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MRC/UVRI MONTHLY PUBLICATIONS DIGEST – JULY 2015

Rwamahe Rutakumwa, Martin Mbonye, Thadeus Kiwanuka, Daniel Bagiire & Janet Seeley (2015): Why do men often not use condoms in their relationships with casual sexual partners in Uganda? Culture, Health & Sexuality: An International Journal for Research, Intervention and Care. DOI: 10.1080/13691058.2015.1053413

With a focus on Uganda, this paper examines men's condom use in sexual relationships with casual partners and what this might tell us about men's vulnerability to HIV-infection. We carried out repeat interviews with 31 men attending a clinic serving women at high risk for HIV infection and their partners in Kampala. We found that the experience of condom-less sex in the men's youth, itself the outcome of a restrictive home environment, was perceived as influencing later unsafe sexual behaviour. Peer pressure encouraged men to have multiple partners. Alcohol negatively affected condom use. Men often opted not to use a condom with women they thought looked healthy, particularly if they had had sex with the same woman before. Some men who were HIV-positive said they saw little point in using condoms since they were already infected. A concerted effort is required to reach men, like those in our study, to halt HIV and the transmission of other sexually transmitted infections.

Birungi J, Min JE, Muldoon KA, Kaleebu P, King R, Khanakwa S, et al. (2015) Lack of Effectiveness of Antiretroviral Therapy in Preventing HIV Infection in Serodiscordant Couples in Uganda: An Observational Study. PLoS ONE 10(7): e0132182. doi:10.1371/journal.pone.0132182

BACKGROUND:
We examined the real-world effectiveness of ART as an HIV prevention tool among HIV serodiscordant couples in a programmatic setting in a low-income country.

METHODS:
We enrolled individuals from HIV serodiscordant couples aged ≥18 years of age in Jinja, Uganda from June 2009 - June 2011. In one group of couples the HIV positive partner was receiving ART as they met clinical eligibility criteria (a CD4 cell count ≤250 cells/ μL or WHO Stage III/IV disease). In the second group the infected partner was not yet ART-eligible. We measured HIV incidence by testing the uninfected partner every three months. We conducted genetic linkage studies to determine the source of new infections in seroconverting participants.

RESULTS:
A total of 586 couples were enrolled of which 249 (42%) of the HIV positive participants were receiving ART at enrollment, and an additional 99 (17%) initiated ART during the study. The median duration of follow-up was 1.5 years. We found 9 new infections among partners of participants who had been receiving ART for at least three months and 8 new infections in partners of participants who had not received ART or received it for less than three months, for incidence rates of 2.09 per 100

person-years (PYRs) and 2.30 per 100 PYRs, respectively. The incidence rate ratio for ART-use was 0.91 (95% confidence interval 0.31-2.70; p=0.999). The hazard ratio for HIV seroconversion associated with ART-use by the positive partner was 1.07 (95% CI 0.41-2.80). A total of 5/7 (71%) of the transmissions on ART and 6/7 (86%) of those not on ART were genetically linked.

CONCLUSION:
Overall HIV incidence was low in comparison to previous studies of serodiscordant couples. However, ART-use was not associated with a reduced risk of HIV transmission in this study.

Smith, Peter G., Richard H. Morrow, and David A. Ross, eds. (Anatoli Kamali contributing author) *Field trials of health interventions: A Toolbox*. Oxford University Press, 2015.

Zumla A, Chakaya J, Hoelscher M, Ntoumi F, Rustomjee R, Vilaplana C, Yeboah-Manu D, Rasolof V, Munderi P, Singh N, Aklillu E, Padayatchi N, Macete E, Kapata N, Mulenga M, Kibiki G, Mfinanga S, Nyirenda T, Maboko L, Garcia-Basteiro A, Rakotosamimanana N, Bates M, Mwaba P, Reither K, Gagneux S, Edwards S, Mfinanga E, Abdulla S, Cardona PJ, Russell JB, Gant V, Noursadeghi M, Elkington P, Bonnet M, Menendez C, Dieye TN, Diarra B, Maiga A, Aseffa A, Parida S, Wejse C, Petersen E, Kaleebu P, Oliver M, Craig G, Corrah T, Tientcheu L, Antonio M, Rao M, McHugh TD, Sheikh A, Ippolito G, Ramjee G, Kaufmann SH, Churchyard G, Steyn A, Grobusch M, Sanne I, Martinson N, Madansein R, Wilkinson RJ, Mayosi B, Schito M, Wallis RS, Maeurer M. Towards host-directed therapies for tuberculosis. Nat Rev Drug Discov. 2015 Jul 17. doi: 10.1038/nrd4696. [Epub ahead of print

