

Poster

STDs & HIV/AIDS 2017



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July 26-27, 2017 | Executive Hotels & Resorts
Vancouver, Canada

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Female inject drug users, vulnerability to HIV infections and lack of service provisions-NEPAL

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Issue: The intersection of unsafe injecting drug use and unsafe sexual practice is a significant factor in the increased risk for HIV infection among female who inject drugs (FDUs) in Nepal. Additionally, most HIV/AIDS prevention and care programmes are not reaching this vulnerable group because most programs are designed for men and despite its attempt to reach and work with FDU are not working. In fact, gender sensitive services addressing the specific needs of female injecting drugs user hardly exists in most Asian countries.

Project: Since June-November 2015, Rise Above (Community-based NGO of drug users) implemented 6 months long survey project supported by the Drug Control Program (DCP) under Ministry of Home Affairs, mainly on available service provisions & gaps for FDUs in 4 most affected districts of the country. This survey was carried with mixed methods of individual & institutional interviews, focal group discussions and interaction meetings with concerned stakeholders.

Result: The result revealed that there is very limited and or comparatively non existence of service provision for FDUs in all 4 districts, because there is no dialogue and communication between donor/s, female groups and service providers consequently creating more lack of services for FDUs. Nevertheless, the need for long-gapped programs for FDUs is acknowledged and understood by Government entities, donors & service providers, there is a need to kick-off the intervention with coordinated efforts from all concerned parties. Furthermore, more of the activities targeting social discrimination towards FDUs have to be done at larger scale.

Conclusion: Local government authorities and stakeholders are positive towards the need of services for FDUs and are ready to play their supportive part. There needs to be a frequent dialogue & communication between government body, donors and other stakeholders which should be initiated by FDU groups themselves.

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Evaluation of the admission reasons and the response rates of the HBV vaccination at the adult vaccination polyclinic

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Introduction: One of the main routes of prevention from the infectious diseases is vaccination. Due to the ageing of the world population, the number of people who are at risk of infections has increased. Moreover, because of the common travels to the regions under risk and the increase in the numbers of people who have chronic diseases, who got immunosuppressive treatment, who got organ and/or tissue transplantation and who are diagnosed with HIV/AIDS, adult vaccination gained importance. In this study, it is aimed to determine the main reasons of applying to adult vaccination polyclinic and the response rates to HBV vaccination.

Material and Methods: People who applied to adult vaccination polyclinic in 10 years between 2006-2016 for HBV vaccination and who applied for pneumococcal vaccination in last one year were evaluated in this study. Socio-demographic features such as age, sex of the patients were assessed, besides the indication for vaccination. HBV vaccination was administered by 0.-1.-6 months schedule for people who had no immunosuppressive disease or condition. For people who are immunosuppressed, or solid organ recipients or HIV/AIDS patients, the same scheme was administered with double dose. Response to HBV vaccination was assessed by the measure of anti HBs antibody and the level of >10 IU/mL was considered as protective response. Pneumococcal vaccine was administered with PCV13 and PPSV-23 according to MMWR recommendations.

Results: A total of 2808 patients who vaccinated for HBV in ten years and 47 patients who vaccinated for pneumococcal vaccines for one year were evaluated in the study. 58% and 21% of the vaccination applicants were female for HBV and pneumococcal vaccination, respectively. The main indication for HBV vaccination was living with a person who has HBV infection (84%). Other vaccination indications were; to be healthcare personnel (11.1%), to have chronic HCV infection and other liver disease (5.5%), to be hemodialysis patient (3.1%) and to have cancer (2.6%). The response for HBV vaccination was evaluated in 2346 persons and 93.4% of them was found in protective levels (>10 IU/mL).

Most of people who have been vaccinated with pneumococcal vaccine were patients who are diagnosed with HIV/AIDS (59.5%), followed by renal transplant candidates, who performed splenectomy and who has recurrent meningitis. Only three of the patients were 65 years or older.

Conclusion: The HBV vaccination response rates were found to be comparable with the general response of the vaccine. It is observed that application number of people, who applied for HBV vaccination and are under risk for sexually transmitted diseases, is low. Moreover, the application rate of people who applied for pneumococcal vaccination and have chronic diseases such as diabetes mellitus, chronic heart, kidney, liver, lung diseases and are over 65, was also observed to below.

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Feasibility and Performance of SD BIOLINE Dual HIV/Syphilis Point-of-Care Test Based Screening Strategy in Ethiopia

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Background: Diagnostic tests are needed for the control of sexually transmitted infections. Rapid advances in molecular biology have led to the development of sensitive and specific diagnostic tests. Immunochromatographic test for dual diagnosis of both HIV and syphilis by detecting IgG/IgM antibodies to HIV and recombinant *Treponema pallidum* antigens to syphilis testing has recently been developed as a novel point-of-care testing technology. New diagnostics tests must be evaluated in the situations in which they will be deployed. However, this product has yet not been evaluated in pregnant mothers in Ethiopia.


