HIV This Week: what scientific journals said

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1. Microbicides

Effectiveness and Safety of Tenofovir Gel, an Antiretroviral Microbicide, for the Prevention of HIV Infection in Women

Abdool Karim Q, Abdool Karim S, Frohlich JA, Grobler AC, Baxter C, Mansoor LE, Kharsany ABM, Sibeko S, Mlisana KP,Omar Z, Gengiah TN, Maarschalk S, Arulappan N, Mlotshwa M, Morris L,Taylor D, on behalf of the CAPRISA 004 Trial Group. Science. 2010; July [Epub ahead of print]

The CAPRISA 004 trial assessed **effectiveness and safety of a 1% vaginal gel formulation of tenofovir,** a nucleotide reverse transcriptase inhibitor, for the prevention of HIV acquisition in women. A double-blind, randomized controlled trial was conducted comparing tenofovir gel (n = 445) with placebo gel (n = 444) in sexually active, HIV uninfected **18 to 40 year-old women in urban and rural KwaZulu-Natal**, South Africa. **HIV serostatus, safety, sexual behaviour and gel and condom use were assessed at monthly follow-up visits for 30 months. HIV incidence in the tenofovir gel arm was 5.6 per 100 women-years**, i.e. person time of study observation, (38/680.6 women-years) **compared to 9.1 per 100 women-years** (60/660.7 women-years**) in the placebo gel arm** (incidence rate ratio = 0.61; P = 0.017). In high adherers (gel adherence > 80%), HIV incidence was 54% lower (P = 0.025) in the tenofovir gel arm. In intermediate adherers (gel adherence 50 to 80%) and low adherers (gel adherence < 50%) the HIV incidence reduction was 38% and 28% respectively. **Tenofovir gel reduced HIV acquisition by an estimated 39% overall, and by 54% in women with high gel adherence**. No increase in the overall adverse event rates was observed. There were no changes in viral load and no tenofovir resistance in HIV seroconvertors. **Tenofovir gel could potentially fill an important HIV prevention gap, especially for women unable to successfully negotiate mutual monogamy or condom use.**

For full text access click here: http://www.sciencemag.org/hottopics/hivprevention/index.dtl

Editors' note: Following 20 years of research, including 11 effectiveness trials of 6 microbicide candidates that did not protect women from HIV, this groundbreaking study has responded to Zena Stein's 1990 call for a women-controlled method for HIV prevention (*Am J Pub Health 80, 460-462*). The vaginal gel was inserted anytime in the 12 hours before anticipated sex and once in the 12 hours after sex. This dosing strategy was inspired by the effectiveness of antiretroviral prophylaxis at the time of exposure for preventing mother-to-child transmission. Whatever way the data are analysed, the results show effectiveness. Women who used the gel more consistently had more protection. WHO and UNAIDS are convening a meeting at the end of August 2010 at the invitation of the South African government to consider what further research is needed, what would be the regulatory pathway for tenofovir gel, and what programmatic issues would need to be addressed. An example of the latter would be the optimal frequency of HIV testing - having a test every month, as was done in the trial, would not be practical. When the results were presented in Vienna at IAS 2010 there was a standing ovation – an extremely rare event in science. You can download the slides and watch the presentation at: http://globalhealth.kff.org/AIDS2010/July-20/Safety-and-Effectiveness.aspx

2. Pre-Exposure Prophylaxis

Sex frequency and sex planning among men who have sex with men in Bangkok, Thailand: implications for pre- and post-exposure prophylaxis against HIV infection.

van Griensven F, Thienkrua W, Sukwicha W, Wimonsate W, Chaikummao S, Varangrat A, Mock P. 2010. J Int AIDS Soc. 2010;13:13