The treatment of tuberculosis is based on combinations of drugs that directly target Mycobacterium tuberculosis. A new global initiative is now focusing on a complementary approach of developing adjunct host-directed therapies.

Despite the availability of effective antibiotics for tuberculosis (TB) for the past half century, it remains an important global health problem; there are ~9 million active TB cases and ~1.5 million TB-induced deaths per year (see the World Health Organization (WHO) Global Tuberculosis Report in Further information). Health services around the world face major barriers to achieving optimal outcomes from current TB treatment regimens. These barriers include: the spread of multidrug-resistant TB (MDR-TB) and extensively drug-resistant TB (XDR-TB); complex and toxic treatment regimens for MDR-TB; HIV co-infection; pharmacokinetic interactions between TB drugs and antiretroviral drugs; relapse; permanent damage to lung and other tissues; long-term functional disability; immune reconstitution inflammatory syndrome (IRIS); and co-morbidity with non-communicable diseases such as diabetes and chronic obstructive airway diseases. Another fundamental problem is the long duration of TB drug treatment (6 months for drug-sensitive TB and at least 18 months for drug-resistant TB) to achieve a cure, owing to the presence of dormant Mycobacterium tuberculosis bacilli that are phenotypically resistant to current classes of anti-TB drugs, which can only target bacterial replication.

There is therefore an urgent need for new TB treatments. However, the TB drug pipeline is thin1, 2. For the past 60 years, efforts to develop new treatments have focused on compounds and regimens

that target M. tuberculosis directly. Recently, however, attention has focused on investigating a range of adjunct treatment interventions known as host-directed therapies (HDTs) that instead target the host response to infection. Here, we highlight the rationale for HDTs, the current portfolio of HDTs and their mechanisms of action, and a consortium-based approach to drive forward their evaluation in clinical trials.

Rhee SY, Blanco JL, Jordan MR, Taylor J, Lemey P, Varghese V, Hamers RL, Bertagnolio S, de Wit TF, Aghokeng AF, Albert J, Avi R, Avila-Rios S, Bessong PO, Brooks JI, Boucher CA, Brumme ZL, Busch MP, Bussmann H, Chaix ML, Chin BS, D'Aquin TT, De Gascun CF, Derache A, Descamps D, Deshpande AK, Djoko CF, Eshleman SH, Fleury H, Frange P, Fujisaki S, Harrigan PR, Hattori J, Holguin A, Hunt GM, Ichimura H, Kaleebu P, Katzenstein D, Kiertiburanakul S, Kim JH, Kim SS, Li Y, Lutsar I, Morris L, Ndembi N, Kee PN, Paranjape RS, Peeters M, Poljak M, Price MA, Ragonnet-Cronin ML, Reyes-Terán G, Rolland M, Sirivichayakul S, Smith DM, Soares MA, Soriano VV, Ssemwanga D, Stanojevic M, Stefani MA, Sugiura W, Sungkanuparph S, Tanuri A, Tee KK, Truong HH, van de Vijver DA, Vidal N, Yang C, Yang R, Yebra G, Ioannidis JP, Vandamme AM, Shafer RW. Correction: Geographic and Temporal Trends in the Molecular Epidemiology and Genetic Mechanisms of Transmitted HIV-1 Drug Resistance: An Individual-Patient- and Sequence-Level Meta-Analysis. PLoS Med. 2015 Jun 1;12(6):e1001845.

