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Assessment of Private Hospitals' Acceptability to Introduce Human Immunodeficiency Virus Provider Initiated Counseling and Testing (PICT) Policy in Khartoum State, Sudan: A Cross Sectional Survey

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ABSTRACT

Introduction: Sudan shows low coverage and utilization of HIV testing services among general population, according to the WHO indicators 1% of women and men aged 15-49 years old received HIV test and know their result. To increase coverage and utilization of HIV testing services among general population many strategic interventions are introduced in Sudan HIV strategic plan 2019-2025 and one of them is introducing the HIV PITC in private hospitals. Till now no data base available for acceptability of private hospitals to introduce HIV PICT policy.

Aims: to study the private hospitals acceptability to introduce HIV provider-initiated counseling and testing policy in Khartoum state.

Methods: A mixed qualitative- quantitative analytical cross-sectional study was done. The study was conducted in federal ministry of health, state ministry of health and private hospitals within Khartoum state. The study population was composed of HIV focal person at FMoH, HIV program director at SMoH, private hospitals general directors and health care providers within private hospitals. The study used thematic analysis for the qualitative part and descriptive analysis for the quantitative part.

Results: FMoH didn't start to implement PICT policy in private hospitals to increase the coverage. SMoH believe private hospital adoption of HIV PICT is a major addition and will also increase the coverage. private hospitals admins accepted the PICT policy implementation after training for their health cadre. 77% of the health care providers are willing to be trained in implementation of PICT.

Conclusion: This study showed that private hospitals will accept the PICT policy implementation to increase coverage and utilization of HIV testing services among general population.

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Keywords: PITC, HIV, Policy, General Population, Private Hospitals

Abbreviations

HIV: Human Immunodeficiency Virus
WHO: World Health Organization
PICT: Provider-Initiated Counseling and Testing
FMOH: Federal Ministry of Health
SMOH: State Ministry of Health
VCT: Voluntary Counseling and Testing
ART: Antiretroviral Therapy
PLHIV: People Living with HIV
SDGS: Sustainable Developmental Goals
NGOS: Non-Governmental Organizations
UNDP: United Nations Development Program
UNAIDS: United Nation Program of AIDS
UNFPA: United Nations Fund for Population Activities

Introduction

Provider-initiated HIV testing and counseling (PICT) refers to HIV testing and counseling which is routinely recommended by health care providers to people attending health care facilities as a standard component of medical care. PICT is distinguished from voluntary counseling and testing (VCT) in which individuals seek HIV testing and counseling services on their own [2]. To end HIV as a global public health threat by 2030 which is one of Sustainable Development Goals (SDGs) sub-targets, HIV treatment should be delivered to all who need it [3]. Accumulating evidence of the benefit of early antiretroviral therapy (ART) highlighted the need to expand HIV testing which motivating UNAIDS to introduce its 90:90:90 strategy that calls for 90% of people with HIV to be diagnosed, 90% of the diagnosed to access ART and 90% of the treated to be virally suppressed and achieving 'the first 90' is critical to the whole treatment cascade, globally it is estimated only 64.6% of the people leaving with HIV (PLHIV) were initiated

