the proportion of patients testing positive (among patients tested for HIV) in the last six months ranged from 16 %to 21 %.A high proportion of health providers from all levels of private health clinics reported referring clients elsewhere for ART and PMTCT services, primarily to public facilities using a standard referral form.[35]

A multicounty analysis found that between 3% and 45% of women and between 6% and 42% of men reported the private for-profit sector as the source of their most recent HIV test.[21]

Another study found that 21% of all patients receiving ART in 6 African countries (South Africa, Uganda, Kenya, Zambia, Ethiopia, and Rwanda) were served by private sector providers in 2006, and this number has grown since then.[36]

Rapid Assessment of HIV/AIDS Care in the public and private sectors in Nigeria reported that private sector HIV service provision is limited largely because only a few patients can afford private sector ARV drugs. Most patients are referred to public sector facilities for treatment. In fact, many private sector facilities are concerned about the long-term sustainability of these programs. National guidelines on ART treatment are rarely accessible in the private sector and few private facilities have developed their own guidelines for clinical management and other aspects of HIV care and support services. Laboratory monitoring tests are rarely conducted and community outreach activities are generally considered outside the mandate of private sector facilities. The cost of HIV service provision in the private sector is more than double that of the public sector, due to the high cost of ARV drugs in the private sector. Costs of staff salaries, staff training, and monitoring tests, however, were lower in the private sector, possibly confirming anecdotal evidence of lower levels of service quality.

The same report found that the majority of private sector facilities do not receive any form of support from the government and there are no formal linkages between private and the public sector ART programs. Many private sector facilities expressed the desire for greater collaboration between the public and private sectors to ensure better service delivery and follow-up care and treatment for patients.[28]

In a survey in Pune, India, 77% of PMPs had prescribed HIV tests and 94% of laboratories had performed HIV tests, or collected samples for HIV testing. Among those providers who had prescribed/performed tests, practices which violated national policy guidelines were found to be common. 55% of PPs and 94% of laboratories had not prescribed/performed confirmatory HIV tests, 82% of PPs had conducted routine HIV screening tests, 53% of PPs and 47% of laboratories had never counseled patients before testing, and 39% of laboratories reported breaching confidentiality of test results. [37]

In several countries the use of the private sector for HIV testing lags behind the use of the private sector for other health services.[38]

Another study from India found that a variety of HIV test kits are available in the Indian market from various sources. Among the 95 facilities assessed, one did not carry out HIV testing within the facility and referred the individuals seeking the test to a Government facility. Of the remaining 94, all facilities carry out at least the rapid test, 20 facilities (21%) also carry out ELISA and 4facilities carry out/refer Western Blot (4%). Regarding confidentiality, register based records were kept safe under lock and key in 57% of the facilities, and could be accessed only by hospital staff. Computer based records were held in 40 facilities, and could be accessed only by hospital staff . An explicit internal policy in counseling and testing was found in only 4% of the facilities. [39]

A survey in Vietnam found that barriers to involving the private sector in STI/HIV/AIDS treatment and prevention come from both sides, the private sector as a service provider and government as a policy maker. The main weaknesses found were: i) Lack of official clarity regarding an appropriate collaborative mechanism and no specific guidance for public and private sector partnerships ii) Concerns about quality in the private health sector, and iii) Lack of capacity in establishing and managing PPPs in STI/HIV/AIDS treatment and prevention.[40]

In Sudan, according to the comprehensive epidemiological and behavior review of the HIV and AIDS situation in Sudan (August, 2009), the overall HIV prevalence is0.67%, which is expected to increase to 1.2% by 2015 Data from the estimation and projection for this reporting period for Sudan showed that in 2009 the total number of adults and children living with HIV was about 122,216, of whom 67,661 were women (ages 15+) and 5,107 children (ages 0-14). There are 27,888 AIDS orphans (ages 0-17), currently living with HIV and AIDS in Sudan.

This data shows Sudan has a low HIV prevalence. However, the potential for slow growth over the next five years remains a possibility. HIV prevalence among high-risk populations is also below the 5% threshold for a concentrated epidemic. [26]

Despite the fact that strengthening the role of the private sector in the national HIV response is one of the general objectives of the Sudan National AIDS Control Program (SNAP) national strategic plan[30], until now no action has been taken by it to engage the private health sector. All the HTC facilities are governmental, and there are 144 voluntary counseling and testing (VCT) centers. In addition to that, HTC is currently provided through Provider Initiated Testing & Counseling

(PITC) in 75 TB Management Units (TBMUs) in 9 states, through ANC in 5 hospitals and 35 PHC centers. The scale up of PITC among Primary Health Care (PHC) centers providing STI management was launched in early 2012

The number of Anti Retroviral Therapy (ART) centers is 30, Prevention of Mother to Child Transmission (PMTCT) sites is 70; pregnant women tested were 28,551(in what time period?). PLHIV currently on treatment are 2, 500.[15]

Even today less than 5% of the adult Sudanese population have had access to VCT(?) and know their HIV status.[40]

A total of 31,222 and 32,329 people were tested in all the HTCs in 2010 and 2011 respectively. The Sudan Household Survey (SHHS) 2010 surveyed 22,747 men and women and showed that the HIV testing coverage is 1%.[15]

In Sudan by the end of year 2011 there were 144 VCT centers; the majority of the sites are located in health facilities and run by government. Only 3 of the facilities are run by NGOs. The private sector was not involved in the VCT service provision.

About 400 counselors and 145 laboratory technicians have been trained to provide counseling and HIV testing services. However, the utilization of these VCT sites is very low. The services had reached 34,000 clients by 2008.

The majority of the people tested for HIV are men, which can be attributed to the limited capacity of women` to have access to information, socio-cultural norms that restrict mobility of women in accessing HTC, stigma and the consequent discrimination associated with HIV , and the economic difficulties.

It is estimated that, out of the 2.5 million people targeted for HIV testing, about 2.8% only have been reached. PITC and outreach counseling and testing has been introduced to improve access to counseling and testing services in Sudan. HIV counseling should also be holistic and should include nutrition education. [26]

The national response to HIV in Sudan is largely public sector driven. The involvement of the private sector is almost nonexistent. However, the nature of the HIV epidemic requires a strong partnership among all sectors.

The strategic plan, therefore, seeks to strengthen the engagement of all key partners from government, private and civil society organizations in the national response for greater reach and effectiveness. This is reflected in the strategies adopted in delivering HIV services, which seek to

utilize the comparative advantage of each partner in implementing specific aspects of the national response.[26]

Sudan has developed a 25-year vision, laying out its strategies for strengthening the health system to provide effective health care for all.

The role of the private sector in providing health services is not well documented. However, the private sector significantly expanded during the 1990s and the new century, particularly in the aftermath of the implementation of the major macroeconomic and related sectoral reforms. The growth of the private sector is encouraged by the government policies. Private health services are mainly concentrated in urban settings and better-off states. The focus is on curative services, and they play only a little role in the provision of public goods such as preventive interventions, immunization and health promotion. The systems and regulations that govern the private sector are poorly enforced. [42]

Sudan Household Health Survey (2006) showed that 19% of health services users chose the private sector. A similar result (18%) was reported by the Utilization of Health Services Survey (2006).

Issues and challenges concerning the private sector include: quality assurance, competition policies, price moderation, regulation and public private partnership.[43]

A study conducted in Khartoum state found that the concentration of private hospitals is not balanced; they are mainly situated in the city center and some affluent areas without consideration to population density and shortage of care. The poor and middle income groups, as well as the rich, sometimes seek health care from private providers, but they are mainly insured or covered by their employers.[42]

Private hospital services are mainly oriented towards curative services with a small contribution to some preventive services such as immunization and family planning. The major strength of private hospitals is provision of quality services with reliable support staff, a comfortable environment for the patients, and good management.

The major constraints facing private hospitals are the absence of direct support from the government for this type of investment, the weak regulatory role of the MOH, and heavy taxes and fees imposed by the government.

The majority of consumers resort to these hospitals immediately after feeling ill or after visiting public hospitals, and a small number of them after visiting traditional practitioners.

The MOH regulatory and legislative role towards private hospitals is still inadequate, dealing mainly with the most basic requirements, such as practice entry and facility registration, but no effective continuous assessment of the type, quality and prices of the services rendered by private hospitals[44]

A recent survey conducted in Khartoum and Gezera States showed that out of all patients seeking health care, 22% consulted the private sector. In terms of hospital admissions and surgical interventions, the share of private sector was 31% and 7% respectively. Twenty two percent (22%) of patients were covered by an insurance scheme, while 47% came to seek diagnostic services. [45] These studies showed the importance of the private health sector in Sudan, and the increased reliance on it by Sudanese. The sector could play a key role in scaling up HIV treatment and care, and therefore it should be involved in the national response.[26]

CHAPTER THREE

Methodology

Study design:

Descriptive, cross- sectional quantitative and qualitative facility-based study

Study area:

The study will be conducted in private health care facilities (hospitals, healthcare centers and clinics) in Khartoum (capital of Sudan). The numbers of private health care facilities which are distributed over the seven localities (Khartoum, Khartoum Bahri, West Nile, Omdurman, Ombada, Karrari, Jabalawlya).

Inclusion criteria:

- Private hospitals , healthcare center with inpatient and outpatient services
- Private clinics

Exclusion criteria:

- Private hospitals , healthcare center with inpatient services only
- Dental private hospitals and clinics

Study population:

- Medical directors of private hospitals
- Health care providers in private health care sector
- Head of Lab technicians in private health care sector

Sampling:

Sample size

Sample size of healthcare providers was calculated by this formula

$n = z^2 p q / (EP)^2 * deff.$

n=(1.96)2 *0.05(1-0.5)/(0.11)2*1.5 = 401

n =is the sample size

z = z score at 95%confidence interval =1.96

p = expected proportion =50% (0.5)

q= 1-p=1-0.05

E= The relative margin of error=0.11

deff. =Design effect=1.5

Sampling technique

Systematic sampling:

Number of private health care facilities for each (hospitals and clinics) was determined from department of private institutions management at Khartoum MOH then by proportion we determine the number of private hospitals, and clinics then a list of private health care hospitals and clinics was brought the first one was selected randomly.

From private hospitals 38 were selected and 56 from private clinics.

The distribution of health care providers(401) as following;

- 38 medical directors
- Private healthcare providers at hospitals and clinics were 269
- The head of laboratories of private of hospitals and clinics were 94

Study instruments:

The instruments used for data collection (quantitative part) are structured questionnaire filling by interviewing medical directors, healthcare providers and head of laboratories. This structured questionnaire will be tested for validity and reliability

For qualitative part, in-depth interview with Focal person of HIV control program in FMOH and 10 of medical directors.