Daily HIV anti-retroviral pre-exposure prophylaxis (PrEP) is being evaluated in clinical trials among men who have sex with men. However, daily PrEP may not be congruent with sexual exposure profiles of men who have sex with men. Here the authors investigate sex frequency and sex planning to identify and inform appropriate PrEP strategies for men who have sex with men. They evaluated sex frequency and sex

planning in a cohort HIV-negative men who have sex with men in Bangkok, Thailand. Chi^2 test was used to compare **reports of sex on different weekdays**; logistic regression was used to identify **predictors of sex frequency and sex planning**. Of 823 men who have sex with men (mean age 28.3 yrs) **86% reported sex on 2 days per week or less** and **65% reported their last sex to have been planned**. Sex on the weekend (~30%) was more often reported than sex on weekdays (~23%). In multivariate analysis, use of alcohol, erectile dysfunction drugs, group sex, sex with a foreigner, buying and selling sex and a history of HIV testing were associated with having sex on 3 days per week or more; age 22 to 29 years, not identifying as homosexual, receptive anal intercourse and not engaging in group sex were associated with unplanned sex. **Intermittently dosed PrEP (as opposed to daily) may be a feasible HIV prevention strategy** and should be considered for evaluation in clinical trials. **Predictors of sex frequency and sex planning may help to identify those in need for daily PrEP** and those who may not be able to take a timely pre-exposure dose.

For full text access click here: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2873546/?tool=pubmed

Editors' note: In this study, planned sex meant 'having made intentional arrangements to have sex, e.g. you went to the park, sauna, bar, or online to find a sex partners or you had made an appointment with another man to have sex'. Two-thirds of the men in this study had planned sex on the first encounter of the last day they had sex. Given the sex frequency reported in this study, it would be possible for many men who have sex with men in Bangkok to use intermittent pre-exposure prophylaxis (PrEP), if it proved to be effective. For others who are having sex more frequently or who are less able to plan when they will have sex, a daily antiretroviral dose would be more practical. There is a daily dose effectiveness trial underway among men who have sex with men in Peru, Ecuador, USA, South Africa, and Thailand - it will report results in the next 6 months. A safety and acceptability study of intermittent PrEP among men who have sex with men is underway in Kenya and Uganda and two further safety studies are planned. If daily PrEP provides protection and intermittent PrEP is safe, the question will be whether intermittent PrEP will be effective and for which men. Local studies such as this one eventually can inform the counselling that will help men to choose a tailored approach that will work best for them.

3. HIV Testing

HIV-1 subtype C-infected individuals maintaining high viral load as potential targets for the "test-and-treat" approach to reduce HIV transmission.

Novitsky V, Wang R, Bussmann H, Lockman S, Baum M, Shapiro R, Thior I, Wester C, Wester CW, Ogwu A, Asmelash A, Musonda R, Campa A, Moyo S, van Widenfelt E, Mine M, Moffat C, Mmalane M, Makhema J, Marlink R, Gilbert P, Seage GR 3rd, DeGruttola V, Essex M. PLoS One. 2010;5:e10148.

The first aim of the study is to assess the distribution of HIV-1 RNA levels in subtype C infection. Among **4,348 drug-naïve HIV-positive individuals participating in clinical studies in Botswana**, the median baseline plasma HIV-1 RNA levels differed between the general population cohorts (4.1-4.2 log(10)) and combination antiretroviral therapy-initiating cohorts (5.1-5.3 log(10)) by about one log(10). The proportion of individuals with high (> or = 50,000 (4.7 log(10)) copies/ml) HIV-1 RNA levels ranged from 24%-28% in the general HIV-positive population cohorts to 65%-83% in combination antiretroviral therapy-initiating cohorts. The second aim is to **estimate the proportion of individuals who maintain high HIV-1 RNA levels for an extended time and the duration of this period**. For this analysis, the authors estimate the proportion of individuals who could be identified by repeated 6- vs. 12-month-interval HIV testing, as well as the potential reduction of HIV transmission time that can be achieved by testing and antiretroviral treatment. Longitudinal analysis of 42 seroconverters revealed that **33% (95% CI: 20%-50%) of individuals maintain high HIV-1 RNA levels for at least 180 days post seroconversion and the median duration of high viral load period was 350 (269; 428) days post seroconversion.** They found that it would be possible to identify all HIV-infected individuals with viral load > or = 50,000 (4.7 log(10)) copies/ml using repeated six-month-interval HIV testing. Assuming individuals with high viral load initiate combination antiretroviral therapy after

being identified, the period of high transmissibility due to high viral load can potentially be reduced by 77% (95% CI: 71%-82%). Therefore, if HIV-infected individuals maintaining high levels of plasma HIV-1 RNA for extended period of time contribute disproportionally to HIV transmission, a modified "test-and-treat" strategy targeting such individuals by repeated HIV testing (followed by initiation of combination antiretroviral therapy) might be a useful public health strategy for mitigating the HIV epidemic in some communities.

