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Publications Digest - November 2018

Rachel Kawuma, Janet Seeley, Zivai Mupambireyi, Frances Cowan, Sarah Bernays & the REALITY Trial Team (2018): “Treatment is not yet necessary”: delays in seeking access to HIV treatment in Uganda and Zimbabwe, African Journal of AIDS Research.

<https://doi.org/10.2989/16085906.2018.1490785>

Abstract

We examined the logic that individuals use to account for delaying HIV testing and/or initiating HIV treatment. Our qualitative study, situated within the REALITY trial (Reduction of EARly mortaLITY in HIV infected adults and children starting antiretroviral therapy), was conducted in Uganda and Zimbabwe in 2015. Forty-eight participants (different age groups, sex and viral load/WHO disease stage) were included. Each participant had 2 interviews (1 after 4 weeks of participation in the trial the other after 12 weeks). If a person could manage presenting symptoms, they felt they had "more time" before starting antiretroviral therapy (ART). Their reluctance to have an HIV test (despite deteriorating health) arose from a belief that they were not "sick", that treatment was "not yet necessary". People in our study did not consider themselves as presenting "late", and treatment was not considered urgent as long as they considered their health to be "good enough".

Sarah Nakamanya, Billy N. Mayanja, Richard Muhumuza, Dominic Bukenya & Janet Seeley (2018): Are treatment supporters relevant in long-term Antiretroviral Therapy (ART) adherence? Experiences from a long-term ART cohort in Uganda, Global Public Health, DOI: 10.1080/17441692.2018.1514418

Abstract

BACKGROUND:

This study aimed to understand the relevance of treatment supporters in adherence among people living with HIV taking Anti-retroviral therapy (ART) for more than five years in Uganda.

METHODS:

In-depth interviews were conducted with 50 participants (28 women and 22 men) of the Complications of Long-Term ART (CoLTART) cohort with experience of at least five years on

ART in Uganda. Participants were stratified by line of ART regimen and viral loads of less or above 1000 copies/ml. Data were analyzed thematically.

RESULTS:

Many participants felt that a treatment supporter was most useful at the beginning of therapy before individuals get used to the drugs or when they are still weak. However, this did not reflect treatment outcomes, as many individuals without treatment supporters had failed on first line ART regimens and were switched to second line ART. Those who were still on first line had viral loads of ≥ 1000 copies/ml. There was a preference for female treatment supporters, many of who were persistent in their supportive role.

CONCLUSION:

Treatment supporters remain important in adherence to long-term ART. HIV-care providers need to encourage the involvement of a treatment supporter for individuals taking ART long-term.

Ritah Nakiboneka, Susan Mugaba, Betty O. Auma, Christopher Kintu, Christina Lindan, Mary Bridget Nanteza, Pontiano Kaleebu, Jennifer Serwanga. Interferon gamma (IFN- γ) negative CD4+ and CD8+ T-cells can produce immune mediators in response to viral antigens. Vaccine. <https://doi.org/10.1016/j.vaccine.2018.11.024>