Data collection technique: Twenty one data collectors were selected then we divided them into seven teams for each team there will be a supervisor, they were trained on communication skills, how filling the questionnaire and on how doing in-depth interviews, on three days training workshop.

Variables:

Some variables:

HIV testing availability, HIV testing process; the place of doing HIV confirmatory test by private hospitals, presence of ELISA device, HIV counseling, Type of HIV counseling, dealing with HIV infected person, patients referral for HIV/AIDS services, routine HIV testing to pregnant ladies and surgical procedures, the availability of HIV kits, TB drugs and ART, the importance of HTC services for private hospitals ,Possibility of providing place, staff and incentive, role of stigma and cost in application of HTC services in private hospitals, the existence of written guidelines for dealing with HIV infected people , the existence of national guidelines concern with HIV/AIDS, the existence of written standards for ART,TB and STDs diagnosis, treatment and care, report submission to MOH, knowledge of PITC, attitude and practice of PITC.

Data management and analysis:

Data revised at field by team supervisors who appointed to check all parts of questionnaire for any missed response after he assured that the questionnaire is complete then put his/her Signature on it.

Coding for each locality and private health institutions was used

Data managed and analyzed by statistical package of social science (SPSS) version23

Qualities data analyzed by thematic analysis, a coding scheme is used based on the themes and put on a matrix.

Ethical considerations:

- Approval from the research ithical committee –FMoH and SMoH were obtained
- Targeted units officially notified by letters from Diseases Control Directorate and department of private health institutions at SMOH.
- The study populations initially were informed and their consent was taken, including an explanation of the study objectives, expected outcomes, rights of respondents and confidential processing of collected data.

CHAPTER FOUR

Results

Quantitative part

A-Medical directors

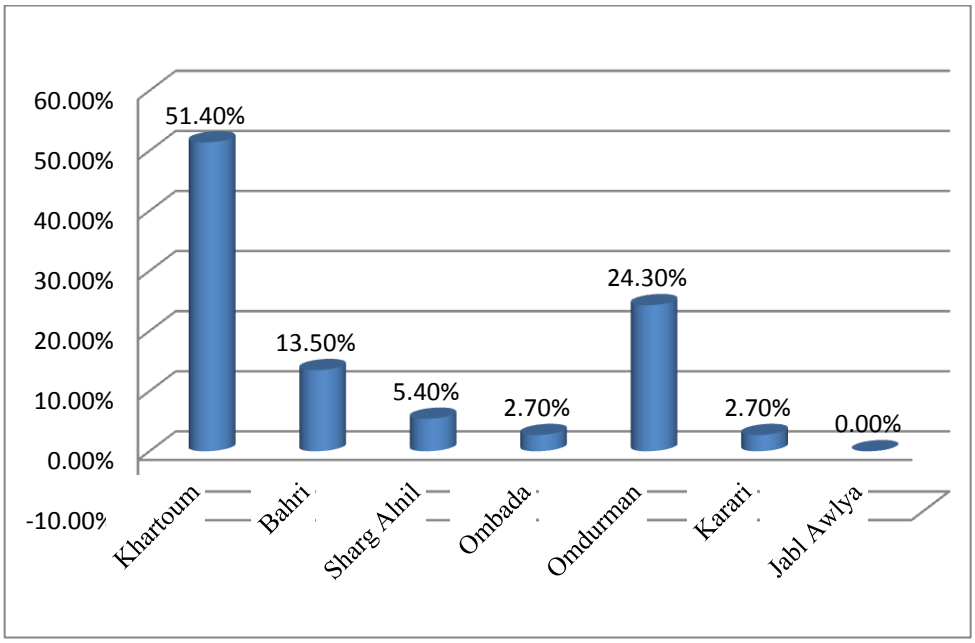

Fig.1: The distribution of private hospitals by localities in Khartoum state -2019, (n = 37).

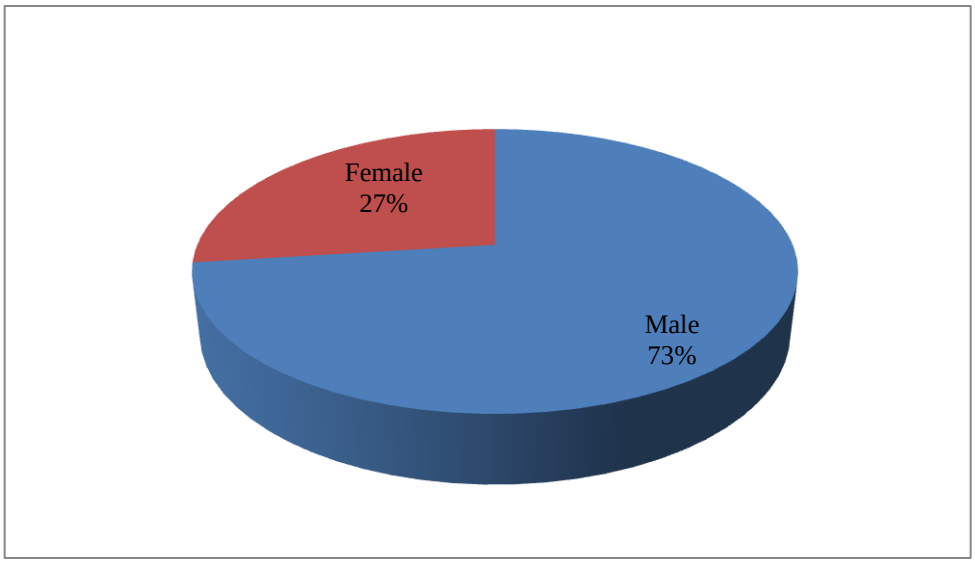

Fig.2: Sex distribution of medical directors of private hospitals in Khartoum state- 2019, (n = 37)

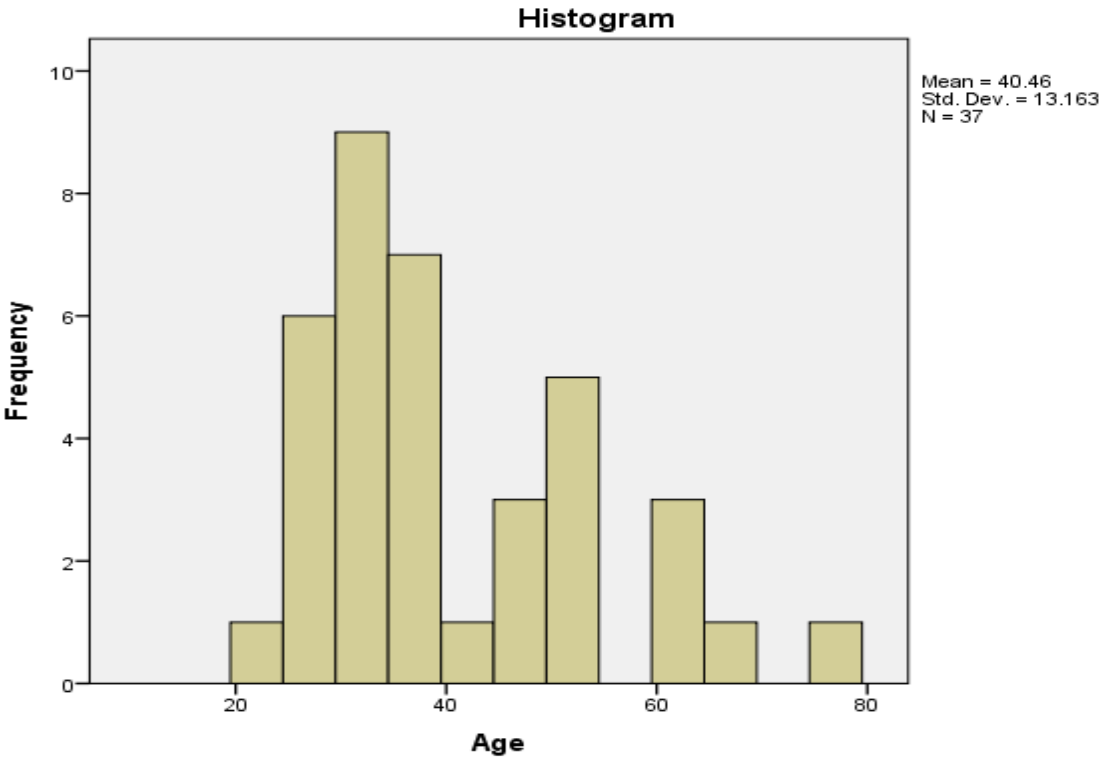

Fig.3: Age distribution of medical directors of private hospitals in Khartoum state- 2019, (n = 37)

Table1: time of employment of medical directors of private hospitals in Khartoum state- 2019, (n = 37)

Period of employment	Frequency	%
<1year	9	24.3%
1-<3years	12	32.4%
3-5 years	6	16.2%
>5years	10	27.0%
Total	37	