For full text access click here:
http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0010148

Editors' note: Viral load studies in sub-type B infection have shown that for most people the initial peak of viral load resolves to a steady-state setpoint in 4 to 6 months, with higher viral setpoint associated with an increased risk of disease progression and onward HIV transmission. Although we do not know what the threshold for HIV transmission is, it is assumed to be between 10,000 and 100,000 copies/ml, with 50,000 copies/ml used in most studies. This study of over 4000 people with sub-type C infection participating in 7 cohort studies in Botswana found that 24-28% of people in the general population studies and 65-83% in the populations staring on antiretroviral therapy had viral loads over 50,000. In the acute infection cohort, the mean and median duration of high viral load was about 12 months, with around 33% of people maintaining high viral loads. Modelling to determine the optimal testing frequency to identify these individuals and offer them immediate treatment revealed that more HIV transmission could be prevented (77%) with 6-monthly viral load testing than with an annual test. Clearly, people in need of life-prolonging treatment should be prioritised for access to therapy. Thereafter, strategies such as offering treatment to people who are not eligible for treatment based on CD4 count but who are most likely to transmit to others could be considered.

Couple-oriented prenatal HIV counseling for HIV primary prevention: an acceptability study.

Orne-Gliemann J, Tchendjou PT, Miric M, Gadgil M, Butsashvili M, Eboko F, Perez-Then E, Darak S, Kulkarni S, Kamkamidze G, Balestre E, Desgrees du Lou A, Dabis F. BMC Public Health. 2010;10:197.

A large proportion of the 2.5 million new adult HIV infections that occurred worldwide in 2007 were in stable couples. Feasible and acceptable strategies to improve HIV prevention in a conjugal context are scarce. In the preparatory phase of the ANRS 12127 Prenahtest multi-site HIV prevention trial, the authors assessed the **acceptability of couple-oriented post-test HIV counselling** and **men's involvement within prenatal care services**, among pregnant women, male partners, and health care workers in **Cameroon, Dominican Republic, Georgia, and India**. Quantitative and qualitative research methods were used: direct observations of health services; in-depth interviews with women, men, and health care workers; monitoring of the couple-oriented post-test HIV counselling intervention; and exit interviews with couple-oriented post-test HIV counselling participants. In-depth interviews conducted with 92 key informants across the four sites indicated that men rarely participated in antenatal care services, mainly because these are traditionally and programmatically a woman's domain. However men's involvement was reported to be acceptable and needed in order to improve antenatal care and HIV prevention services. **Couple-oriented post-test HIV counselling** was considered by the respondents to be a **feasible and acceptable strategy to actively encourage men to participate in prenatal HIV counselling and testing** and overall in reproductive health services. One of the keys to men's involvement within prenatal HIV counselling and testing is the **better understanding of couple relationships, attitudes, and communication patterns between men and women**, in terms of HIV and sexual and reproductive health; this conjugal context should be taken into account in the provision of quality prenatal HIV counselling, which aims at integrated prevention of mother-to-child transmission and primary prevention of HIV.

For full text access click here: http://www.biomedcentral.com/1471-2458/10/197

Editors' note: The Prenahtest trial assessing the impact of couple-oriented post-test counselling, underway in 4 low-to-medium HIV prevalence countries, will be completed in 2011. This preparatory study revealed

support for the idea of increasing men's involvement but identified a number of barriers that first must be overcome. These include making antenatal care services more physically and interpersonally receptive to male participation and challenging gender norms to address the social barriers to male involvement. This process can help change the paternalistic, unidirectional nature of relationships between most health care providers and patients which can reveal itself as lectures without opportunities for personalised prevention messages. Testing options for men are limited to sexually transmitted disease clinics, voluntary counselling and testing services, and male circumcision programmes. Couple counselling and testing in the context of pregnancy is an opportunity to increase the testing options for men while decreasing the likelihood of transmission to infants. It is an opportunity that should not to be missed – most men and women living in a serodiscordant couple do not know their status nor that of their partner.