BACKGROUND:
Regional and subtype-specific mutational patterns of HIV-1 transmitted drug resistance (TDR) are essential for informing first-line antiretroviral (ARV) therapy guidelines and designing diagnostic assays for use in regions where standard genotypic resistance testing is not affordable. We sought to understand the molecular epidemiology of TDR and to identify the HIV-1 drug-resistance mutations responsible for TDR in different regions and virus subtypes.

METHODS AND FINDINGS:
We reviewed all GenBank submissions of HIV-1 reverse transcriptase sequences with or without protease and identified 287 studies published between March 1, 2000, and December 31, 2013, with more than 25 recently or chronically infected ARV-naïve individuals. These studies comprised 50,870 individuals from 111 countries. Each set of study sequences was analyzed for phylogenetic clustering and the presence of 93 surveillance drug-resistance mutations (SDRMs). The median overall TDR prevalence in sub-Saharan Africa (SSA), south/southeast Asia (SSEA), upper-income Asian countries, Latin America/Caribbean, Europe, and North America was 2.8%, 2.9%, 5.6%, 7.6%, 9.4%, and 11.5%, respectively. In SSA, there was a yearly 1.09-fold (95% CI: 1.05-1.14) increase in odds of TDR since national ARV scale-up attributable to an increase in non-nucleoside reverse transcriptase inhibitor (NNRTI) resistance. The odds of NNRTI-associated TDR also increased in Latin America/Caribbean (odds ratio [OR] = 1.16; 95% CI: 1.06-1.25), North America (OR = 1.19; 95% CI: 1.12-1.26), Europe (OR = 1.07; 95% CI: 1.01-1.13), and upper-income Asian countries (OR = 1.33; 95% CI: 1.12-1.55). In SSEA, there was no significant change in the odds of TDR since national ARV scale-up (OR = 0.97; 95% CI: 0.92-1.02). An analysis limited to sequences with mixtures at less than 0.5% of their nucleotide positions—a proxy for recent infection—yielded trends comparable to those obtained using the complete dataset. Four NNRTI SDRMs—K101E, K103N, Y181C, and G190A—accounted for >80% of NNRTI-associated TDR in all regions and subtypes. Sixteen nucleoside reverse transcriptase inhibitor (NRTI) SDRMs accounted for >69% of NRTI-associated TDR in all regions and subtypes. In SSA and SSEA, 89% of NNRTI SDRMs were associated with high-level resistance to nevirapine or efavirenz, whereas only 27% of NRTI SDRMs were associated with high-level resistance to zidovudine, lamivudine, tenofovir, or abacavir. Of 763 viruses with TDR in SSA and SSEA, 725 (95%) were genetically dissimilar; 38 (5%) formed 19 sequence pairs. Inherent

limitations of this study are that some cohorts may not represent the broader regional population and that studies were heterogeneous with respect to duration of infection prior to sampling.

CONCLUSIONS:
Most TDR strains in SSA and SSEA arose independently, suggesting that ARV regimens with a high genetic barrier to resistancecombined with improved patient adherence may mitigate TDR increases by reducing the generation of new ARV-resistant strains. A small number of NNRTI-resistance mutations were responsible for most cases of high-level resistance, suggesting that inexpensive point-mutation assays to detect these mutations may be useful for pre-therapy screening in regions with high levels of TDR. In the context of a public health approach to ARVtherapy, a reliable point-of-care genotypic resistance test could identify which patients should receive standard first-line therapy and which should receive a protease-inhibitor-containing regimen.