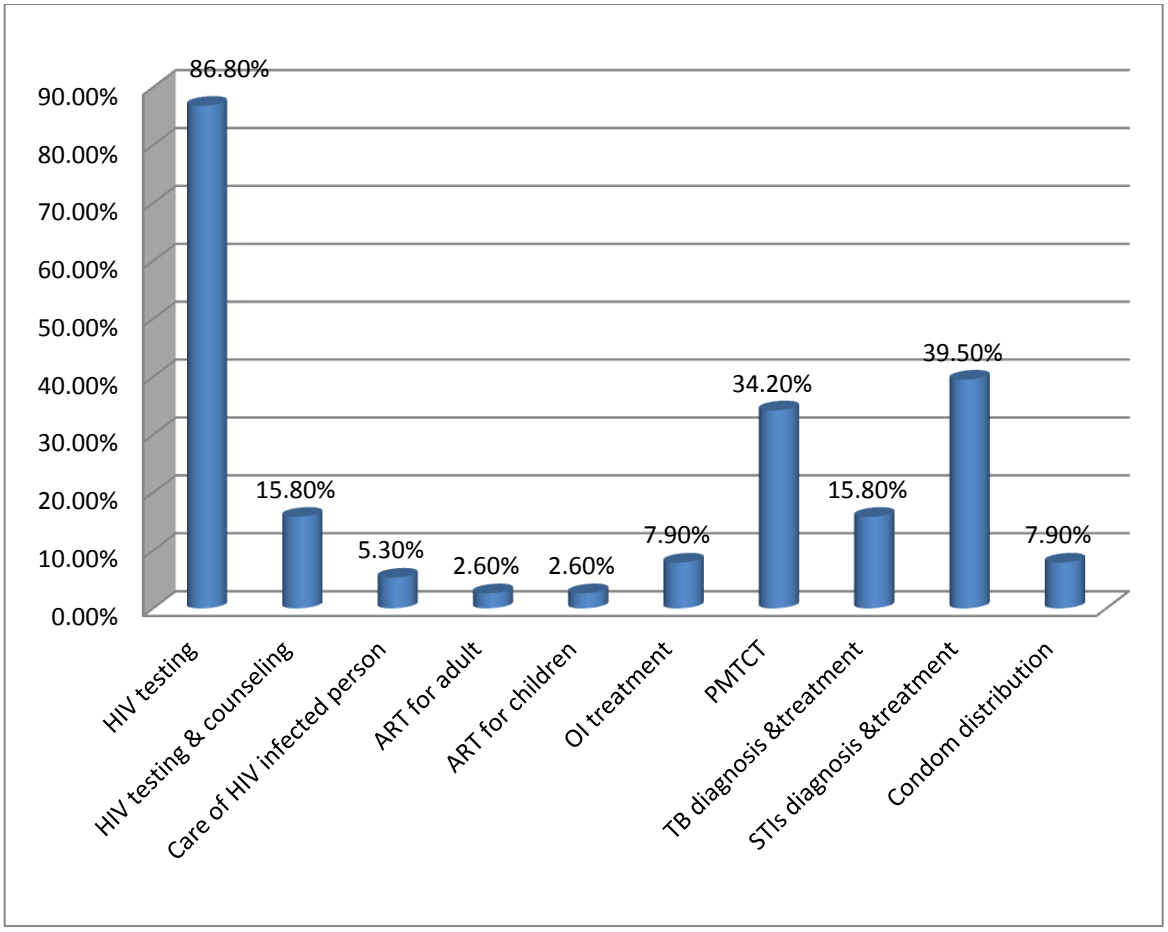

Fig.4: HIV and related services provided by private hospitals, Khartoum state-2019, (n = 37).

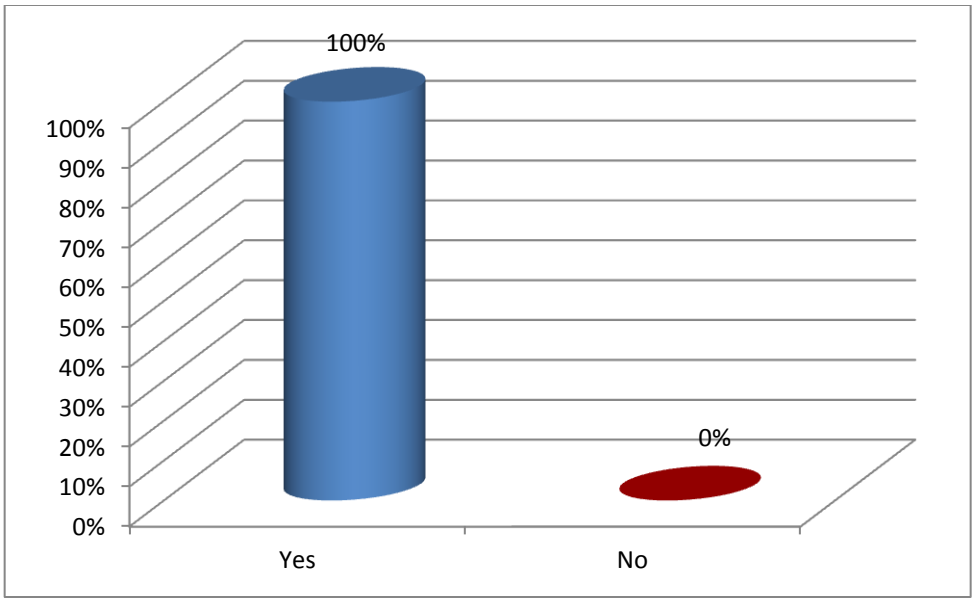

Fig.5: The response of medical directors toward the importance of HTC services for private hospitals in Khartoum state -2019, (n = 37).

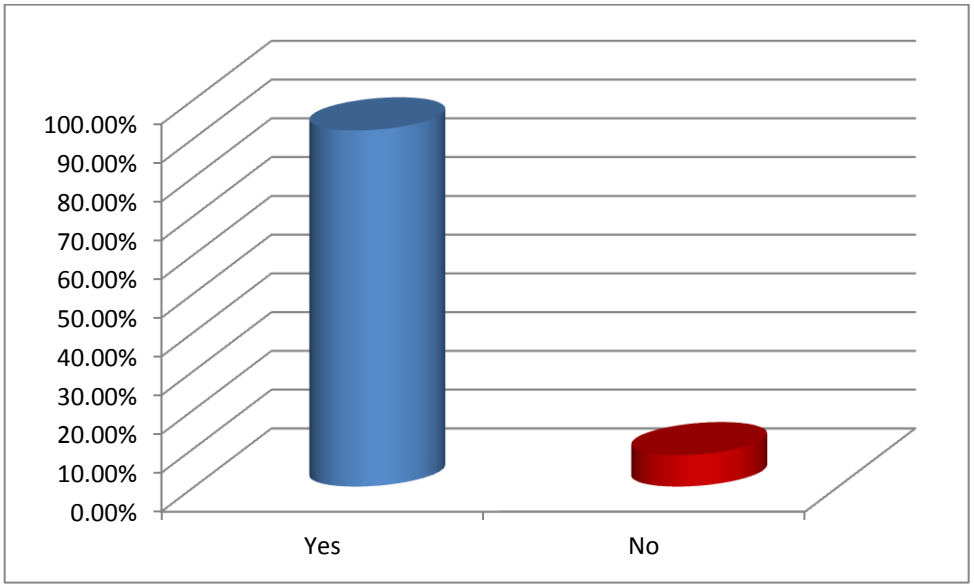

Fig.6: The response of medical directors toward the need for PITC services implementation in private hospitals in Khartoum state -2019, (n = 37)

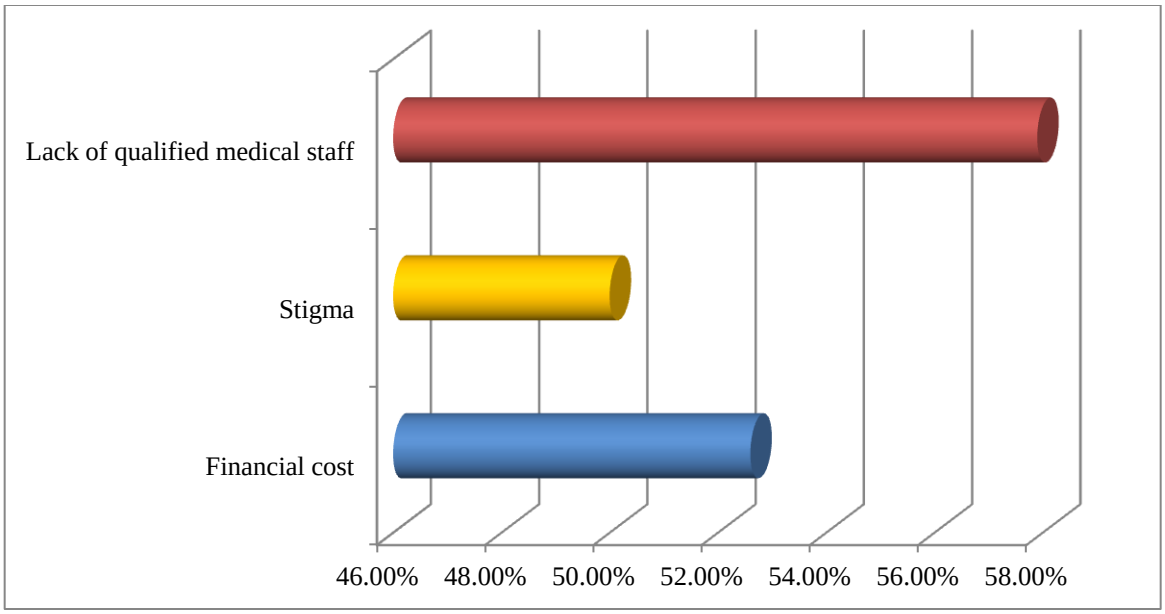

Fig.7: The main obstacles to implementing HIV PITC services in the private health care sector, Khartoum state -2019, (n = 37)

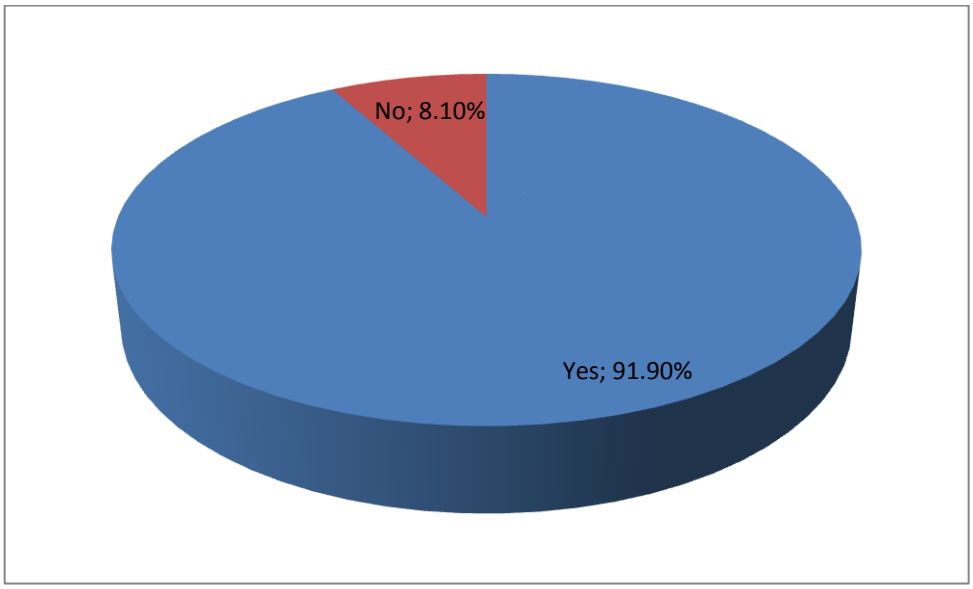

Fig.8: Medical directors agreed on providing PITC at Private hospitals, Khartoum state -2019, (n = 37)