on ART by June of 2019 [4-5]. Accordingly, Global and national guidance supports PICT as an important strategy for diagnosing HIV cases in clinical settings and connecting patients to treatment and care to prevent HIV-related morbidity and mortality [6]. In 2007, the World Health Organization (WHO) issued guidelines recommending that countries and organizations adopt PICT to increase HIV testing rates. These guidelines were developed because HIV testing rates globally remained low and few people living with HIV noticed their status. In 2009, more countries adopted policies on provider-initiated testing and counseling, and the number of facilities providing HIV testing and counseling continued to increase [7]. Private sector is defined as those which fall outside the direct control of government; private ownership generally includes both for-profit and non-profit providers. The private sector is typically involved in every aspect of health services delivery in developing countries, largely due to relatively high demand, and patient's willingness and ability to pay. Working in collaboration with private sector is better than ignoring them, and that cooperation can be an effective strategy for reaching some important sector goals. Private health care providers' presence and capacities will necessitate working with and through them to pursue desired objectives Republic of Sudan is classified as a low middle-income country [8]. The first AIDS case was reported in 1986 and according to UNAIDS estimates 2017, the total number of HIV/AIDS cases in Sudan is 51,000 and the HIV/AIDS prevalence is around 0.2%. This estimation put Sudan among the lowest countries with HIV/AIDS prevalence in Sub-Saharan region but the spread of HIV is influenced by poverty and illiteracy which both are widespread in Sudan [9]. HIV testing and counseling modalities are diverse in Sudan It includes outreach mobile HIV testing in rural and urban areas for the general population, fixed voluntary counseling and testing centers (mostly governmental and very few NGOs), HIV testing in health facilities -provider initiated testing and counseling in Antenatal and Delivery Care, TB Management Units and Primary Health Care Centers (for STI cases mainly), VCT within ART centers which test family members of PLHIV and unregulated HIV testing in inpatient settings and private sector (an estimated 1,500 private laboratories perform this HIV test in Khartoum state alone). There is no data to capture the scale of HIV testing among inpatient settings and private sector laboratories to end HIV as a global epidemic by 2030, Sudan HIV strategic plan 2019-2025 shows seven HIV response priority areas, one of these areas is concerning with HIV testing services and HIV care and treatment to increase coverage and utilization of HIV testing services among general population [1, 7]. this study assessed the acceptability of private hospitals to introduce HIV provider-initiated counseling and testing policy in Khartoum state. Acceptability refers to determining how well an intervention will be received by the target population and the extent to which the new intervention might meet the needs of the target population and organizational setting to increase coverage and utilization of HIV testing services among general population.

Materials and Methods

A mixed qualitative-quantitative facility based descriptive cross-sectional survey. The study was conducted in disease control directorate in federal ministry of health and HIV program in state ministry of health and the private hospitals within Khartoum state. The study population was HIV focal person in Diseases Control Directorate in FMoH, Director of HIV program in SMoH, General Director of selected private hospitals, and Health care providers (specialist, consultant, registrar, and medical officers) within selected private hospital. full coverage of private hospitals was done according to the following inclusion and exclusion criteria. The total private hospitals were found to be 73, 15 hospitals were closed and turned into covid-19 quarantine centers 12 hospitals were closed due to disinfection, some hospitals refused due to covid-19. The remaining was 30 hospitals. The FMoH and SMoH HIV program focal person was interviewed. Every health care provider working within the 30 hospitals on the day of interviewing the general director was asked to fill the questionnaire. Data collectors with medical background were recruited and trained to target study population in the study area in Khartoum state. For the qualitative data collection and analysis, a total of 30 Key informant in-depth interviews were conducted, using an interview guide. The interviews were voice taped then transcribed manually by the main researcher and dimensional zed. Thematic analysis was used to interpret the qualitative data based on themes generated by the researcher. The quantitative data was collected using a structured guided questionnaire. Then, the data was computerized through Epi-Info 7 and analyzed through the statistical package for social sciences (SPSS 29). Descriptive statistics was carried out and data presented in forms of graphs.