Kayondo JK, Ndembi N, Parry CM, Cane PA, Hué S, Goodall R, Dunn DT, Kaleebu P, Pillay D, Mbisa JL. Intrapatient Evolutionary Dynamics of Human Immunodeficiency Virus Type 1 in Individuals Undergoing Alternative Treatment Strategies with Reverse Transcriptase Inhibitors. AIDS Res Hum Retroviruses. 2015 Jul;31(7):749-56.
Structured treatment interruption (STI) has been trialed as an alternative to lifelong antiretroviral therapy (ART). We retrospectively performed single genome sequencing of the HIV-1 pol region from three patients representing different scenarios. They were either failing on continuous therapy (CT-F), failing STI (STI-F), or suppressing on STI (STI-S). Over 460 genomes were generated from three to five different time points over a 2-year period. We found multiple-linked-resistant mutations in both treatment failures. However, the CT-F patient showed a stepwise accumulation of diverse, linked mutations whereas the STI-F patient had lineage turnover between treatment periods with recirculation of wild-type and resistant variants from reservoirs. The STI-F patient showed a 7-fold increase in the third codon position substitution rate relative to the first and second positions compared to a 2-fold increase for CT-F and increased purifying selection in the pol gene (62 vs. 22 sites, respectively). An understanding of intrapatient viraldynamics could guide the future direction of treatment interruption strategies.

Thornhill J, Inshaw J, Oomeer S, Kaleebu P, Cooper D, Ramjee G, Schechter M, Tambussi G, Fox J, Miro JM, Weber J, Babiker A, Porter K, Fidler S. Enhanced normalisation of CD4/CD8 ratio with early antiretroviral therapy in primary HIV infection. J Int AIDS Soc. 2014 Nov 2;17(4 Suppl 3):19480

INTRODUCTION:
Despite normalization of total CD4 counts, ongoing immune dysfunction is noted amongst those on antiretroviral therapy (ART). Low CD4/CD8 ratio is associated with a high risk of AIDS and non-AIDS events and may act as a marker of immune senescence [1]. This ratio is improved by ART although normalization is uncommon (~7%) [2]. The probability of normalization of CD4 count is improved with immediate ART initiation in primary HIV infection (PHI) [3]. We examined whether CD4/CD8 ratio similarly normalized in immediate vs. deferred ART at PHI.

MATERIAL AND METHODS:
Using data from the SPARTAC trial and the UK Register of HIV Seroconverters, we examined the effect of ART with time (continuous) from HIV seroconversion (SC) on CD4/CD8 ratio (≥1) adjusted for sex, risk group, ethnicity, enrolment from an African site and both CD4 count and age at ART initiation. We also examined that effect by dichotomizing HIV duration at ART initiation (ART

started within six months of SC: early ART; ART initiated>six months after SC: deferred). We also considered time to CD4 count normalization (≥900 cells/mm(3)).

RESULTS:
In total, 353 initiated ART with median (IQR) 97.9 (60.5, 384.5) days from estimated seroconversion; 253/353 early ART, 100 deferred ART. At one year after starting ART, 114/253 (45%) early ART had normalized CD4/8 ratio, compared with 11/99 (11%) in the deferred group, whilst 83/253 (33%) of early ART had normalized CD4 counts, compared with 3/99 (3%) in the deferred group. Individuals initiating within six months of PHI were significantly more likely to reach normal ratio than those initiating later (HR, 95% CI 2.96, 1.75 - 5.01, p<0.001). The longer after SC ART was initiated, the reduced likelihood of achieving normalization of CD4/CD8 ratio (HR 0.98, 95% CI 0.96 - 0.99 for each 30-day increase). CD4 count at ART initiation was also associated with normalization, as expected (HR 1.002, 95% CI 1.001 - 1.002, p<0.001). There was an association between normal CD4/CD8 ratio and being virally suppressed (<400 copies HIV RNA/ml) p<0.001. CD4 count normalization was also significantly more likely for those initiating early (HR 5.00, 95% CI 1.52 - 16.41, p=0.008).

CONCLUSIONS:
The likelihood of achieving normalization of CD4/CD8 ratios was increased if ART was initiated within six months of PHI. HigherCD4/CD8 ratio may reflect a more "normal" immune phenotype conferring enhanced prognosis and predict post-treatment control.