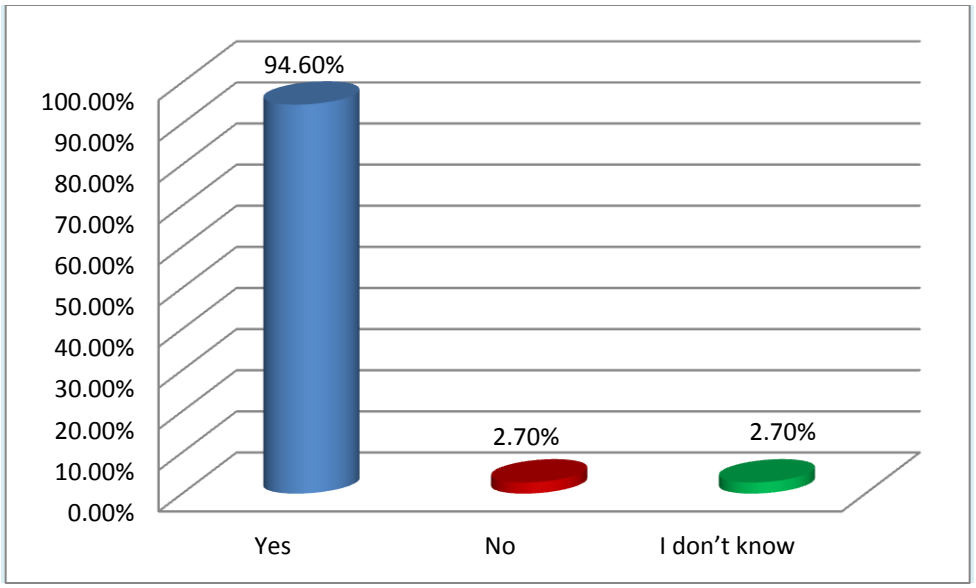

Fig.9: Private hospitals prepared to allow its health care providers to receive training in HIV topics, Khartoum state -2013, (n = 37).

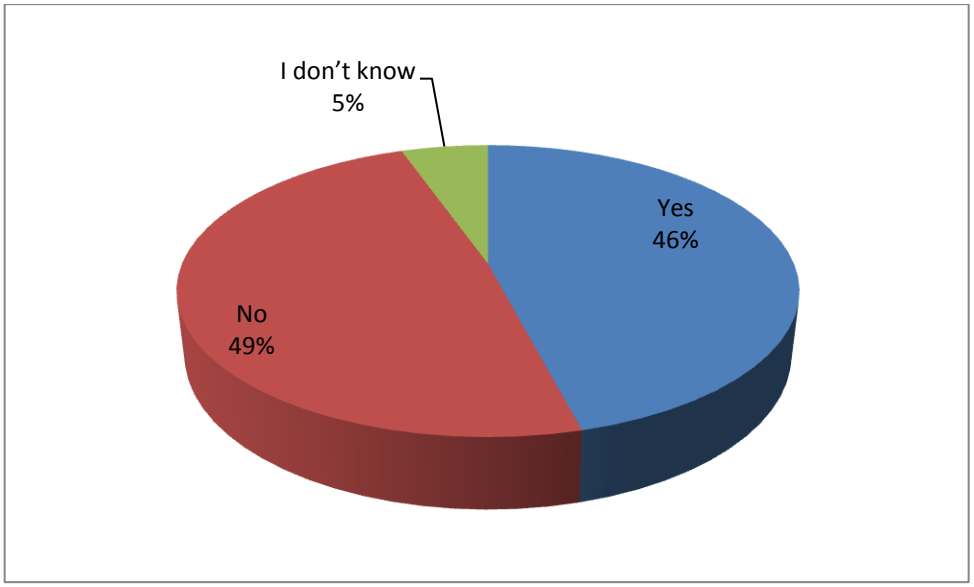

Fig.10: The existence of written guidelines -policies for dealing with HIV infected people in private hospitals, Khartoum state - 2019, (n = 37).

B- Health care workers:

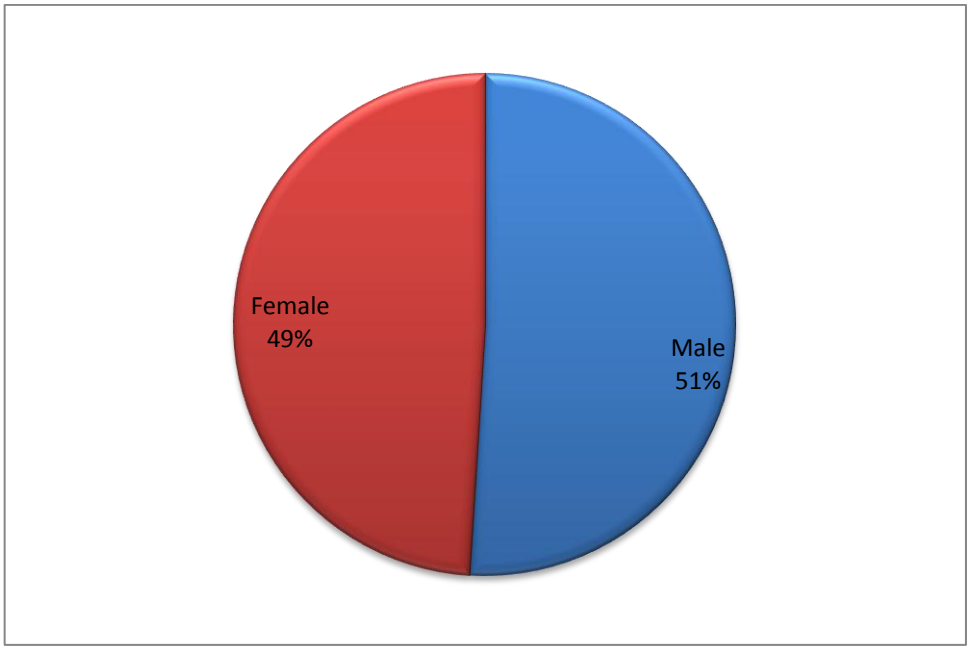

Fig.11: Sex distribution of health care providers at private health care sector in Khartoum state, Sudan- 2019, (n = 269)

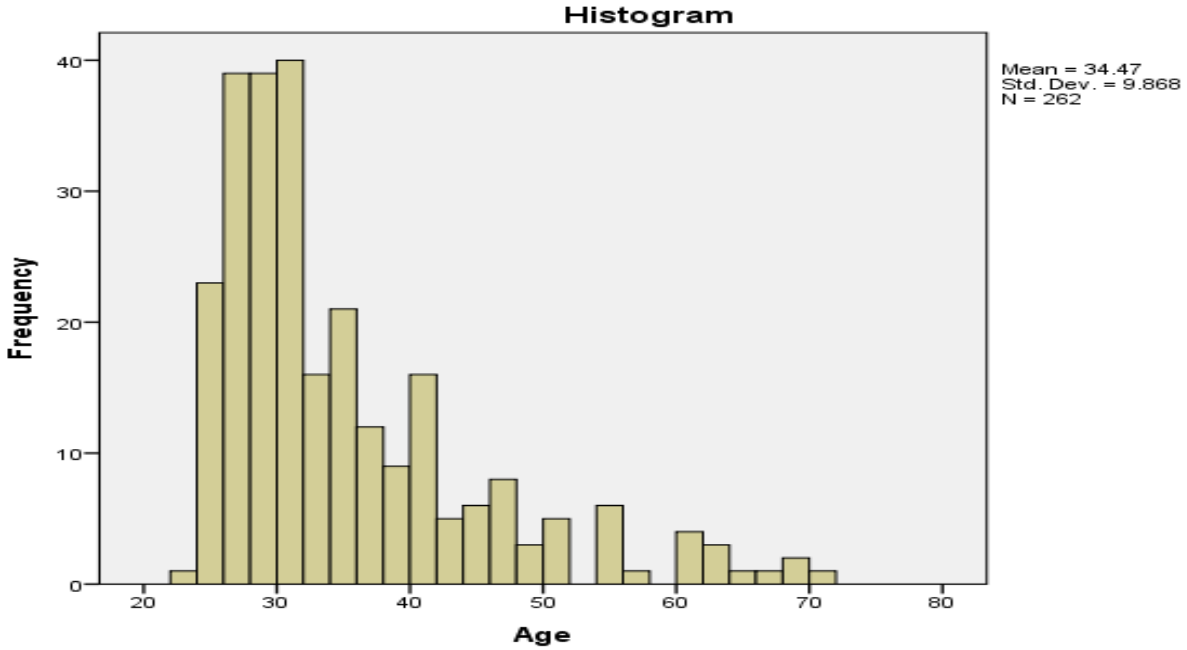

Fig.12: Age distribution of health care providers at private health care sector in Khartoum state, Sudan- 2019, (n = 269)

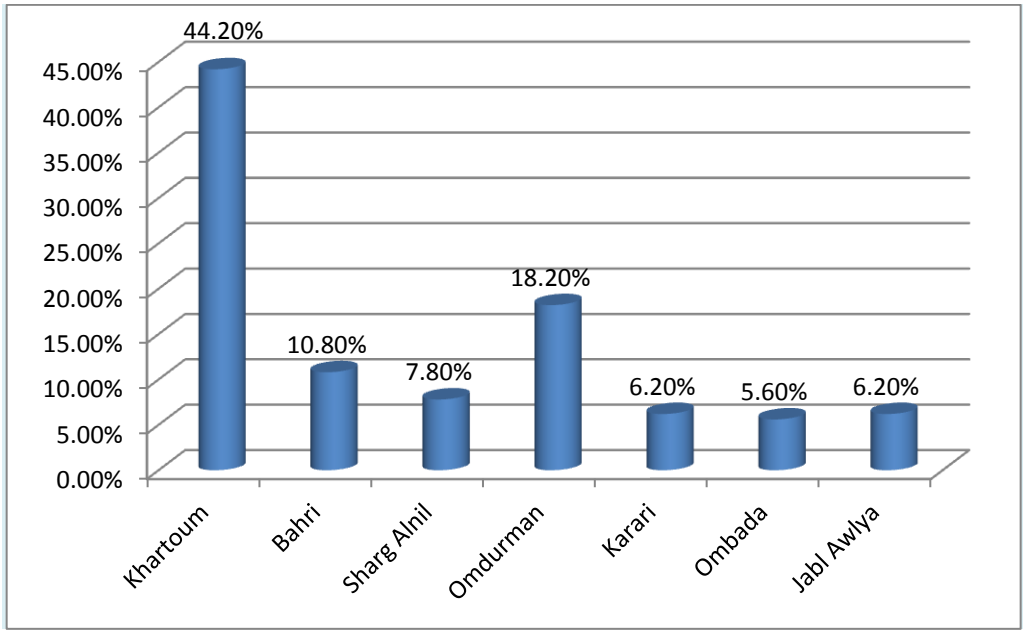

Fig.13: Distribution of health care providers in private health care sector by localities in Khartoum state, Sudan- 2019, (n = 269)