Method: A total of 1,888 characterized repository plasma samples, previously collected from pregnant mothers were used. HIV ELISA Ag-Ab test (Vironostica) as a screening and Bio- Meurex as a confirmatory were used as gold standards for evaluation of HIV, ELISA (Trepanostica-TPPA) recombinant were also used as a gold standard for syphilis testing. The samples were assayed for the presence of antibodies to HIV and *T. Pallidum* by the SD Bioline HIV/syphilis Duo. Moreover, the samples were characterized using SPINREACT RPR kit for syphilis.

Result: The sensitivity and specificity of SD Bioline HIV/syphilis Duo in HIV testing were 97.6% and 100%. The sensitivity and specificity of SD Bioline HIV/syphilis Duo in detecting syphilis were 95.2% and 97%. Moreover, the kappa value for SD Bioline HIV/syphilis Duo had

0.99 and 0.616 in HIV and syphilis testing respectively. Inter reader variability of SD Bioline HIV/syphilis Duo was greater than 3%.

Conclusion: SD Bioline HIV/syphilis Duo was found to be highly specific but with limited sensitivity in detecting both HIV and syphilis. It can also be performed in clinics without laboratory training and require no equipment or refrigeration. SD Bioline HIV/syphilis Duo compared favorably with TPPA and ELISA. SD Bioline HIV/syphilis Duo can be used for simultaneous screening of HIV and syphilis at antenatal care settings in Ethiopia.

Key words: Sensitivity, Specificity, Positive Predictive Value, Negative Predictive Value

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Accepted Abstracts

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Syphilis sero-positivity among pregnant women attending public antenatal clinics: A five Year analysis from fifteen public primary health care facilities in Gaborone, Botswana

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Background: The prevalence of syphilis in pregnancy varies across the globe and among different age groups within the same country. In sub-Saharan Africa, syphilis prevalence among pregnant women has been found to range from 2.5 to 18% among antenatal clinic attendees, with the highest prevalence in the age group 35-49 years. Also, it is higher in the rural than urban clinics.

Objectives: To determine trends in syphilis prevalence using the Venereal Disease Research Laboratory (VDRL) and the Rapid Plasma Reagin (RPR) test among pregnant women attending the public antenatal clinics in Gaborone, Botswana (2004-2008).

Study design: Cross-sectional study using routinely collected antenatal data.

Results: The overall syphilis prevalence amongst pregnant women in Gaborone, Botswana decreased from 2.96% (95% CI, 2.55-3.37) in 2004 to 1.15% (95% CI, 0.89-1.41) in 2008

($p < 0.001$). The age specific prevalence per total number of reactive VDRL/RPR was highest amongst pregnant women aged 26 to 30 years ($p < 0.001$) and lowest for those aged 16 to 20 years ($p < 0.025$) during the period 2004-2008. However, there were variations in syphilis prevalence rates within and between the clinics.

Conclusion: Syphilis sero-positivity in pregnancy in Gaborone, Botswana has been declining for the last five years, but was more prevalent amongst pregnant women aged 26 to 30 years with the lowest prevalence among those aged 16 to 20 years during the period 2004 to 2008. This decline may be attributed to a number of factors and in particular, the adoption of the syndromic approach for management of sexually transmitted infections in the country.

Keywords: antenatal clinics, pregnant women, syphilis, sero-positivity, sero-prevalence.

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Clients' satisfaction with HIV treatment services in Bamenda, Cameroon: a cross-sectional study.

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Background: Clients have explicit desires or requests for services when visiting hospitals; inadequate discovery of their needs may result in dissatisfaction. Patient satisfaction influences retention in HIV care, adherence to HAART and serves as determinant to HIV suppression. This study's objectives were to quantify clients' satisfaction with HIV services in Bamenda and determine relationship between satisfaction and clients' socio-demographic/structural characteristics.

Methods: A cross-sectional study was conducted on HIV-positive patients followed-up, on treatment and who consulted in the Bamenda Regional Hospital treatment centre between July and August 2014. Participants consent was sought and data collected on client's level of satisfaction to staff-patient-communication, staff attitudes, privacy and confidentiality and staffing and amenities situations in the hospital. Data was collected using a structured questionnaire interviewer-administered by investigator and trained health personnel. Collected data was analyzed using Epi Info version 3.5.4 and clients' satisfaction measured using frequencies

and percentages.

Results: A total of 384 participants took part in this study and their median age was 37 years (IQR: 29-46). Two hundred and seventy-four (71.4%) participants were females. Overall satisfaction with HIV services was 91.2% and participants reported less satisfaction with overall staffing and amenities situation of the centre (3.6%). In the multivariate analysis, only being female, employed and perceiving high number of nurses working at the treatment centre remained significant predictors of overall satisfaction with HIV services.

Conclusion: A high proportion of participants expressed satisfaction with HIV services. However, some dissatisfaction is masked in this high satisfaction level. This dissatisfaction underscores need to improve staff attitudes, staff-patient-communication, employ more staff and build better patient facilities. Future studies need to focus on assessing long-term progression of satisfaction levels with services and determinants of satisfaction involving larger samples in many treatment centres.

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Prevalence, infectivity and associated risk factors of Hepatitis B virus among pregnant women in Yirgalem Hospital, Southern Ethiopia: Implication of screening to control mother-to-child transmission?