4. Basic Science

Effects of thymic selection of the T-cell repertoire on HLA class I-associated control of HIV infection.

Kosmrlj A, Read EL, Qi Y, Allen TM, Altfeld M, Deeks SG, Pereyra F, Carrington M, Walker BD, Chakraborty AK. Nature. 2010;465:350-4

Without therapy, most people infected with human immunodeficiency virus (HIV) ultimately progress to AIDS. **Rare individuals ('elite controllers') maintain very low levels of HIV RNA without therapy, thereby making disease progression and transmission unlikely**. Certain HLA class I alleles are markedly enriched in elite controllers, with the highest association observed for **HLA-B57**. Because **HLA molecules present viral peptides that activate CD8(+) T cells**, an immune-mediated mechanism is probably responsible for superior control of HIV. Here the authors describe how the peptide-binding characteristics of HLA-B57 molecules affect thymic development such that, compared to other HLA-restricted T cells, a larger fraction of the naive repertoire of B57-restricted clones recognizes a viral epitope, and these T cells are more cross-reactive to mutants of targeted epitopes. Their calculations predict that such a **T-cell repertoire imposes strong immune pressure on immunodominant HIV epitopes and emergent mutants**, thereby **promoting efficient control of the virus**. Supporting these predictions, in a large cohort of HLA-typed individuals, Kosmrlj and colleagues' experiments show that the relative ability of HLA-B alleles to control HIV correlates with their peptide-binding characteristics that affect thymic development. These results provide a conceptual framework that unifies diverse empirical observations, and have implications for vaccination strategies.

For full text access click here: http://www.nature.com/nature/journal/v465/n7296/full/nature08997.html

Editors' note: The human leukocyte antigen (HLA) system is composed of a large number of genes related to immune system function in humans. It was first recognised as a result of reactions to organ transplantation. Organ transplants are less likely to be rejected if the donor and recipient have similar HLA profiles. People expressing HLA-B8 have a rapid progression to HIV disease while those expressing HLA-B57 tend to have a lower HIV viral setpoint and a slower HIV disease progression. This research suggests that this difference is related to the diversity of peptides presented in the thymus during T-cell development. Individuals with HLA-B57 tend to have a more cross-reactive repertoire because their T-cells encounter fewer self-peptides during development – this also makes such individuals more likely to have autoimmune diseases and hypersensitivity reactions. Although rarer, cross-reactive T-cells are found in people with other HLA alleles so the challenge for a T-cell vaccine will be to activate these cells in everyone to enable robust immune responses.

5. Men Who have Sex with Men

Bisexual concurrency, bisexual partnerships, and HIV among Southern African men who have sex with men.

Beyrer C, Trapence G, Motimedi F, Umar E, Iipinge S, Dausab F, Baral S. Sex Transm Infect. 2010. [Epub ahead of print]