Results

Federal and State Ministries of Health In-depth Interviews

The HIV focal person in Federal Ministry of Health in depth interview indicated that the stakeholders of HIV program are the following non-governmental organization (NGO) The Global Fund Program Management Unit at United nations development program (GF, PMU, UNDP), world health organization (WHO) the joint united nation program of AIDS (UNAIDS) United Nations Fund for Population Activities (UNFPA). Also, he stated that to integrate the private hospitals successfully, there should be a coordination between the mentioned stakeholders and the privet hospitals directorate in ministry of health. He emphasized on introducing private sector as service provider for HIV, and the great benefit it would bring to extending the coverage of health services to more target groups. If private sectors are successfully integrated, "*would be a major addition and increase the coverage and will reach the target by 2025*"as he mentioned that private sector has a major role in facilitating the HIV 2025 target of service coverage extension. Also, he said "*The strategy stated that by introduction of PICT and expansion of the treatment services will increase it and reach the target by 2025*" but till now no any plans for implementing PICT policy. The key informant was asked to elaborate on the responsibility of the FMOH in the strategy, and about the resource mobilization part of the strategy and whether FMoH is able to implement it; he clarified that the HIV program in FMoH is not the implementing agency, it is responsible for supervision, polices and guidelines. Also, HIV program in FMoH is a governing body as well as studying disease pattern. SMoH with Other stakeholders mentioned above are responsible of implementation of national strategic plans interventions. Furthermore, he reveled that for the quality assessment in private sector hospitals; a mandatory pilot study at administrative and care provision levels should be conducted before full expansion. Then, it will be clearly state quality measures and indicators. Regarding completeness of reports and assurance of data, HIV focal person in FMoH suggested to train health care cadre in private hospitals in development health information system 2 (DHIS 2) if it implemented in FMoH, and he stressed in technical capacity building which is necessary to achieve effective PICT policy implementation.

Also, during the in-depth interview with State Ministry of Health, the HIV director, he showed that choosing of VCT model as HIV screening model in Sudan was due to disease sensitivity

and the need for proper counseling before any testing or further management. Breaking bad news and other communication skills are highly needed in such conditions. He clarified that the extension of the service to include private sectors in Khartoum State is very promising as private sector is the catchment area to many Sudanese especially in the outskirts of the state. The implementation of such services is mandatory to our population and the need for commitment from private sector administration is necessary. Following international guidelines in testing and kit using will definitely reduce the false positive results. Moreover, he stated that challenges that facing SMoH in implementation of HIV PICT is the delay in supply of HIV testing kits and condoms, which hinders the service continuation at the VCT centers. Regarding reporting and record keeping, the state ministry receives a monthly report from all the centers, the report has data about follow up of registered cases and of the new cases and accordingly the amount of treatment needed per center will be calculated. A joint report is presented on monthly bases to the director of HIV then the report will be shared by the FMOH to insure higher authority commitment. On the other hand, The SMoH was not optimistic about the expansion and integration of VCT/PICT services in private sectors, "*It will create a defect as a full package service because this is resource that can be utilized in other aspects of HIV program and it is very difficult or nearly impossible to apply it in private hospitals*". He was especially concerned about deficiencies in reporting, among his concerns was the overuse of testing kits by private sector, and that the test will be considered a routine test and ordered randomly.

Private Hospitals Admins' Depth Interviews

Knowledge about HIV Voluntary Counseling and Testing (HCT) model:

1. Eighteen of hospital directors who were interviewed had no prior knowledge about the existence of HIV program, while few knew about the program and its mandates. Some hospital directors thought that" *the program is weak and not fully activated*". Through the interviews we identified only two hospital directors knew about HIV- Voluntary Counseling and Testing (HCT) model. One hospital director had a totally perfect idea "*There are facility based in healthcare places and non-facility based and under each one there is a subdivision*". While twenty-seven of hospital directors who were interviewed had no idea what is HCT.
2. The relation between private hospitals and HIV program in Khartoum state:
   None of the private hospitals were part of State Ministry reports, nor the directors been invited for meetings regarding HIV. Private hospital directors think that they have been ignored by the State Ministry with regard to HIV situation. All directors suggested that Public Hospitals had better situation and more active partners with SMoH unlike private sector "*in public hospitals there is good contact but us in private hospital no any meeting we have got invited*".
3. HIV policies and guidelines within private hospitals:
   Local policies and guidelines were noticed to be poorly developed by the private hospital directors. Seven of them declared that they did not formulate their own policy and were expecting to receive HIV policy and guidelines from State Ministry but they did not Eighteen Hospitals refer patients with HIV somewhere for further management?, they do not deal with them, while five hospitals had developed local guidelines, yet only 3 are applying it in practice" *Yes , we have our policy {just screen for surgeries} , {to screen every pregnant women to know her HIV states before delivery, if the lady is positive then we refer to the nearest HIV center to receive the treatment} , {any patient for admission in this hospital will be screened for HIV, HBV and HCV. If the patient tests positive for HIV will be isolated is private room*". The rest of the hospitals which was two do not apply their local guidelines for fear of patient's refusal.
4. Assessing the knowledge of hospital admins about HIV program:
   Twenty-seven of hospital directors who were interviewed had identified the test used for screening of HIV, only three do not know. Upon further questioning about the standard test requested for confirmation of patient's HIV status, only one interviewee could identify the test. There was a clear confusion weather ELISA or fast screening kit is the ideal investigation. Upon enquiring about the steps to be done if the patient turned to be positive, we identified twenty-six hospitals directors who council and refer patients "*we screen the patient and if positive we council him and if he stables, we refer him but if in-patient we call the center of VCT*". One hospital director gave a response that reflects poor knowledge about patient privacy and ethics in handling sensitive medical issues, that is:" If the patient is newly discovered by our test, a doctor will privately ask the co-patient about the patient's HIV status". About the site of referral, three main sites were identified by the interviewee; seven mentioned the referral site to be STACK Medical Lab, while seventeen would refer HIV positive patients to VCT centers. The rest would either refer to Omdurman Teaching Hospital or to tropical disease hospital which also include VCT centers. Knowledge about voluntary counseling and testing VCT centers was limited to half of respondents, while the other half had no idea.
5. Knowledge about PICT among private hospitals admins:
   We introduced the provider-initiated counseling and testing to interview and found that only one knew about the model "*Yes provider-initiated counseling and testing is one of the facility-based models where the provider asks for screening, it is not voluntary it depends on the clinical sense of the provider*", while the rest did not. Regarding future training on PICT, 25 of hospital directors welcome staff training as a concept and like to be involved. Some of them (4) refused the concept of training in any HIV-related issue at the current situation of COVID pandemic and suggested training to be targeting handling COVID-19 patients. l, and tried to redirect the initiative to target staff at While one private hospital director suggested central lab (STAC) staff to be the target group for training rather than private hospital staff. One director gave the following response "*this will require the hospital to give up a whole roomr, staffed and equipped for HIV patient who may not come or we might see only 1 case a day. And in severe cases we might not be able to help the patient. This will decrease the income of the Privet hospitals. It's not enough to just provide us the treatment and training*". The previous response indicates lack of commitment of some private sector administration, and a business a approach in dealing with patients problems.15 of the interviewee think that HIV service coverage will increase if it is adopted by private sector. While the other had do not believe in this concept, and their response were negative. The minority think that public hospitals should be the target sector not private hospitals. A hypothetical assumption was offered to the private hospitals directors in order to project future agreement in case of integration of the HIV services. Each director was asked for his/her agreement about offering a space for MOH to bring staff and other commodities/supplies needed for establishing

a service. Unfortunately, 9 directors only agreed and accepted to offer the appropriate infrastructure needed by MOH to establish HIV package of services "*We don't mind at all we will provide infra structure and all stuff needed for the sake of the patient*"

Results of private hospitals' healthcare providers filled questionnaire displayed that 63% of the participants were medical officers while 26% were registrars and 11% were specialists or consultants. 46% percent of the participants were working in the cold case clinics and 37% were on emergency department duty 17% were covering the outpatient clinic. The participants were asked if they know about HIV PICT policy and the result showed that 54% of them, they notice about PICT and 46% they know nothing about PICT policy. The participants were asked if PICT was implemented in the hospital strategy and the result showed that 44% didn't notice if PICT is implemented within the hospital they are employed in or no while 17% said it is used and 39% was telling that it isn't a policy that is used with their hospitals. The participants were asked if they implement PICT on their daily practice and the result showed that 60% do not implement it on their daily practice, 17% apply it and 23% do it from time to time not always. The participants were asked if they are willing to be trained in PICT policy and the result showed that 77% were willing to be trained on PICT while 23 % refused to be trained because of HIV stigma.