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Background: A hepatitis B surface antigen (HBsAg) and Hepatitis B e antigen (HBeAg) positive mother has up to a 90% likelihood of mother-to-child transmission (MTCT) of hepatitis B virus (HBV) to newborns in the absence of any prophylaxis or antiviral therapy utilization. However, routine antenatal screening and intervention strategies are not yet practiced in Ethiopia. Therefore, this study was conducted to determine the prevalence, infectivity and associated risk factors of HBV among pregnant women.

Methods: A cross-sectional study was conducted from October 2015 to August 2016 in Yirgalem Hospital. A total of 475 pregnant women were recruited consecutively. Data on socio-demography and potential risk factors were collected using a structured questionnaire. In addition, blood samples were tested for HBsAg. Positive HBsAg samples were tested for HBeAg using a commercially available strip test. The status of HIV was collected from the records. The data were entered and analyzed using SPSS version 20 statistical

package.

Results: Among the total study participants 35.4% were aware of MTCT, 15.6% were previously screened and only 0.6% had taken full dose vaccine for HBV. Thirty-four women (7.2%) were HBsAg-positive, of whom 27(76.5%) were positive to HBeAg. The prevalence of HIV infection was 10.1% (48/475). Overall, HBV/HIV co-infection rate was 2.1% (10/475). Women with a history of multiple sexual partners (aOR=2.92, 95%CI=1.19-7.16) and being HIV positive (aOR= 4.44, 95%CI=1.96-10.08) were the only independent predictors of HBsAg positivity.

Conclusions: High prevalence of HBsAg and coexisting with HBeAg, in addition to low awareness and practice suggests that MTCT might be the prevailing mode of HBV transmission in the study area. Thus screening of all pregnant women and provision of health education about the risk factors, the mode of transmission and prevention is recommended.

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Variable host cell viral affinity due to distinct and multiple number of HIV variants remains challenges in management and control of HIV/AIDS

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Human immunodeficiency Virus (HIV) binds different host cell receptors including human Mannose Receptor (hMR), DC-SIGN, Galactosyl Ceramide, Syndecan-Syndecan-3 Heparan Sulfate Proteoglycan receptors as well as immune cells. HIV is known to be sexually transmitted by binding to hMR on human sperm, vaginal epithelial which are devoid of conventional CD4 receptor. Localization of hMR was found to be in lower number of vaginal epithelial cells of HIV negative female partner of serodiscordant couples as compared to normal females suggesting association of hMR in sexual transmission of HIV. Additionally poor proof reading activity HIV results in to presence of distinct and multiple DNA and RNA variants in different cells and secretions of the same individual. Genotypic and phenotypic characterization of C2-V3 region of HIV1 C env gene in PBMCs, sperm, vaginal epithelial cells and cervical cells showed presence of distinct variants in the same individual with variable infectivity with different numbers of N-linked

glycosylation (NLG) sites suggesting variation in coreceptor affinity in different cells of same individual which may influence disease progression and risk of HIV transmission. Additionally genotypic characterization of HIV1 gp41 by next generation sequencing showed presence of multiple variants in blood of the same individual. Presence of distinct and multiple variants in different cells and secretions may influence the viral affinity to host and immune cells and therefore may affect HIV transmission, infectivity, response to antiretroviral drug therapy and pathogenicity. Presence of cell associated DNA virus and cell free RNA virus suggests the need for development of effective vaccine which elicit both cell mediated as well as humeral; immune responses. Also development of formulation for prevention of sexual transmission of HIV need to be primarily prevent HIV binding to hMR, CXCR4 and CCR5 coreceptor which may be safe microbicide for prevention of HIV transmission.

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Prevention of mother-to-child transmission (PMTCT) as one of the most effective HIV prevention programmes in Uganda

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Uganda is one of the countries in the world most seriously affected by the HIV/AIDS epidemic and thousands of people in the country have died of the disease. The overall antenatal prevalence rate by 2011 was estimated at 6.5 percent closely comparing with 6.1 percent in 2010 (Ministry of Health, 2012). Despite the registered declines which have been attributed to strong preventive measures including condom use, public awareness raising campaigns and behaviour change messages, these rates are still high by international standards with severe socio-economic and demographic impact at the national, community and household levels. Majority of HIV/AIDS cases (83%) occur among young adults 15-40 years old with just under half of those HIV cases occurring between the ages 10-24years.

Methods: However Uganda is embracing 90-90-90 strategy An ambitious treatment target to help end the AIDs epidemic. By 2020, 90% of all people living with HIV will know their HIV status. By 2020, 90% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy. By 2020, 90% of all people receiving antiretroviral therapy will have viral suppression this is highlighted by *Prevention of mother-to-child transmission (PMTCT) reports* since it was launched in 2011, the UNAIDS Global Plan has had a marked effect on bringing HIV services to children and women in Uganda. By the end of 2015, 93% of pregnant women were tested for HIV and knew their result. Whilst embracing *SDG3* Good health and well being PEPFAR (US Presidential Emergency Fund for AIDS Relief) is the major contributor to the international funding of HIV and AIDS around the world, particularly to African countries including Uganda.