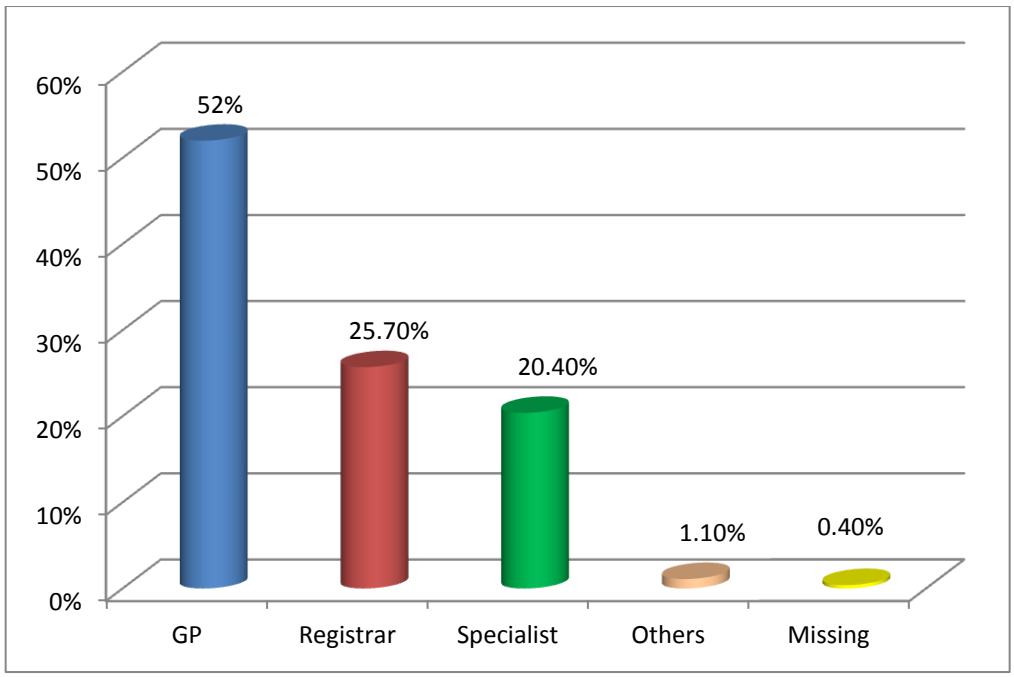

Fig.14: Job title of health care providers in private health care sector in Khartoum state, Sudan- 2019, (n = 269)

Table 2: Period of employment of healthcare providers in private health care sector, Khartoum state ,2019 (n=269)

Period of employment	Frequency	%
<1year	92	34.1%
1- <3years	85	31.5%
3-5 years	46	17.0%
>5years	45	16.7%
Missing	1	0.7%
Total	269	

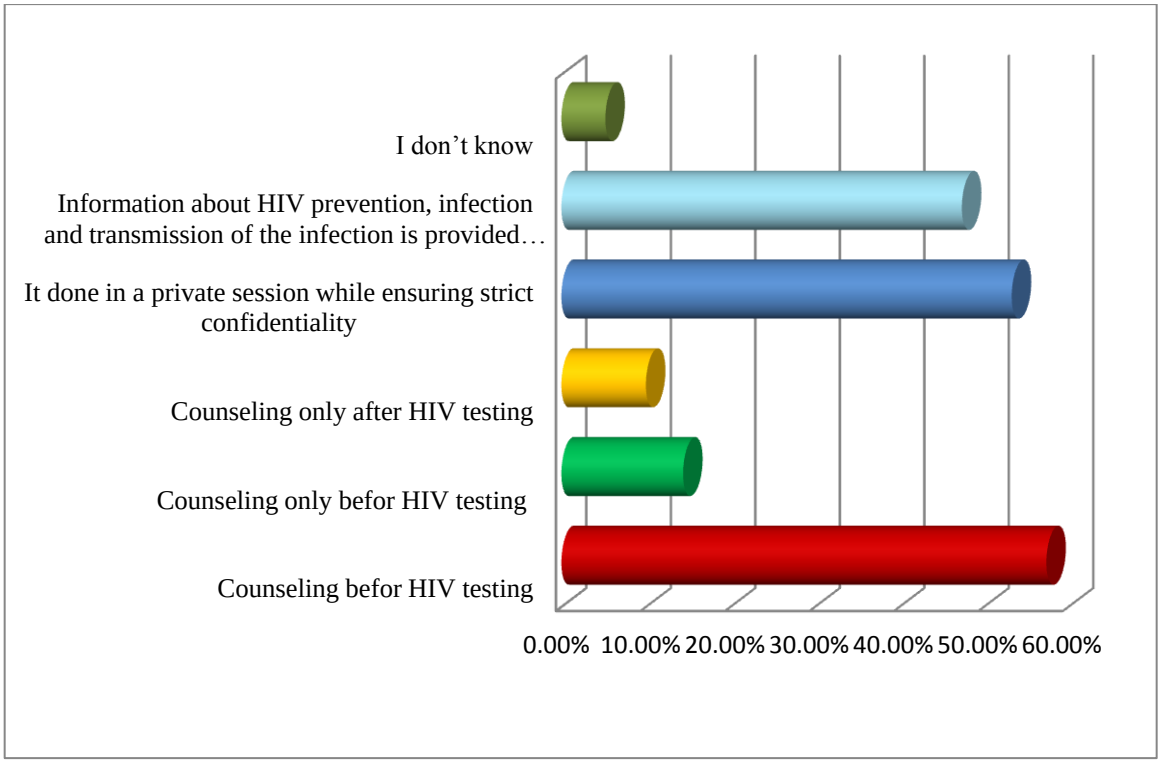

Fig.15: knowledge of health workers at private health care sector about HIV PITC steps. Khartoum state, Sudan- 2019, (n = 269)

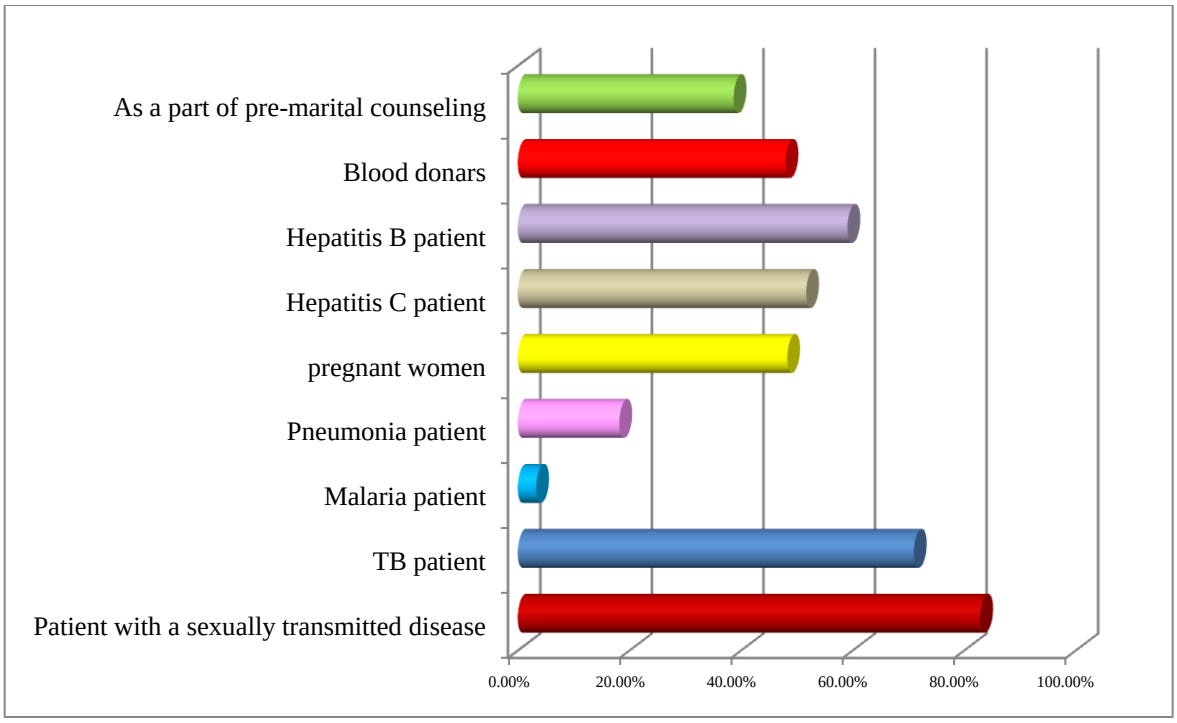

Fig.16: Types of patients/client whom advice to do HIV testing, by health care workers at private health care sector about HIV PITC steps. Khartoum state, Sudan- 2019, (n = 269)

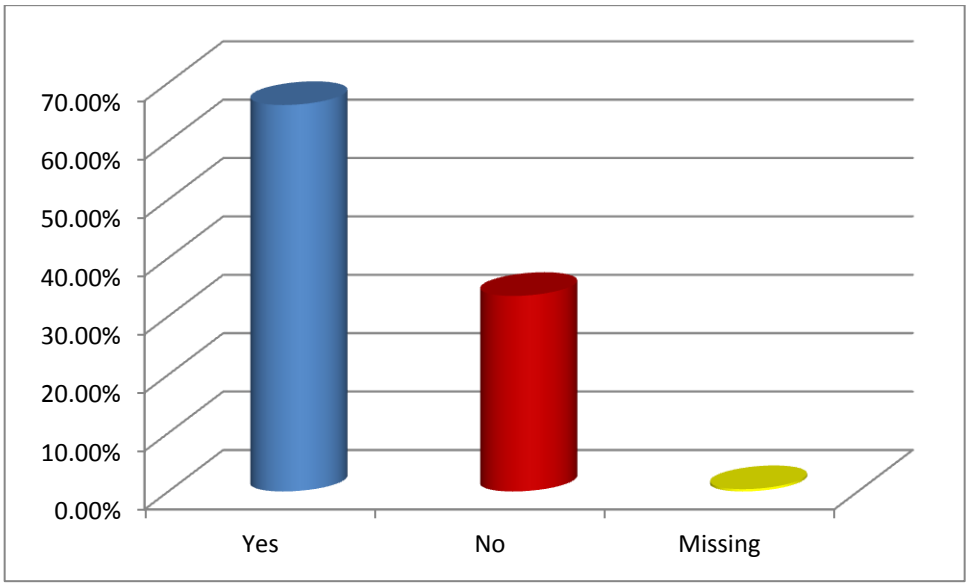

Fig.17: Health care workers at private health care sector, who ever met HIV infected person. Khartoum state, Sudan- 2019, (n = 269)