Discussion

The Kennedy et al. A series of systematic reviews of HIV behavioral interventions in low- and middle-income countries proved that the coverage will be increased by applying PICT policy as these have been agreed by the HIV focal person at FMOH [4]. This study revealed according to the interview at the federal ministry of health that expansion and introduction of PICT would be a major addition and increase the coverage and will reach the target by 2025 according to the national AIDS strategy. The FMoH was willing to provide training for the private hospital's health care. On the other hand, SMoH were accepting the introduction of PICT services within private hospitals and they believe it is a major addition. They were worried about the data flow and the quality of reports and the active referral system.

Johnson, D., Cheng, X analyzed the role played by private commercial health providers in providing HIV testing in 18 countries by using several newly available datasets and exploring additional lines of investigation [11]. They estimated the overall proportion of those tested for HIV who received their test from a private provider in each of these countries, compared use of the private sector for HIV testing with use of the private sector for other health services, and investigated the relationship between household wealth and use of the private sector for HIV testing. These results suggested that strategies for supervising and engaging private health providers with regard to HIV testing should be country specific and take into account local context. In this study interviews were done with the private hospitals admen who was asked about the strategies of HIV, the majority didn't have any strategy or policy to deal with HIV patient, out of the 30 hospital admen's 3 only notice the standers test and referral system. There was a very big gap between the private sector and the SMoH and the private sector knowledge was very weak to the extent that 18 hospitals refer to National Public Health lab which is not a VCT center, that will cause missing of the patient and will increase the infection rate because not directed to the right pathway. The positive aspect was that most of them were willing to the training program and don't mind to have the service within their hospitals. Some of them didn't accept the training they was telling in such an outbreak of covid 19 the training should be in this area. Dieleman, M., Bwete, V., Maniple, E. did a cross-sectional study with qualitative and quantitative components to identify the influence of HIV/AIDS on staff working in general hospitals at district level in rural Uganda's Central Region areas and to explore support required and offered to deal with HIV/AIDS in the workplace Data were collected in two government and two faith-based private not-for-profit hospitals [12]. Eighty-six per cent of respondents reported an increased workload, with 48 per cent regularly working overtime, while 83 per cent feared infection at work, and 36 per cent reported suffering an injury in the previous year. HIV-positive staff remained in hiding. One small-scale study in Kenya held focus groups with nurses in outpatient and inpatient settings and concluded that nurses found implementing PICT difficult and stressful particularly in maintaining consent, confidentiality, and counseling [13]. This study revealed that 53% of health care providers with in the selected private hospitals were males and 47% were females, the majority of them (70%) were between 20 to 30 years old and 63% were medical officers, 26% were registrars and the remaining were specialists or consultants. The result showed that 46% were in the cold case clinic, 37% were in the emergency department and the remaining in the outpatient clinic. 56% have heard about PICT and 44% didn't notice about it. 44% didn't notice if the hospital was applying this policy or not. 60% don't apply PICT policy within their daily practice. 77% were willing to be trained to apply this policy and 23 % refused to be trained because of HIV stigma.

Conclusion

This study revealed that FMoH did not yet start to implement PICT policy in private hospital. SMoH showed willingness to implement HIV PICT policy in private hospitals to increase coverage and utilization of HIV testing services among general population. This study showed that hospitals in private sector are totally obscured from HIV program and they have no idea about HIV protocols and guild lines. Also, this study revealed that private hospitals will accept to adopt the PICT policy and to be trained on it and they will provide infrastructure to provide the services of PICT. At the level of health care providers, the study showed that most of them didn't notice about PICT policy and they are willing to be trained.

Recommendations

This review recommended the following:

1. To coordinate between FMoH and SMoH to achieve effective implementation of PICT policy in private hospitals.
2. To provide training by stakeholders to health care providers in private hospitals.
3. To conduct a pilot study before implementation of PICT to insure quality of registering and reporting tool.
4. To Advocate about HIV PICT at the level of private hospital admins.

Authors' Contributions

AM, SG & HT Conceptualization, Investigation, Methodology, Supervision, Visualization, writing – original draft, Writing – review & editing

HT, SG Project administration, Supervision, Visualization, writing – original draft, Writing – review & editing

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