Results and Discussion: Uganda as a country has taken up an aggressive treatment scale up effort and current data shows that Uganda achieved the programmatic tipping point in 2013 of having fewer new adult infections of 140,000 than the net increase in adult patients on treatment of 161,028 per year. The figure bellow shows the comparison of the estimated number of annual new infections, the number of adults on treatment and estimated death overtime from 2004 to 2014. The estimated AIDS death declined by 19,583 between 2012 and 2014. HIV incidence rate is projected to fall from 2014 Uganda HIV and AIDS Country Progress report Page11 approximately 0.76% in 2014 to 0.46% in 2020, and annual new infections from 139,086 in 2013 to just over 100,000 in 2020 according to the Uganda Investment case 2014. For successful mitigation of Uganda's severe HIV epidemic, a series of comprehensive health, political and social strategies will need to be implemented. For people who inject drugs, both political and cultural conditions need to be redressed, starting with transforming punitive laws that criminalise the use of drugs. Continued movement away from criminalisation towards a humane and supportive approach to drug users will transform national strategies into the best public health outcomes. HIV prevalence is higher among women (8.3%) than among men (6.1%) emphasis should be directed at PMTCT Program, ABC Program through demonstrations, video shows and drama through thorough sensitizations about HIV/AIDS to tackle the problem of myths that is still existing with some communities.

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Empowerment of HIV positive Patients in promoting coping strategies with stress and their health outcomes

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Introduction: HIV infection is the greatest health challenges in worldwide. The identity of AIDs disease is that, It causes the psychological and social distress including stress in the patients. So the aim of the study is to determine the effectiveness of interventional program based on transactional model to promote coping strategies and their health outcomes (stress reduction and improvement of quality of life) in HIV positive patients.


Methods: This current study was clinical trial. In the first phase the validation of standards questionnaire according to transactional model constructs were performed. Then 120 HIV- positive patients that had been referred to the Counseling of Behavioral Disease Center at the Imam Khomeini Hospital with inclusion criteria were selected. They were assigned by random allocation method in two groups including case and control whom related questionnaires (pretest). According the results of pretest, empowerment of interventional program including 6 session based on constructs of coping self-efficacy, problem and emotional – based coping efforts, religious coping, meaning based coping and social support was designed and performed for case

group.

Results: In this current study the mean age of participants was 34.74(SD=7.14). After 3 month intervention phase, interventional participants showed significant increase in problem-based coping, emotional-based coping , meaning-based coping and coping self-efficacy ($P<0.05$). compared with control group, interventional group did not show significant increase in religious coping ($P=0.063$).In addition, interventional group reported lower perceived stress levels than control group at the 3- month assessment ($P=0.001$). Following intervention HIV-infected people indicated a significant difference in dimensions of quality of life included mental health ($P=0.018$), role physical ($P=0.001$), role emotion ($P=0.049$), general health ($p=0.001$), vitality ($P=0.02$).

Conclusion: Development of tailored empowerment of intervention programs based on transaction model can improve adaptive coping strategies with stress and health outcomes (perceived stress, quality of life) among HIV-positive patients.

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Socio-cultural construction of HIV/AIDS stigma among african migrant women in lower saxony, Germany

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An estimate of 80,000 people are living with HIV in Germany with 4,400 sero-positive persons in the State of Lower Saxony which counts amongst the high HIV prevalence states in Germany. Yet, many sexually active people do not know their HIV status. In so doing, HIV-related stigma stands a major barrier in seeking VCT especially within the African communities. Gender and culture play a significant part in the aftermath of the infection. Women are more likely to be blamed for the transmission of HIV compared to men. All these complicate the disclosure of infection and prevention of HIV transmission. HIV prevention efforts are slowed down by societal and cultural factors that largely lead to stigmatization of infected individuals.

The current research therefore examines the socio-cultural constructions of HIV stigma and dilemmas as African-migrant Women struggle to cope with the challenges posed by HIV/AIDS in their day to day lives. The social context of HIV-related stigma is reflected in negative behaviors including discrimination, denial, secrecy and self-blame.

Most HIV infections are through heterosexual transmission, a mode of transmission closely linked to promiscuity and the resultant HIV-related stigma. The complexity surrounding HIV-related stigma cannot be ignored considering the fact that, it is layered amongst other stigmas such as gender and promiscuity (Skinner & Mfecane, 2004). Intersectionality is an ideal framework for analyzing complex health inequalities that occurs among HIV-infected subgroups especially African Women whose experiences are different from their male counterparts. Multiple factors often precipitate stigmatization experiences and their social identities at the individual level such as being female, ethnic minority, low economic status which interlocks with oppressive forces at the macro level e.g classism or sexism which creates social injustice. It is vital to examine the underlying aspects creating and re-enforcing HIV-related stigma in order to design culturally sensitive interventions. Thus, redefining HIV/AIDS from the social perspective which initially created stigma needs to be addressed in order to eradicate it.

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The relationship between risk behavior and scientific knowledge of HIV/AIDS amongst South African school girls.