Initiation of Antiretroviral Therapy in Early Asymptomatic HIV Infection. INSIGHT START Study Group N Engl J Med. 2015 Jul 20. [Epub ahead of print]

Background Data from randomized trials are lacking on the benefits and risks of initiating antiretroviral therapy in patients with asymptomatic human immunodeficiency virus (HIV) infection who have a CD4+ count of more than 350 cells per cubic millimeter. Methods We randomly assigned HIV-positive adults who had a CD4+ count of more than 500 cells per cubic millimeter to start antiretroviral therapy immediately (immediate-initiation group) or to defer it until the CD4+ count decreased to 350 cells per cubic millimeter or until the development of the acquired immunodeficiency syndrome (AIDS) or another condition that dictated the use of antiretroviral therapy (deferred-initiation group). The primary composite end point was any serious AIDS-related event, serious non-AIDS-related event, or death from any cause. Results A total of 4685 patients were followed for a mean of 3.0 years. At study entry, the median HIV viral load was 12,759 copies per milliliter, and the median CD4+ count was 651 cells per cubic millimeter. On May 15, 2015, on the basis of an interim analysis, the data and safety monitoring board determined that the study question had been answered and recommended that patients in the deferred-initiation group be offered antiretroviral therapy. The primary end point occurred in 42 patients in the immediate-initiation group (1.8%; 0.60 events per 100 person-years), as compared with 96 patients in the deferred-initiation group (4.1%; 1.38 events per 100 person-years), for a hazard ratio of 0.43 (95% confidence interval [CI], 0.30 to 0.62; P<0.001). Hazard ratios for serious AIDS-related and serious non-AIDS-related events were 0.28 (95% CI, 0.15 to 0.50; P<0.001) and 0.61 (95% CI, 0.38 to 0.97; P=0.04), respectively. More than two thirds of the primary end points (68%) occurred in patients with a CD4+ count of more than 500 cells per cubic millimeter. The risks of a grade 4 event were similar in the two groups, as were the risks of unscheduled hospital admissions. Conclusions The initiation of antiretroviral therapy in HIV-positive adults with a CD4+ count of more than 500 cells per cubic

millimeter provided net benefits over starting such therapy in patients after the CD4+ count had declined to 350 cells per cubic millimeter.

Min-Su Kang, Peter Nkurunziza, Richard Muwanika, Guoqing Qian, Lili Tang, Xiao Song, Kathy Xue, Allan Nkwata, John Ssempebwa, Tom Lutalo, Gershim Asiki, David Serwadda, Janet Seeley, Pontiano Kaleebu, Fred Nalugoda, Robert Newton, Jonathan H. William & Jia-Sheng Wang (2015): Longitudinal evaluation of aflatoxin exposure in two cohorts in south-western Uganda, Food Additives & Contaminants: Part A

Aflatoxins (AF) are a group of mycotoxins. AF exposure causes acute and chronic adverse health effects such as aflatoxicosis and hepatocellular carcinoma in human populations, especially in the developing world. In this study, AF exposure was evaluated using archived serum samples from human immunodeficiency virus (HIV)-seronegative participants from two cohort studies in south-western Uganda. AFB_1-lysine (AFB-Lys) adduct levels were determined via HPLC fluorescence in a total of 713 serum samples from the General Population Cohort (GPC), covering eight time periods between 1989 and 2010. Overall, 90% (642/713) of the samples were positive for AFB-Lys and the median level was 1.58 pg mg^{-1} albumin (range = 0.40-168 pg mg^{-1} albumin). AFB-Lys adduct levels were also measured in a total of 374 serum samples from the Rakai Community Cohort Study (RCCS), across four time periods between 1999 and 2003. The averaged detection rate was 92.5% (346/374) and the median level was 1.18 pg mg^{-1} albumin (range = 0.40-122.5 pg mg^{-1} albumin). In the GPC study there were no statistically significant differences between demographic parameters, such as age, sex and level of education, and levels of serum AFB-Lys adduct. In the RCCS study, longitudinal analysis using generalised estimating equations revealed significant differences between the adduct levels and residential areas ($p = 0.05$) and occupations ($p = 0.02$). This study indicates that AF exposure in people in two populations in south-western Uganda is persistent and has not significantly changed over time. Data from one study, but not the other, indicated that agriculture workers and rural area residents had more AF exposure than those non-agricultural workers and non-rural area residents. These results suggest the need for further study of AF-induced human adverse health effects, especially the predominant diseases in the region.