Abstract

Evaluation of antigen-specific T-cell responses to viral antigens is frequently performed on IFN- γ secreting cells. However, T-cells are capable of producing many more functions than just IFN- γ , some of which, like Perforin, are associated with immune protection in HIV-1 disease elite controllers. We evaluated the extent of missed T-cell functions when IFN- γ secretion is used as a surrogate marker for further evaluation of T-cell functions. Intracellular cytokine staining assay and flow cytometry were used to assess peripheral blood mononuclear cells (PBMCs) from 31 HIV-infected ART-naive individuals for the extent to which gated CD4+ and CD8+ IFN- γ producing and non-producing T-cells also secreted IL-2, Perforin, and TNF- α functions. Similarly, the extent of missed virus-specific responses in IFN- γ ELISpot assay negative T-cells from 5 HIV-1 uninfected individuals was evaluated. Cells from HIV-infected individuals were stimulated with pooled consensus group M (Con M) peptides; and those from healthy individuals were stimulated with pooled adenovirus (Ad) peptides. Overall, frequencies of virus-specific IFN- γ secreting CD4+ and CD8+ cells were low. Proportions of IFN- γ negative CD4+ expressing IL-2, Perforin, or TNF- α to Con M were significantly higher (5 of 7 functional profiles) than the corresponding IFN- γ positive CD4+ (0 of 7) T-cell phenotype, $p = 0.02$; Fisher's Exact test. Likewise, proportions of CD8+ T-cells expressing other functions were significantly higher in 4 of the 7 IFN- γ negative CD8+ T-cells. Notably, newly stimulated Perforin, identified as Perforin co-expression with IL-2 or TNF- α , was significantly higher in IFN- γ negative CD8+ T-cell than in the positive CD8+ T-cells. Using SEB, lower responses in IFN- γ positive cells were most associated with CD4+ than CD8+ T-cells. These findings suggest that studies evaluating immunogenicity in response to HIV and Adenovirus viral antigens should

not only evaluate T-cell responsiveness among IFN- γ producing cells but also among those T-cells that do not express IFN- γ .

O Mugisha, Enid J Schatz, Christian Hansen, Emily Leary, Joel Negin, Paul Kowal & Janet Seeley (2018): Social engagement and survival in people aged 50 years and over living with HIV and without HIV in Uganda: a prospective cohort study, African Journal of AIDS Research. <https://doi.org/10.2989/16085906.2018.1542322>

Abstract

This study examined the association between social engagement and survival in people with or without HIV aged 50 years and over in Uganda. We analysed two waves of a survey from two sites in Uganda to assess predictors of mortality between waves. The first wave was conducted between 2009 and 2010 while the second wave was conducted between 2012 and 2013. A standardised questionnaire adapted from the World Health Organization study on global AGEing and adult health (SAGE) was administered through face-to-face interviews at both survey waves. Cox proportional hazards models and Nelson-Aalen cumulative hazards functions were used to investigate associations between the strength of participants' social ties, using distance and intimacy metrics, and their social engagement with mortality between waves. Of the original 510 participants, 63 (12.3%) died between waves. Being more socially engaged and able to provide in-kind or financial contributions to family or friends were protective. After adjusting for covariates neither social tie measure was predictive of mortality. There were no significant differences in social engagement and survival by HIV status. Further research is needed in African settings on the relationship between social relationships and subsequent mortality in older adults to assess if improved social relationships could moderate mortality.

Anupam Garrib, Josephine Birungi, Sokoine Lesikari, Ivan Namakoola, Tsi Njim, Luis Cuevasa, Louis Niessene, Kenneth Mugisha, Gerald Mutungi, Janneth Mghamba, Kaushik Ramaiyah, Shabbar Jaffare, Sayoki Mfinanga and Moffat Nyirenda. Integrated care for human immunodeficiency virus, diabetes and hypertension in Africa. Trans R Soc Trop Med Hyg 2018; 00: 1–4 doi:10.1093/trstmh/try098

Abstract

The rising burden from non-communicable diseases (NCDs) poses a huge challenge for health care delivery in Africa, where health systems are already struggling with the long-term care requirements for the millions of people now on antiretroviral therapy requiring regular visits to health facilities for monitoring, adherence support and drugs. The HIV chronic disease management programme is comparatively well-funded, well-organised and well-informed and offers many insights and opportunities for the expansion of NCD prevention and treatment

services. Some degree of human immunodeficiency virus (HIV) and NCD service integration is essential, but how to do this without risking the HIV treatment gains is unclear. Both HIV and NCD services must expand within a resource-constrained environment and policymakers are in urgent need of evidence to guide cost-effective and acceptable changes in these health services.

van den Heuvel LL, Levin J, Mpango RS, Gadow KD, Patel V, Nachega JB, Seedat S, Kinyanda E. Caregiver and youth self-reported emotional and behavioural problems in Ugandan HIV-infected children and adolescents. S Afri J Psych. 2018; 24:1265.