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Introduction: The prevalence of HIV/AIDS in South Africa remains worryingly high. This is in spite of numerous programs which are aimed at reducing risk behaviour, eliminating stigma and promoting disclosure about HIV infections. As part of these efforts, the South African government has mandated the integration of HIV/AIDS education in the school curriculum. Life Orientation for instance is a subject where students are taught the socio-economic aspects of HIV/AIDS including while in Biology they are taught the scientific nature of HIV/AIDS in relation to various body systems such as the immune system and the circulatory system.


Research methods: The current study followed a quantitative questionnaire based methodology to collect data from a group of 291 school girls aged between 15 and 18 years. Of these 180 were Biology students and 111 were non-Biology. A non-probability convenience sampling approach was used to select students to participate in the study with a view to obtain a sample that is representative of the South African population.

Results: Results showed that Biology students have a significantly higher knowledge of health literacy related to HIV/AIDS ($M = 54, SD = 20$) than non-Biology students ($M = 27, SD = 23$), $t(289) = -10.498, p = 0.001$. It was also found that the HIV/AIDS literacy of Biology students ($M = 74, SD = 16$) was significantly higher than that of non-Biology students ($M = 62, SD = 19$), $t(289) = -5.691, p = 0.002$. The self-reported

behaviours of the two groups however were not significantly different ($p = .283$). Further analysis of the data showed a significant correlation between Health Literacy and HIV/AIDS literacy. However, both Health Literacy and HIV/AIDS literacy did not correlate significantly with self-reported behaviour. Data also revealed that both groups reported tendency towards risk behaviour related to multiple sexual partners and unprotected sex.

Conclusion: The major finding of the current study was that scientific knowledge related to HIV/AIDS does not always correlate with self-reported behaviour amongst the youth. This is in agreement with scholars (e.g. Mnguni, Abrie & Ebersohn, 2016) who have suggested that knowledge alone does not influence behaviour. This also echoes views that scientific knowledge alone will not affect morality, character and citizenship (Mnguni et al., 2016). As reported by Mnguni et al. (2016), HIV/AIDS related behaviour could be affected by various socio-economic factors which are context specific, rather than scientific knowledge alone. Furthermore, it is possible that the lack of correlation between scientific knowledge and behaviour is due to misalignment between school curriculum and factors affecting the society such as HIV/AIDS. The current researchers believes that there is an urgent need to explore the alignment between school curriculum and HIV/AIDS education in order to ensure that students are able to utilize scientific knowledge in their everyday life.

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HIV in women-elderly

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The objective of this study is to identify the factors associated with the vulnerability of the women aged 60 years or more to HIV/AIDS, based on in-depth interviews aiming to understand aspects of epidemic HIV/AIDS among the aged women in Belo Horizonte, addressing aspects related to the epidemiologic and individual context; and verify the perceptions and behaviors of older women related to HIV/AIDS. The study universe were the older women living with the virus, treated at Hospital Eduardo de Menezes da Fundação Hospitalar do Estado de Minas Gerais. Interviews with 12 older women, who signed a consent form and were considered mentally fit were performed. The aged interviewed showed low level of education, low income, some women were in marital union, and have perceptions and behaviors grounded in structural gender relations with asymmetry of power, therefore, showing low responsiveness to vulnerability. Most aged interviewed are sexually active,

but few of them declared to protect themselves by using condoms. Adherence to antiretroviral therapy has close relation with the way of contracting the virus: aged women who were betrayed have a poor adherence to the ART and are angry and depressed. Regarding the programmatic level, many aged highlighted that they have never seen a program focused on their generation, and the lack of information reaches all levels of vulnerability. The picture revealed by this study is worrying because, despite the fact that demographic dynamics and the aging population have already been incorporated into discussions, elderly have been considered as asexual beings. It is expected, in this sense that, this study can help to demystify the sexual invisibility of the aged, ensuring them a healthy and continuous sexual life, what is rightfully theirs.

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Mathematical Analysis of HIV/AIDS Epidemic in a Heterogeneous Population

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In this paper, a nonlinear deterministic mathematical model for HIV/AIDS disease is proposed in a heterogeneous population. Here, the total population is divided in two different classes: upper class and the labour class. These classes are further categorized into four different compartments: susceptibles, the latent period of infectives, HIV-positive infectives and AIDS patients. Different rates of parameters are considered for different classes. The

equilibrium and the stability of the model are discussed by using basic reproduction number R_0 . If the basic reproduction number R_0 is less than 1, then the disease-free equilibrium is stable and in such a case endemic equilibrium does not exist. If R_0 is greater than 1, the endemic equilibrium exists and it is globally stable. The numerical simulations are performed to illustrate our theoretical results.