Mugisha J, Muyinda H, Wandiembe P, Kinyanda E. Prevalence and factors associated with Posttraumatic Stress Disorder seven years after the conflict in three districts in northern Uganda (The Wayo-Nero Study). BMC Psychiatry. 2015

BACKGROUND:
Research on the prevalence of Posttraumatic Stress Disorder (PTSD) is still limited in low income countries yet PTSD can be a public health problem in post conflict areas. In order to respond to the burden of PSTD in northern Uganda, an area that experienced civil strife for over two decades, we need accurate data on its (PTSD) prevalence and the associated risk factors to facilitate public mental health planning.

METHODS:
This study employed a cross-sectional study design and data collection was undertaken in three districts in northern Uganda: Gulu, Amuru and Nwoya. Respondents were aged 18 years and above and were randomly selected at community level. A total of 2400 respondents were interviewed using a structured questionnaire in the three study districts. In this study, multivariate logistic

regression was employed to analyze the associations of socio-demographic factors, trauma related variables and the outcome of PTSD.

RESULTS:
The prevalence of Posttraumatic Stress Disorder (PTSD) in the study population was 11.8 % (95 % CI: 10.5 %, 13.1 %) with aprevalence of 10.9 % (95 % CI: 9.3 %, 12.5 %) among female respondents and 13.4 % (95 % CI: 11.2 %, 15.7 %) among male respondents. Quite a number of factors were strongly associated with PTSD. Overall, a respondent had experienced 9 negative life events. In a multivariate logistic regression, the factors that were strongly associated with PTSD were: exposure to war trauma events, childhood trauma, negative life events, negative copying style and food insecurity. The findings also indicate no association between sex, age and PTSD.

CONCLUSION:
The prevalence rate of PTSD in the study communities is unacceptably high. Quite a number of factors were associated with PTSD. Effective public mental health services are needed that combine treatment (medical) psychological and social welfare programs especially at community level to address the high burden of PTSD. Longitudinal studies are also recommended to continuously assess the trends in PTSD in the study communities and remedial action taken.

K. Church, F. Kiweewa, A. Dasgupta, M. Mwangome, E. Mpandaguta, F. X. Gomez-Olive, S. Oti, J. Todd, A. Wringe, E. Geubbels, A. Crampin, J. Nakiyingi-Miiro, C. Hayashi, M. Njage, R. G. Wagner, A. R. Ario, S. D. Makombe, O. Mugurungi, and B. Zaba, 'A Comparative Analysis of National Hiv Policies in Six African Countries with Generalized Epidemics', *Bull World Health Organ*, 93 (2015), 457-67

OBJECTIVE:
To compare national human immunodeficiency virus (HIV) policies influencing access to HIV testing and treatment services in six sub-Saharan African countries.

METHODS:
We reviewed HIV policies as part of a multi-country study on adult mortality in sub-Saharan Africa. A policy extraction tool was developed and used to review national HIV policy documents and guidelines published in Kenya, Malawi, South Africa, Uganda, the United Republic of Tanzania and Zimbabwe between 2003 and 2013. Key informant interviews helped to fill gaps in findings. National policies were categorized according to whether they explicitly or implicitly adhered to 54 policy indicators, identified through literature and expert reviews. We also compared the national policies with World Health Organization (WHO) guidance.

FINDINGS:
There was wide variation in policies between countries; each country was progressive in some areas and not in others. Malawi was particularly advanced in promoting rapid initiation of antiretroviral therapy. However, no country had a consistently enabling policy context expected to increase access to care and prevent attrition. Countries went beyond WHO guidance in certain areas and key informants reported that practice often surpassed policy.

CONCLUSION:
Evaluating the impact of policy differences on access to care and health outcomes among people living with HIV is challenging. Certain policies will exert more influence than others and official policies are not always implemented. Future research should assess the extent of policy implementation and link these findings with HIV outcomes.