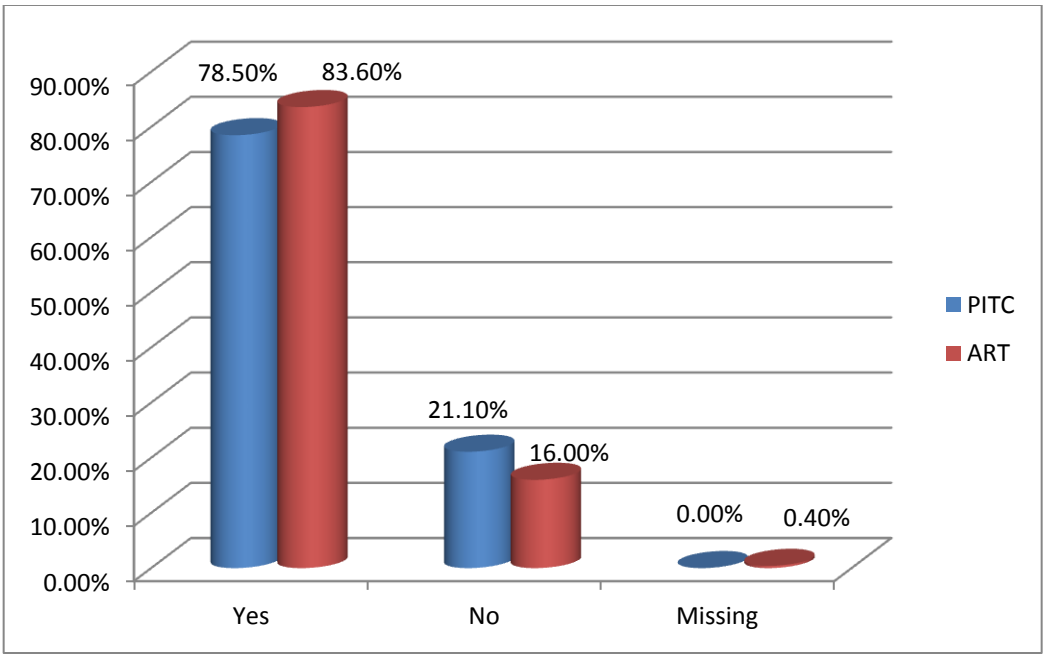

Fig.18: Health care workers at private health care sector, who heard about HIV PITC &ART. Khartoum state, Sudan- 2019, (n = 269)

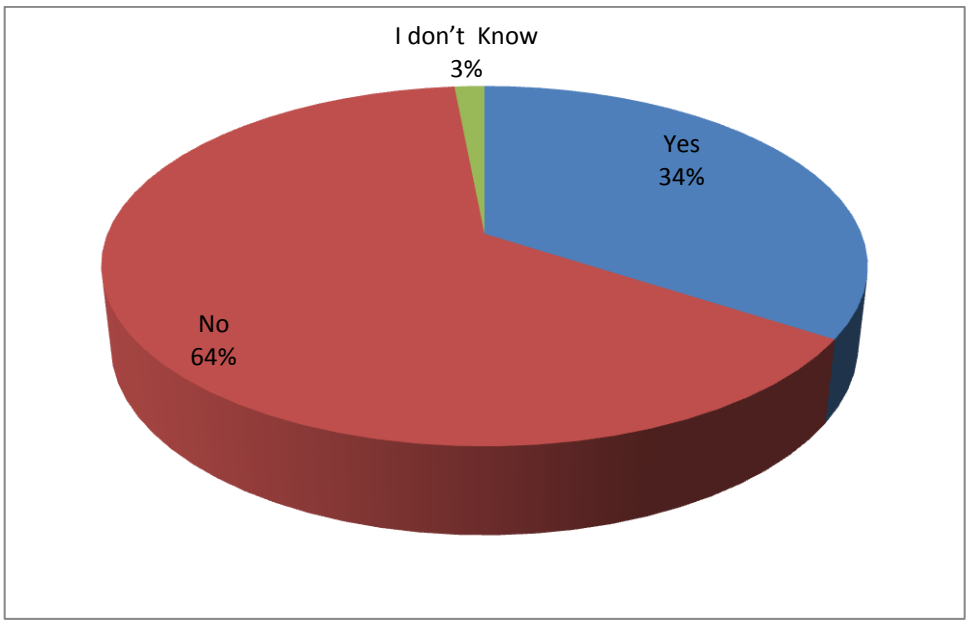

Fig.19: Response of Health care workers toward the HIV positive test means HIV infected person in private health care sector. Khartoum state, Sudan- 2019, (n = 269)

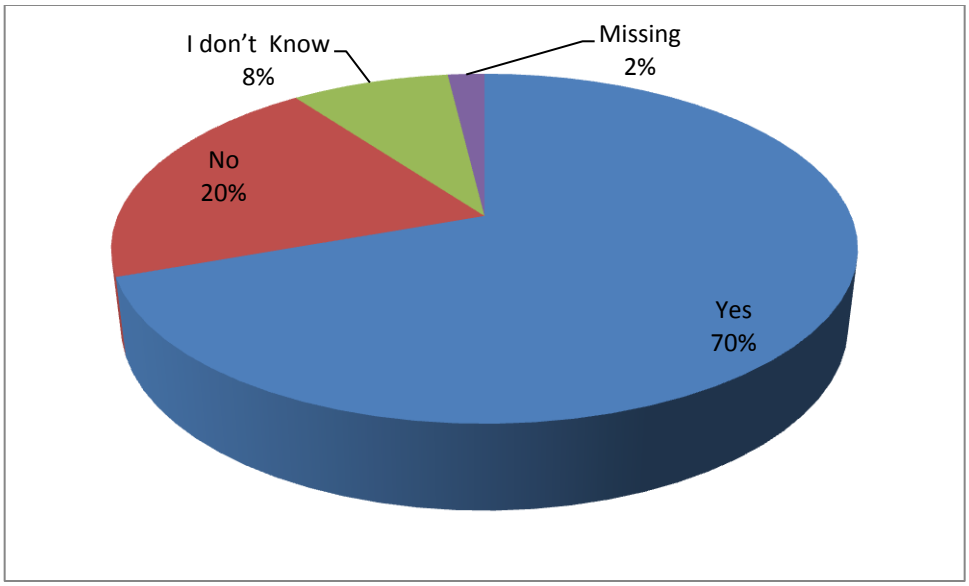

Fig.20: Response of Health care workers toward the right of patient in refusing HIV testing after counseling, in private health care sector. Khartoum state, Sudan- 2019, (n = 269)

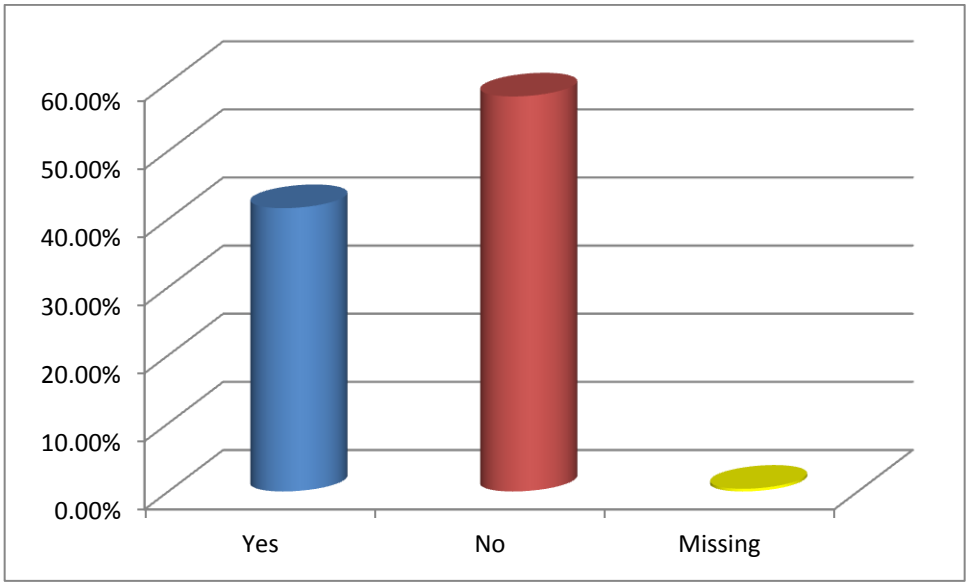

Fig.21: Health care workers who ever attended HIV training, in private health care sector. Khartoum state, Sudan- 2019, (n = 269)

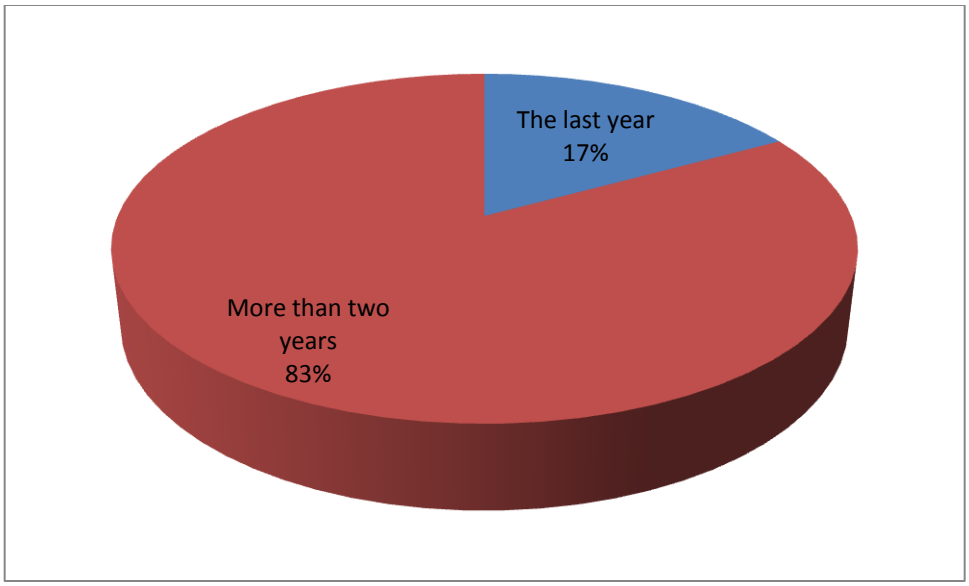

Fig.22: Time of training attended by health care workers, in private health care sector. Khartoum state, Sudan- 2019, (n = 112)