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The use of local herbals to enhance STD and HIV/AIDS management in rural Malawi

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Malawi is among the countries worst affected by the HIV epidemic. The number of People Living with HIV and AIDS (PLHIV) is estimated at about 1,000,000 which includes 850,000 people aged 15 years and above and 170,000 children below 15 years of age. The most recent estimates on the epidemic are based on modeling using the UNAIDS SPECTRUM, which estimates the prevalence of HIV at 10.3% indicating a slight reduction in prevalence from 10.6% in 2010¹. It was estimated in 2013 that 34,000 new infections occurred in the year, including 7,400 new infections amongst children aged less than 15 years². Annual AIDS deaths were estimated at 48,000, slightly less than half of what they were at the epidemic's peak in 2004, at 99,000. This early decline follows the natural course of the epidemic and was probably also driven by a reduction of risky sexual behavior as the population became increasingly aware of HIV as the cause for the massive death wave the country experienced. Between 2000-2004, evidence strongly suggests that behavior changes (e.g. increases in condom use, decreases in the proportion of men having sex with more than one woman) contributed significantly to decreases in HIV in Malawi's epidemic.

Malawi health care services is majorly hit by by in adequate health care workers has resulted in to a tremendous HIV/AIDS patients living in rural areas of Malawi who desperately seek access to health care. In contrast, the ratio of traditional healers is considerably higher, and represents a tremendous opportunity to leverage existing community support networks and resources for widening the current health care worker in HIV/AIDS prevention and control efforts. In this paper, I propose using rapid assessment procedures (RAPs)

to create a fast, effective, decentralized participatory model of engaging local traditional healers with state health care service providers to enhance access to ARVs for HIV/AIDS patients living in rural areas of Malawi.

The feasibility of integrating traditional healers in HIV/AIDS interventions in Malawi needs to be seriously investigated based on the results in our SubSahara African countries. Traditional healers are a vast untapped source of human capacity. If trained and educated in a participatory collaborative manner with biomedical health practitioners, they could complement and strengthen the HIV/AIDS prevention, control and care services in Malawi. As shown, traditional healers are more than eager to improve their comprehension of HIV/AIDS treatment and are motivated to participate in rural areas where patients are most difficult to reach. Furthermore, traditional healers have proven themselves, in many studies throughout SubSaharan Africa, to be worthy allies and would greatly assist Malawi's strategies to curtail the spread of HIV/AIDS infection and provide much needed human resource support for ARV adherence and compliance. The success of integrating traditional healers into Malawi's HIV/AIDS National Action Framework, will require the support and acceptance of policymakers, public health officials and international donors. Active participation of community innovations, cultural leaders, the formal and informal segments of the private sector, Community Based Organizations, PLHIV and community groups is needed to complement the efforts of the public sector in finding the cure for HIV.

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Assessment of HIV/AIDS related knowledge, attitudes and behaviours among students in higher education in Tanzania and Uganda

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There is a paucity of studies that have systematically and comprehensively investigated the knowledge level, attitudes and the pattern of sexual behaviours related to HIV and AIDS in East Africa in particular. This study attempted to fill this void in knowledge. A cross-sectional descriptive design was used, employing a self-administered questionnaire as the main data collection tool. More than 559 higher education students completed a questionnaire assessing their knowledge, attitudes and behaviours related to HIV and AIDS in Tanzania and Uganda. About three quarters of respondents demonstrated comprehensive knowledge about HIV and AIDS, and the majority of respondents

expressed positive attitudes towards people living with HIV and AIDS. Despite demonstrating high knowledge level about HIV and AIDS, the results show that sexual behaviours among students in higher education are characteristically risky, and do not significantly differ from youth in the general population. The theoretical and practical implications of these findings in relation to promoting protective sexual behaviours among university students have been discussed.

Key Words: HIV and AIDS, Tanzania, Uganda, Comprehensive HIV and AIDS knowledge, higher education

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HIV prevention strategies in Uganda: What we are yet to learn.

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Thirty years and still counting since the discovery of one of the deadliest incurable disease we now know as HIV/AIDS. A lot has been learnt about HIV including the transmission dynamics and effective evidence-based HIV prevention strategies. However, what still perplexes scientists and researchers is how best to translate research findings into effective HIV intervention programs. This challenge is attributed to a number of factors including exclusively defining HIV as a medical problem, reluctance to use a multidimensional HIV intervention approach, and lack of theory to guide HIV-interventions especially in Africa where HIV is endemic. This has resulted into diverse debates in the HIV-intervention scholarship. For example Uganda is perceived as a success story in HIV prevention.

However some critics have questioned the accuracy of HIV surveillance data. Additionally some authors are skeptical about the use of strategies such as abstinence, being faithful to one sexual partner and safe male circumcision in circumstances where people have concurrent multiple sexual relationships. On the other side condom use dual role as an effective family planning method and protective measure against STD contraction remains undoubted. Based on the fact that HIV contraction in Uganda is largely through coitus with an infected person, therefore there is need to focus on interventions that have theoretical basis such as condom use in addition to other strategies such as sex-education and life-skills training in the appropriate cultural context.