Mwesigire Doris, Wu Albert, Martin Faith, Katamba Achilles, Seeley Janet. Quality of life in patients treated with first-line antiretroviral therapy containing nevirapine or efavirenz in Uganda: a prospective non-randomized study. BMC Health Services Research.2015, 15:292 DOI: 10.1186/s12913-015-0959-0

BACKGROUND:
The goal of antiretroviral therapy (ART) is to suppress viral replication, reduce morbidity and mortality, and improve quality of life(QoL). For resource-limited settings, the World Health Organization recommends a first-line regimen of two-nucleoside reverse-transcriptase inhibitors and one non-nucleoside transcriptase inhibitor (nevirapine (NVP) or efavirenz (EFV)). There are few data comparing the QoL impact of NVP versus EFV. This study assessed the change in QoL and factors associated with QoL among HIV patients receiving ART regimens based on EFV or NVP.

METHODS:
We enrolled 640 people with HIV eligible for ART who received regimens including either NVP or EFV. QoL was assessed at baseline, three months and six months using Physical Health Summary (PHS) and Mental Health Summary (MHS) scores and the Global Person Generated Index (GPGI). Data were analyzed using generalized estimating equations, with ART regimen as the primary exposure, to identify associations between patient and disease factors and QoL.

RESULTS:
QoL increased on ART. The mean QoL scores did not differ significantly for regimens based on NVP versus EFV during follow-up for MHS and GPGI regardless of CD4 stratum and for PHS among patients with a CD4 count >250 cells/μL. The PHS-adjusted β coefficients for ART regimens based on EFV versus NVP by CD4 count strata were as follows: -1.61 (95 % CI -2.74, -0.49) for CD4 count <100 cells/μL; 0.82 (0.22, 1.43) for CD4 count 101-250 cells/μL; and -1.33 (-5.66, 3.00) for CD4 count >250 cells/μL. The corresponding MHS-adjusted β coefficients were as follows: -0.39 (-1.40, 0.62) for CD4 < 100 cells/μL; 0.16 (-0.66, 0.98) for CD4 count 101-250 cells/μL; and -0.75 (-2.01, 0.51) for CD4 count >250 cells/μL. The GPGI-adjusted odds ratios for EFV versus NVP were 0.51 (0.25, 1.04) for CD4 count <100 cells/μL, 0.98 (0.60, 1.58) for CD4 count 101-250 cells/μL, 1.39 (0.66, 2.90) for CD4 > 250 cells/μL. QoL improved among patients on EFV over the 6-month follow-up period (MHS $p < 0.001$; PHS $p = 0.04$, $p = 0.028$). Overall, patients with depression (PHS $p < 0.001$; GPGI $p < 0.001$) had lower scores and women had lower MHS (on NVP, $p = 0.001$). Other factors associated with lower QoL included alcohol use, low education level and advanced HIV disease.

CONCLUSIONS:
ART improves QoL. The results support use of either NVP or EFV. Patients initiating ART should be assessed for depression and managed appropriately. Women may require extra support to improve their QoL.

Joseph O Mugisha, E Schatz, J Seeley & P Kowal (2015) Gender perspectives in care provision and care receipt among older people infected and affected by HIV in Uganda. African Journal of AIDS Research, 14:2, 159-167, DOI: 10.2989/16085906.2015.1040805

The objective of this study was to examine gender roles in the provision and receipt of care among older Ugandans. Survey data on care work were collected in 2009-2010 from 510 older people infected or affected by HIV/AIDS, at one rural and one semi-urban site. The questionnaire was adapted from the WHO Study on global AGEing and adult health survey. The type of care work done by older men and women for children in their households differs, yet, both men and women are taking on various types of care work. Women were more likely to report taking part in health/personal and physical care, whereas men were more likely to report providing financial assistance. Some older people, particularly women, were providing care at the same time as needing care. The finding on reciprocity of care suggests the need for further studies focused on how the reciprocity of care may affect health and well-being in older age.