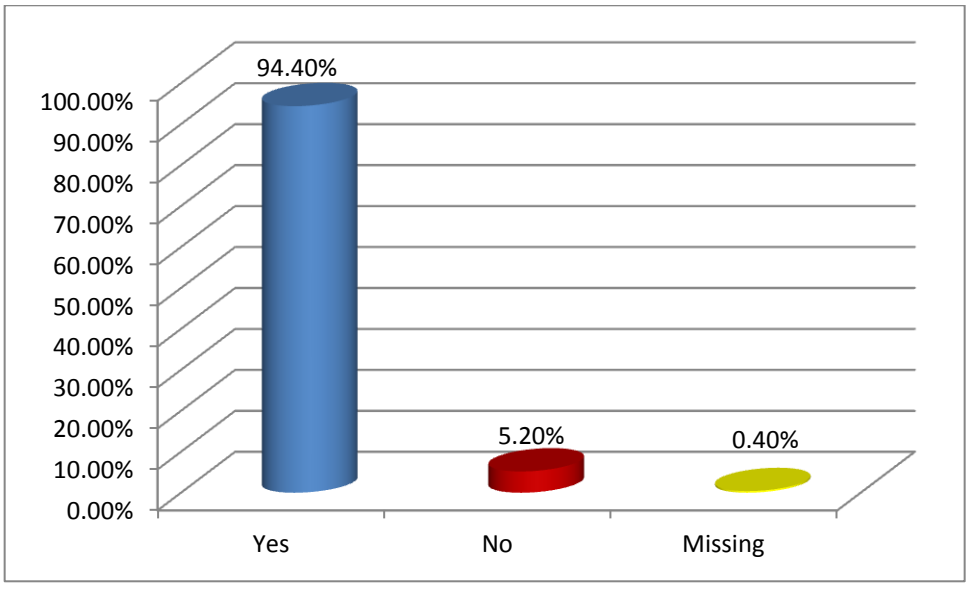

Fig.23: Health care workers who care about HIV training topics, in private health care sector. Khartoum state, Sudan- 2019, (n = 269)

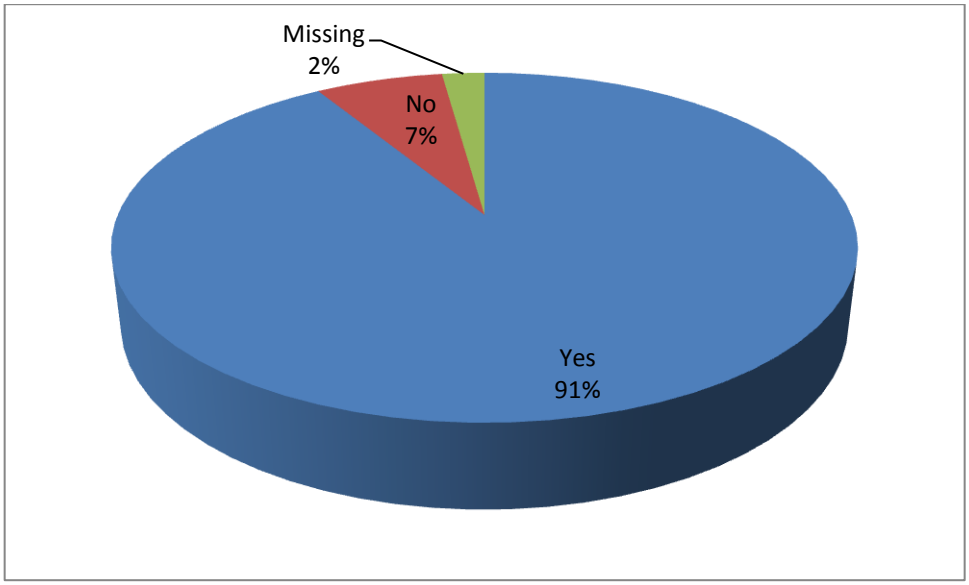

Fig.24: Health care workers who accept to provide healthcare for HIV infected person, in private health care sector. Khartoum state, Sudan- 2019, (n = 269)

C-Private health care sectors laboratories

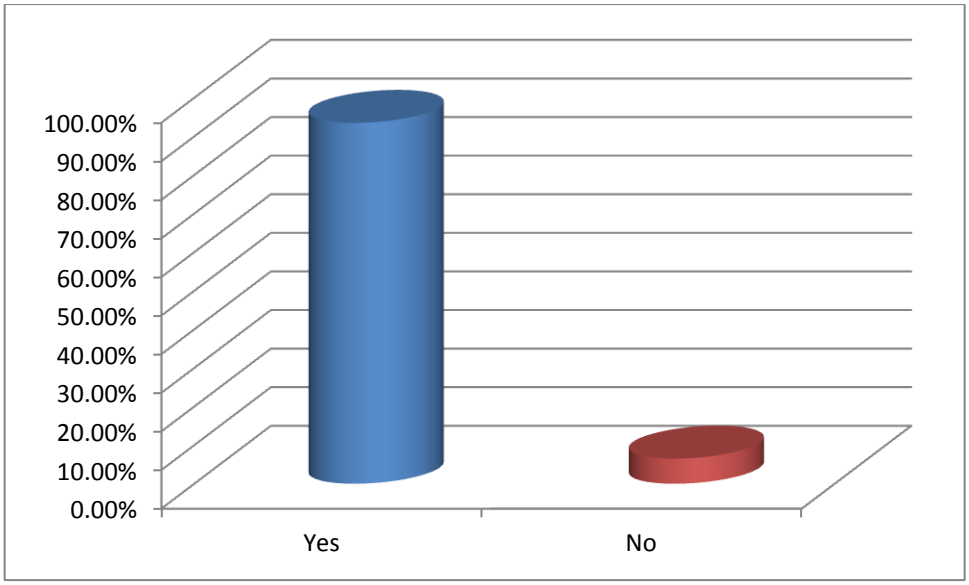

Fig.25: Private health care sectors laboratories provide HIV testing services. Khartoum state, Sudan- 2019, (n = 92)

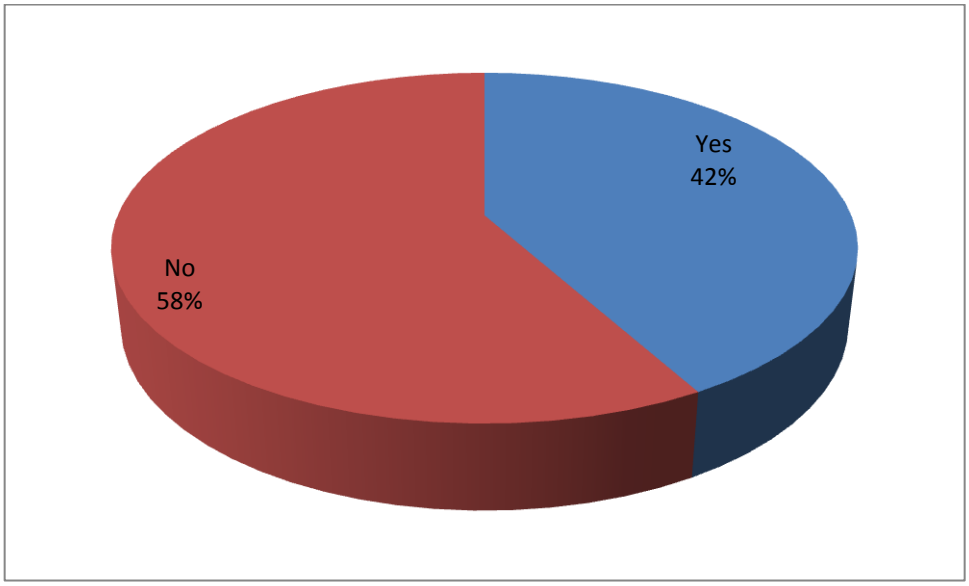

Fig.25: Existence of written standard operating procedures for HIV testing in private health care sectors laboratories. Khartoum state, Sudan- 2019, (n = 86)

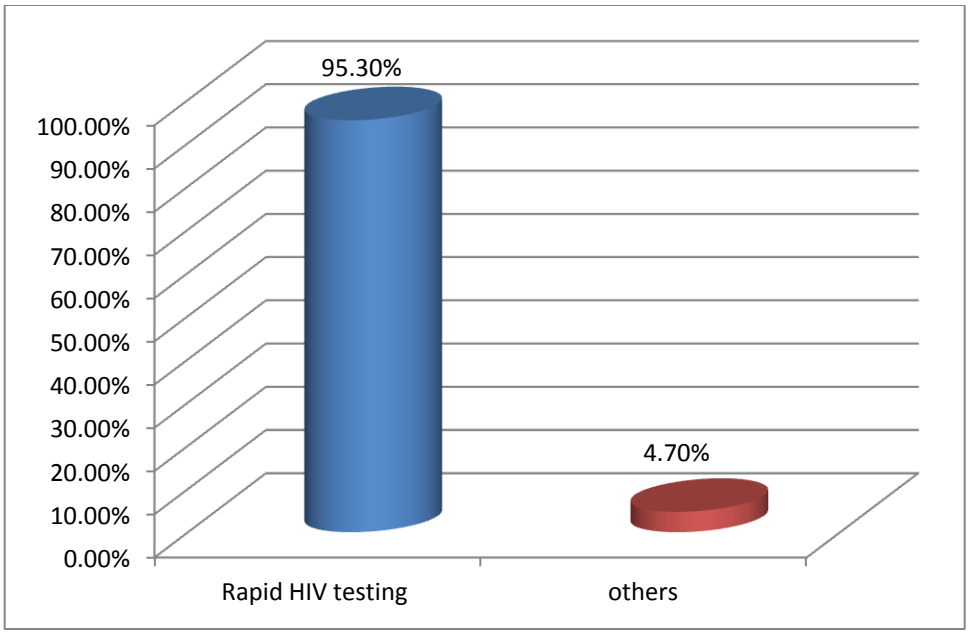

Fig.26: Strategy of HIV testing in private health care sectors laboratories. Khartoum state, Sudan-2019, (n = 86)

Qualitative Results

Medical directors of private hospitals:

All of medical directors agreed on PITC as an important services. Most of them deny any existence of cooperation and coordination between private hospitals and HIV control program except in some private hospitals refer the positive cases to the near ART centers.