The sexual behaviour of men who have sex with men in southern Africa has been little studied. Beyrer et al present here the first data on bisexual partnerships and bisexual concurrency among **men who have sex with men in Malawi, Namibia and Botswana**. The authors conducted a **cross-sectional probe** of a **convenience sample** of 537 men who have **ever reported anal sex with another man** using a structured survey instrument and rapid-kit HIV screening. **34.1% of men who have sex with men were married or had a stable female partner, and 53.7% reported both male and female sexual partners in the past 6 months.** Bisexual concurrency was common, with 16.6% of men who have sex with men having concurrent relationships with both a man and a woman. In bivariate analyses, any bisexual partnerships were associated with lower education (OR 1.6, 95% CI 1.1 to 2.3), higher condom use (OR 6.6, 95% CI 3.2 to 13.9), less likelihood of having ever tested for HIV (OR 1.6, 95% CI 1.1 to 2.3), less likelihood of having disclosed sexual orientation to family (OR 0.47, 95% CI 0.32 to 0.67) and being more likely to have received money for casual sex (OR 1.9, 95% CI 1.3 to 2.7). **Bisexual concurrency** was associated with a **higher self-reported condom use** (OR 1.7, 95% CI 1.0 to 3.1), **being employed** (OR 1.8, 95% CI 1.2 to 2.9), **lower likelihood of disclosure of sexual orientation to family** (OR 0.37, 95% CI 0.22 to 0.65) and **having paid for sex with men** (OR 2.0, 95% CI 1.2 to 3.2).The majority of men who have sex with men in this study report some bisexual partnerships in the previous 6 months. Concurrency with sexual partners of both genders is common. Encouragingly, men reporting any **concurrent bisexual activity** were more likely to report condom use with sexual partners, and these men were **not more likely to have HIV infection than men reporting only male partners.** HIV-prevention programmes focussing on decreasing concurrent sexual partners in the African context should also target bisexual concurrency among men who have sex with men. **Decriminalisation of same-sex practices** will **potentiate evidence-based HIV-prevention programmes** targeting men who have sex with men.

For full text access click here: http://sti.bmj.com/content/early/2010/04/16/sti.2009.040162.long

Editors' note: Historical and current labour migration patterns in southern Africa are thought to be major contributors to sexual concurrency, most often defined as men having two or more female sexual partners and women having two or more male partners at the same time. This is the first study of bisexual concurrency among men who have sex with men, defined as being in an ongoing sexual relationship with both a male and a female partner. Bisexuality was defined as sex with at least one man and one woman in the previous 6 months. The study population in Botswana, Namibia, and Malawi was urban and more likely to be gay-identified because the men were recruited through local human rights organisations with links to these communities of men. All three countries criminalise same sex behaviour. Although the findings cannot be generalised to the entire population of men who have sex with men, they are nonetheless thought provoking. Overall, more than half were sexually active with both men and women, one third were married to women, and one in six was in a stable relationship with a man and a woman. Men were more likely to identify as bisexual and report bisexual concurrency in settings where the social pressure to marry women was strong, such as Malawi. HIV infection prevalence was about twice as high as national estimates of HIV prevalence for men of reproductive age; however, condom use with regular and casual sex partners was higher among those in concurrent bisexual partnerships. Further research is needed to better understand the contribution of bisexuality and bisexual concurrency to African epidemics but the capacity to undertake such research and design tailored prevention programmes will depend on how quickly these countries move to decriminalise homosexuality.

6. Epidemiology

HIV decline in Zimbabwe due to reductions in risky sex? Evidence from a comprehensive epidemiological review.

Gregson S, Gonese E, Hallett TB, Taruberekera N, Hargrove JW, Lopman B, Corbett EL, Dorrington R, Dube S, Dehne K, Mugurungi O. Int J Epidemiol. 2010. [Epub ahead of print]

Recent data from antenatal clinic surveillance and general population surveys suggest substantial declines in human immunodeficiency virus (HIV) prevalence in Zimbabwe. The authors assessed the **contributions of rising mortality**, **falling HIV incidence** and **sexual behaviour change to the decline in HIV prevalence**. Comprehensive review and secondary analysis of national and local sources on trends in HIV prevalence, HIV incidence, mortality and sexual behaviour covering the period 1985-2007 was conducted. HIV prevalence fell in Zimbabwe over the past decade (national estimates: from **29.3% in 1997 to 15.6% in 2007**). National census and survey estimates, vital registration data from Harare and Bulawayo, and prospective local population survey data from eastern Zimbabwe showed **substantial rises in mortality during the 1990s levelling off after 2000**. Direct estimates of HIV incidence in male factory workers and women attending pre- and post-natal clinics, trends in HIV prevalence in 15-24-year-olds, and back-calculation estimates based on the vital registration data from Harare indicated that **HIV incidence may have peaked in the early 1990s and fallen during the 1990s**. Household survey data showed **reductions in numbers reporting casual partners from the late 1990s** and **high condom use in non-regular partnerships between 1998 and 2007**. These findings provide the first convincing evidence of an **HIV decline accelerated by changes in sexual behaviour** in a southern African country. However, in 2007, one in every seven adults in Zimbabwe was still infected with a life-threatening virus and mortality rates remained at crisis level.