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WORLD CONFERENCE ON STDs, STIs & HIV/AIDS

July 26-27, 2017 | Vancouver, Canada

Cause of poor retention in care in adult HIV patients on treatment at the Bafoussam Regional Hospital, Cameroon

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Achieving 95% of adherence is a major problem faced among HIV/AIDS patients at the Bafoussam Regional Hospital. With an active file of about 4500 patients on treatment at the centre, an average of about 300 patients per month do not report to the pharmacy for refill of drugs. A descriptive study was carried out at the Approved Treatment Centre of the Bafoussam Regional Hospital to identify the reasons why adult patients on ART did not report to the centre for refill. The study included 304 patients who were lost to follow-up in the month of January 2015. Firstly, phone calls were made to contact these subjects, then an interview with those who finally returned to the centre. The median age group was 35-45years, 59.5% were females. After the phone calls were made, 56% of phone numbers

were not going through; 18% (54) promised to come back; the rest were reported either dead or did not pick up their phone. Of the 54 subjects who promised to return, 52 were received and interviewed; 46% (24) were resident out of town (Bafoussam) and could not travel; 17 said they were tired of taking ART, 8 declared to have been admitted in another hospital, 7 were receiving traditional medicines, 7 could not afford the transport fare to the treatment centre, 3 were derailed by pastors who declared them healed; 10 other patients declared to still have medicines. Therefore, HIV patients in Bafoussam are encouraged to receive ART in their hometown


In vitro release and biological activities of Carum copticum essential oil (CEO) loaded chitosan nanoparticles

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In recent years, the unparalleled and functional properties of essential oils have been extensively reported, but the sensitivity of essential oils to environmental factors and their poor aqueous solubility have limited their applications in industries. Hence, we encapsulated CEO in chitosan nanoparticles by an emulsion-ionic gelation with pentasodium tripolyphosphate (TPP) and sodium hexametaphosphate (HMP), separately, as cross-linkers. The nanoparticles were analyzed by Fourier transform infrared spectroscopy (FT-IR), ultraviolet-visible spectroscopy (UV-Vis), differential scanning calorimetry (DSC), scanning electron microscope (SEM) and dynamic light scattering (DLS). The encapsulation efficiency (EE) and loading capacity (LC) of CEO in chitosan nanoparticles increased with the

increase of initial CEO amount. The nanoparticles displayed an average size of 30-80 nm with a spherical shape and regular distribution. *In vitro* release profiles exhibited an initial burst release and followed by a sustained CEO release at different pH conditions. The amount of CEO release from chitosan nanoparticles was higher in acidic pH to basic or neutral pH, respectively. The biological properties of CEO, before and after the encapsulation process were evaluated by 2, 2-diphenyl-1-picrylhydrazyl radical (DPPH) and agar disc diffusion method, respectively. The results indicated the encapsulation of CEO in chitosan nanoparticles could be protected the quality.

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Knowledge on mother to child transmission and utilization of services designed to prevent mother to child transmission of HIV/AIDS among pregnant women in Hossanna Town, Southern Ethiopia

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Every day, more than 1,800 babies worldwide contract HIV from their mothers. Many of these cases occur in Africa including Ethiopia. The transmission of HIV from infected mothers to babies could occur during pregnancy, delivery and breastfeeding. For women to take advantage of measures to reduce transmission, they need to know about Mother To Child Transmission (MTCT) of HIV and their HIV status. The aim of this study was to assess the knowledge on MTCT and utilization of services designed for prevention of mother-to-child transmission (PMTCT) of HIV/AIDS among pregnant women. Community based cross-sectional study was conducted at Hossana town from March 3-28/ 2014 using pre-tested questionnaire and structured interviews. The collected data was analyzed using SPSS version 16. Out of the 417 pregnant women interviewed, 370 (88.7%)

responded that they know MTCT of HIV, 377(90.4%) mothers tested for HIV during current pregnancy and 354(93.9%) shared test result to their husband. Knowledge of Mother to child transmission was the independent predictor of utilization of the services rendered for PMTCT of HIV/AIDS. More than three-fourth of pregnant women knew about MTCT of HIV. Nine women in every 10 tested for HIV during current pregnancy has shared test result to their husband. Knowledge of mother to child transmission of HIV/AIDS was the independent predictor of utilization of PMTCT services. Thus, improving awareness of pregnant women about MTCT of HIV/AIDS and its prevention strategies by means of health care providers in maternal and child health service units should be strengthened.

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Detection of HERVs sequence in head and neck cancer patients in a public hospital (HBDF) in Brasilia, DF, Brazil

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Actively replicative endogenous retroviruses (HERVs) are anciently integrated in the human genome and became stable in inherited material across generations, accounting for 8% of the human genome. Among HERVs group there are the HERV-K and HERV-W. HERV-K virions were seen budding from tumor cells, and viral RNA could be found at higher titers in the plasma of lymphoma and breast cancer patients. Reverse transcriptase and retroviral RNA were detected in plasma samples that simultaneously had HERV-K gag and env proteins, in both mature and pseudo particles. In light of these findings, we propose to initiate a study to evaluate the role of HERV-K among cancer patients in Brasilia, DF, Brazil. After the study approval (number 59/13) by the Committee of Ethics, under patients consent, blood samples and neoplastic tissue fragments were collected, in the surgery unit of the Hospital de Base do Distrito Federal. All the patients had cancer in

the neck or head. 35 extracted DNA samples from different histopathological types which were amplified with primers to the HERV-K gag region, and 31 samples yield an amplicon band size of 250 bp, as expected to the gag sequence. There are substantial reports in the literature of HERV-K proviral sequences detection among head and neck cancer and also in healthy tissues. Of 35 analyzed samples, 10 patients with oral squamous cell carcinoma were previously negative for the presence of human papillomavirus gene sequences, but had HERV-K sequences detected. Further analysis will investigate the presence of other HERV-K sequences as *env*, *pol* and *ltr*, in order to better understand the role of these entities in oncogenesis. Also the obtained amplicons will be sequenced and compared to published and deposited sequences.