Abstract

Introduction

We determined the prevalence of, and factors associated with, self-rated emotional and behavioural problems (EBPs) and assessed the agreement between self-rated and caregiver-rated EBPs in the ‘Mental health among HIV-infected Children and Adolescents (CA-HIV) in Kampala and Masaka, Uganda’ (CHAKA) study. Existing literature demonstrates that CA-HIV face increased mental health challenges related to a broad range of biological and psychosocial factors. There is scarce data on self-reported EBPs in CA-HIV.

Methods

In a cross-sectional sample, caregiver-reported EBPs were assessed with the Child and Adolescent Symptom Inventory-5 (CASI-5), and self-reported problems were evaluated with the Youth Inventory-4 (YI-4) in 469 adolescents aged 12–17 years and the Child Inventory-4 (CI-4) in 493 children aged 8–11 years. Logistic regression models were utilised to determine factors related to self-reported EBPs.

Results

Self-reported emotional problems (EPs) were present in 28.8% of the adolescents and were associated with caregivers being separated and having a lower level of education. Among adolescents, 14.5% had self-reported behavioural problems (BPs), and these were associated with caregiver unemployment and food insecurity. Self-reported EPs were reported by 36.9% of children and were associated with rural study sites, having missed school and caregivers having a lower level of education. There was only modest agreement (maximum $r = 0.29$) between caregiver- and CA-HIV-reported EBPs, with caregivers reporting more EPs and adolescents reporting more BPs.

Conclusion

Self-reported EBPs are frequently endorsed by CA-HIV, and these problems are related to unique psychosocial factors. Including CA-HIV, self-report measures can assist in identifying problems that caregivers may not be aware of, particularly BPs.

Spies G, Denckla CA, Mall S, Levin J, Seedat S, Nakasujja N, Kinyanda E. The relationship between cognitive change and physical health and behavioural outcomes in a Ugandan cohort of adults living with HIV - a longitudinal study. *AIDS Care*. 2018 Nov 13:1-6. doi: 10.1080/09540121.2018.1545987.

Abstract

We investigated changes in cognitive function and physical health and behavioural outcomes (HIV disease progression, health-seeking behaviour, adherence to HIV medications and risky sexual behaviour) at baseline and 12 months later among 1126 Ugandan adults living with HIV. Overall, cognitive function improved from baseline to follow-up, except for gait speed, which was slower at follow-up compared to baseline. There were improvements in physical health and behavioural outcomes by follow-up, with greater improvements among individuals on ART compared to those not on ART. Change in gait speed over time significantly predicted risky sexual behaviours at follow-up. This is the first study to investigate the longitudinal relationships between cognitive function and health outcomes among Ugandan adults living with HIV and provide insights into the possible links between cognitive function and negative clinical and behavioural health outcomes in people living with HIV.

Akotia CS, Knizek BL, Hjelmeland H, Kinyanda E, Osafo J. Reasons for attempting suicide: An exploratory study in Ghana. *Transcult Psychiatry*. 2018 Oct 9:1363461518802966. doi: 10.1177/1363461518802966.

This study examined the reasons for suicide attempts among patients in Ghana. Semi-structured interviews were conducted among 30 informants who had been hospitalized for attempted suicide. Interpretative Phenomenological Analysis (IPA) was used to analyse the transcribed narratives, and five main themes emerged: 1) lack of support; 2) abandonment; 3) shame; 4) existential struggles; and 5) supernatural reasons. There were gender differences with abandonment reported by only women and shame associated with economic difficulties reported only by men. Findings are discussed within the context of a socio-cultural theory of suicide behaviour, and implications for the prevention of suicide and care of suicidal persons are suggested.

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