Most of medical directors agreed to the introducing of HIV PITC at the private hospitals, but it must be a national policy as this is acceptable to clients/patients, due to stigma. Some of them said that the HIV testing must be mandatory for any planning surgical procedure or any patient admitted to hospitals as a medico legal to protect the health workers, also to save the patient's rights.

About mechanism of implementation, most of medical directors believe that any service provided in private hospitals should be paid for, and if the FMoH support them, like financial support, HIV kits provision, service will be affordable, some of them said to provide the service for free . About provision of space and staff, most of medical directors' unanimously agreed on the need of well trained and qualified counselors because of the importance role in PITC services, the counseling must be provided by the healthcare provider at the private hospitals and most of them said the limited space of hospital lead to not provide space for this service.

CHAPTER FIVE

Conclusion and Recommendation

Conclusion

The study demonstrated that it is feasible to provide HIV PITC IN private health care sector. Most of medical directors accept to provide the service, but the mechanism of providing thiservice need coordination with ministries of health. Compact of stigma toward HIV/AIDS patients, and provision of qualified health care providers and counselors are the main challenges.

Medical directors, were very flexible in discussing the issues of HIV/AIDS. They believe that HIV/AIDS is a national issue and needs to unite efforts and attract other partners.

There is a lack of coordination between private health sector and FMOH.

Most of the private hospitals agreed to be involved in providing HTC services, but it must be a national policy.

HIV testing is widely implemented in private hospitals, but poorly follows the WHO guidelines.

National guidelines are poorly distributed to private hospitals.

The study demonstrated many opportunities and barriers:

Main challenge:

FMOH level:

- Adoption of HIV testing and control in the private health care sector.

Private health care sector:

- Stigma is a major problem, which needs more efforts from SNAP and the private hospitals to overcome it.
- Private hospitals are reluctant to provide space for HIV counseling

Recommendations:

- FMoH and DCD to make a clear policy for the provision of HIV PITC services at the private health sector..
- To expand the umbrella of training to include healthcare providers in private health care sector.
- DCD and the private health care sector to increase efforts to combat stigma regarding HIV
- All national guidelines relating to HIV/AIDS to be available in private health care sector.
- FMoH and DCD to ensure HIV testing quality in private health care sector.
- More researches to be conducted HIV in private health care sector.

References:

1. WHO, fact sheets, key fact on HIV/AIDS, 15 February 2018, www.who.net accessed on May 2018
2. WHO, Service delivery approaches to HIV testing and counseling (HTC): a strategic HTC program framework, 2012. www.who.int.
3. WHO, Guidance on provider-initiated HIV testing and counseling in health facilities, 2007.
4. WHO, GLOBAL HEALTH SECTOR STRATEGY ON HIV 2016–2021, www.who.net
5. Sudan FMOH, Policy for market based private health care sector, 2010 www.fmoh.gov.sd.
6. Mather I, Ramaiah S, Private health care in developing countries. BMJ, V.324(7328),January 2002
7. Sheikh K, Rangan S, Kielmann K, Deshpande S, Datye V, Porter J. Private providers and HIV testing in Pune, India: challenges and Opportunities, AIDS Care.; 17(6):757-66, Aug 2005, pubmed.gov
8. Rao P, Gabre-Kidan T, Mubangizi DB and Sulzbach S - Leveraging the Private Health Sector to Enhance HIV Service Delivery in Lower-Income Countries. J Acquir Immune Defic Syndr _ Volume 57, Supplement 2, August 1, 2011. www.jaids.com. Accessed on 15/10/2012.
9. Luis G Sambo, Joses M Kirigia, Africa's health: could the private sector accelerate the progress towards health MDGs?, Int Arch Med. 2011 .
10. Sudan FMOH ,Sudan National AIDS Programme SNAP,National HIV and AIDS Strategic Plan(2010-2014)
11. Sheikh K, Porter J, Kielmann K, Rangan S,Public-private partnerships for equity of access to care for tuberculosis and HIV/AIDS: lessons from Pune, India, Trans R Soc Trop Med Hyg. 2006 Apr;100(4):312-20. Epub 2006 Jan 24.Pubmed.gov
12. Abbas, Y. The Potentialities of the Private Health Sector and its Role in Health Services Provision in the Sudan, Ahfad University for Women-School of Management Studies Khartoum, Sudan, ICBE-RF Research Report No.(2011),.
13. Sudan FMOH, Sudan household survey, 2006
14. Sudan FMOH, Utilization of Health Services Survey, 2006
15. UNAIDS, country Progress Report-Sudan, Global AIDS Monitoring 2017, www.unaids.org, accessed on May 2018
16. Deniz Go¨kengin, Anna Maria Geretti, etal, 2014 European Guideline on HIV testing, International Journal of STD & AIDS 2014, Vol. 25(10) 695–704
17. 17-WHO Library Cataloguing-in-Publication Data,Guidance on provider-initiated HIV testing and counseling in health facilities,2007
18. WHO Library Cataloguing-in-Publication Data, Provider-initiated HIV testing and counseling: one-day training programme, field test version.2011)
19. Abdurahman S, Seyoum et al, Factors affecting acceptance of provider-initiated HIV testing and counseling services among outpatient clients in selected health facilities in Harar Town, Eastern Ethiopiaove pressJournals » HIV/AIDS - Research and Palliative Care » Volume 7
20. Op. cit. number 8
21. Muthoni Gachuhi, Cassandra Blazer,et al,Extending the Reach of Provider-Initiated HIV Testing and Counseling in Kenya, AIDSTAR-One | CASE STUDY SERIES December 2010, www.aidstar-one.com
22. McDonald EA, Currie MJ, Bowden FJ. Delayed diagnosis of HIV: missed opportunities and triggers for testing in the Australian Capital Territory. Sexual Health. 2006, 3(4): 291-295.
23. Nakanjako D et al. Acceptance of Routine Testing for HIV among Adult Patients at the Medical Emergency Unit at a National Referral Hospital in Kampala, Uganda. AIDS and behaviour.2006, (Epub ahead of print).
24. WHO, Priority interventions: HIV/AIDS prevention, treatment and care in the health sector,2009 , www.who.int Accessed on 26/11/2018
25. Joep M.A. Langea B, Onno P. et al. Public–private partnerships and new models of healthcare access/abstract, 3(4):509-13. Jul.2008, Pubmed.gov. Accessed on 10/4/2018

26. Luis G Sambo, Joses M Kirigia, Africa's health: could the private sector accelerate the progress towards health MDGs?, Int Arch Med. 2011 .
27. WHO, The situation of HIV testing and counseling policies and practices in the Eastern Mediterranean Region EMRO Technical Publications Series,No.38,2011.
28. Bethesda, MD: The Partners for Health Reformplus Project, Abt Associates Inc., deliver, and policy Project. Nigeria: Rapid Assessment of HIV/AIDS Care in the Public and Private Sectors. August 2004
29. Aneesa Arur, Sara Sulzbach, et al. Strengthening Health Systems by Engaging thePrivate Health Sector: Promising HIV/AIDS Partnerships) HIV/AIDS policy brief .USAID, 2010.
30. WHO, HIV testing and counseling topics, 2013, www.who.int. Accessed on 10/4/2018
31. Wenjuan W, Sulzbach S, Susna. Utilization of HIV-Related Services from the Private Health Sector: A Multi-Country Analysis. DHS Working Papers No. 67. Calverton, Maryland, USA: ICF Macro, De. 2009
32. Allers C, Noguera M, Chovitz B, et al. Tanzania: Logistics System Capacity and Site Readiness to Expand PMTCT and Initiate ART-Findings and Recommendations of the PMTCT and ART Assessment Team. Arlington, Va.: John Snow Inc./DELIVER, for the U.S. Agency for International Development, September 2003.
33. 23- Mandelli, Andrea, et al. Survey of Private Health Facilities in Uganda. Bethesda, MD: The Partners for Health Reformplus Project, Abt Associates Inc, September 2005.
34. Rao P, Gabre-Kidan T, Mubangizi DB and Sulzbach S - Leveraging the Private Health Sector to Enhance HIV Service Delivery in Lower-Income Countries. J Acquir Immune Defic Syndr _ Volume 57, Supplement 2, August 1, 2011. www.jaids.com. Accessed on 15/10/2018.
35. Sulzbach, Sara, Wenjuan W, O'Hanlon B. Assessing the Role of the Private Health Sector in HIV/AIDS Service Delivery in Ethiopia. Bethesda, MD: Private Sector Partnerships-One project,Abt Associates Inc. Technical Report No. 11, May 2009. www.psp-one.com. Accessed on 25/6/2011
36. Rosen S, Feeley F, Connelly P, et al, The private sector and HIV/AIDS inAfrica: taking stock of six years of applied research. AIDS.;21(suppl3): S41–S45. 2007.
37. Sheikh K, Rangan S, Kielmann K, Deshpande S, Datye V, Porter J. Private providers and HIV testing in Pune, India: challenges and Opportunities, AIDS Care.; 17(6):757-66, Aug 2005, pubmed.gov
38. USAID. HIV Testing by Private Health Providers: Evidence from 18 Countries, 2012. www.shopsproject.org. accessed on: 10.4.2018.
39. AIDS Prevention and Control (APAC) ProjectC/o Voluntary Health Services,Adyar, Chennai, Mainstreaming HIV services in PrivatenSector Hospitals in Tamil Nadu - 2009.
40. Minh PD, Thang NC, et al. International Vietnam Mai Hoang Anh. Prevention of AIDS and TB Centre. Involvement of private sector in HIV/AIDS prevention in Vietnam – A public-private partnership (PPP) model: increase access to STI services of the most at risk population (MARPS), Journal of Science, Hue University, N0 61, 2010.
41. SNAP, National Guidelines and Standard Operational Procedures On HIV Voluntary Counseling and Testing .2010.
42. Abbas, Y. The Potentialities of the Private Health Sector and its Role in Health Services Provision in the Sudan, Ahfad University for Women-School of Management Studies Khartoum, Sudan, ICBE-RF Research Report No.(2011),.
43. Republic of Sudan Federal Ministry of health5-yearHealth Sector Strategy: Investing in Health and Achieving the MDGs (2007-2011).
44. Mather I, Ramaiah S, Private health care in developing countries. BMJ, V.324(7328),January 2002
45. 32- Ahmed B. Role of Private Sector in Health Care Delivery in Khartoum and Gezira States unpublished report, 2005.