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Knowledge of Truvada pre exposure prophylaxis (PreP) among men who have sex with men in Kisumu County, Kenya

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Background: Each country in the world has put in place strategies to prevent HIV/AIDS infections. In Kenya today, to control HIV/AIDS infection, there are various strategies that have been put in place for example: Voluntary counseling and testing (VCT); prevention of mother to child transmission (PMTCT), voluntary medical male circumcision (VMMC) and condom use among others. In that context however, research has shown that Truvada PreP reduces the risk of HIV infection by more than 90% among gay and bisexual men when taken once-daily.

Objective: The objective of this study is to investigate the knowledge of pre exposure prophylaxis (PreP) among men who have sex with men.

Method: Ten (10) community health workers were subjected to a three week intensive training programs to empower them with skills of carrying out interviews. Data was collected for a period of three months by use of questionnaires and personal interviews. During the study, the enumerators used the following demographic data: Sex, age, education and how the partners perceive the use of pre exposure prophylaxis.

Results: 80 MSM were enrolled in this survey with their ages ranging from 18-35 years all being males who are HIV+ and with basic high education. Of 40% of the respondents, they have preferred to use condoms as a protective device and other gels other than Truvada PreP. 50% of the respondents were in agreement to use PreP and they had some perceptions on the cost, availability, side effects in the event of stoppage while 10% of the respondents were not sure whether to use Truvada PreP or not since they needed more education of medical experts. However, the level of knowledge of Truvada PreP was proportional to their education.

Conclusion: The survey showed that more information on Truvada PreP usage should be disseminated since its usage still remains a myth to most Kenyans (there is still a strong believe that AIDS has no cure). Therefore, for a successful Truvada usage depends on opinion leaders, health professionals and researchers to correct the current misconceptions existing about Truvada PreP in their communities.

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Students' knowledge and information needs on HIV/ AIDS in Nigeria

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The advent of human immunodeficiency virus/ acquired immunodeficiency syndrome (HIV/ AIDS) in the world has forced all of us to accept a paradigm shift from curing towards caring. This has led us to focus our interventions on caring for the physical as well as the psychological welfare of the HIV-positive individuals and his/ her significant others. A descriptive survey was used to determine the knowledge awareness level of information services put in place for the prevention and care of HIV/ AIDS for students of tertiary

institutions in Osun State of Nigeria. The findings revealed that students of tertiary institutions in Osun State of Nigeria have high knowledge of the meaning of HIV/ AIDS and they are aware that HIV/ AIDS can be transmitted through sexual intercourse. This study also focuses on the practical work of librarians, information specialists, and health workers in caring for the physical as well as the psychological needs of the HIV-positive individuals and his/ her significant others.

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Predictors of health-seeking behavior: HIV test experiences among youth aged 15-24 in Cameroon and Gabon

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Background: HIV testing plays a vital role in the prevention and reduction of the HIV epidemic and is a critical measure for HIV prevention programs and services. However, reports from Cameroon and Gabon indicated low HIV testing and lack of information about the predicting factors of HIV testing. Therefore, the aims of this study were to investigate the HIV testing experiences and to explore its predicting factors among 15-24 aged Cameroonian and Gabonese youth.


Methodology: This study used nationally representative datasets from Demographic and Health Surveys (DHS) of Cameroon (2011) and Gabon (2012). A total of 14,880 youth of which 9511(63.91%) from Cameroon and 5369(36.08%) from Gabon were taken. Binary multivariate logistic regression was used to investigate the associates of HIV testing using SPSS version 22.

Results: Above 14% of Cameroonian and 19% of Gabonese youth did not know where to get HIV test. In Cameroon 23.1% and in Gabon 41.6% of youth where tested for HIV in their life time. Only 11.7% of Cameroonian and 25.9% of Gabonese youth were tested for HIV in the last 12 months.

Most of the youth tested for HIV in the last 12 months were received results of their HIV test. Even though such data was not available in the DHS data of Gabon, the main reasons for HIV test among Cameroonian youth were asked for the test, offered and accepted, and required. Variables that showed statistically significant association with HIV test and receiving HIV test results were: Age, type of residence, educational level, religion, marital status, wealth index, occupation, comprehensive knowledge and acceptance attitude. Cameroonian and Gabonese male youth were less likely to know place to get HIV test, to be tested for HIV, tested and received HIV test results than their female counterparts.

Conclusion: Life time and in the last 12 months HIV test experiences among Cameroonian and Gabonese youth are very low and even significant proportion of the youth do not know where to get HIV test. Hence, both countries need to implement strategies targeting those younger, male, unmarried, not educated and economically disadvantaged youth to increase their motivation and awareness towards HIV testing.

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