For full text access click here:
http://ije.oxfordjournals.org/cgi/content/full/dyq055v1?view=long&pmid=20406793

Editors' note: Trying to determine the factors that have contributed to the most convincing decline in countrywide HIV prevalence in southern Africa was challenging. The first step was to assemble all available evidence from sources such as population surveys, vital registration, antenatal surveillance, incidence studies, censuses, and behavioural and other studies. After their results were assessed for quality, potential biases, and plausibility, estimates of HIV prevalence and incidence were calculated and modelling conducted to assess the possible impact on HIV prevalence of out-migration from Zimbabwe. The overall findings are striking. Condom use with non-regular partners was already high by the late 1990s and had contributed to bringing the decline in HIV incidence to a tipping point where the net reproductive number was less than one. Further risk reduction in the form of substantial reductions in reported non-regular sexual partners from 1999 to 2004 hastened the fall in incidence. Mortality affected HIV prevalence but out-migration likely had small effects. Zimbabwe has an HIV treatment burden that will last for decades but it has made a major contribution to our understanding of HIV epidemic dynamics. There are critically important lessons still to be learned about what prompted behaviour change in Zimbabwe.

HIV Transmission Rates in Thailand: Evidence of HIV Prevention and Transmission Decline. Siraprapasiri T, Peerapatanapokin W, Manne J, Niccolai L, Kunanusont C. J Acquir Immune Defic Syndr. 2010; 54:430-6

Analysis of HIV transmission rates has provided insight into the impacts of HIV-related prevention programming and policies in the United States by providing timely information beyond incidence or prevalence alone. The purpose of this analysis is to use transmission rates to assess past prevention efforts and explore trends of the epidemic in subpopulations within Thailand. Asian Epidemic Model HIV incidence and prevalence were used to calculate transmission rates over time nationally and among high-risk populations. **A national HIV program implemented in Thailand in the 1990s that targeted sex workers**

and the general population was correlated with a decrease in new cases despite high prevalence. The **turning point of the epidemic was in 1991** when the national transmission rate was 32%. By the late 1990s, the rate dropped to less than 4%. All subpopulations experienced a rate decline; however, sex workers still experienced higher transmission rates. The declining trend in HIV transmission rates despite ever-growing prevalence indicates prevention success correlated with the national HIV program. Data from subgroup analyses provide stronger evidence of prevention success than incidence alone, as this measure demonstrates the effect of efforts and accounts for the burden of disease in the population.

To review the abstract click here: http://www.ncbi.nlm.nih.gov/pubmed/20418773

Editors' note: This paper defines the HIV transmission rate as the new cases of HIV divided by the existing number of persons living with HIV for a specified time. It provides a measure that considers the spread of HIV by accounting for the number of people capable of transmitting HIV. How accurate the transmission rate calculated in this manner will be clearly depends on how good are the HIV incidence and prevalence estimates. Nevertheless, Thailand has clearly met the Millennium Development Goal 6 'to halt and reverse the spread of HIV by 2015' through sustained reductions in HIV incidence. This resulted from the swift action that provoked dramatic changes in HIV incidence from a peak in 1991 and concerted prevention programming thereafter. These included mobilisation of non-governmental organisations, the 100% condom use campaign that went national in 1992, blood screening programmes, and active surveillance. It is unclear how accurate transmission rates calculated this way are for key populations such as men who have sex with men, people who inject drugs, and couples in which one person has HIV infection, but the need to engage these people in the design of effective tailored prevention programming and better surveillance is clear.

7. Gender

Transactional sex amongst young people in rural northern Tanzania: an ethnography of young women's motivations and negotiation.

Wamoyi J, Wight D, Plummer M, Mshana GH, Ross D. Reprod Health. 2010;7:2.

Material exchange for sex (transactional sex) may be important to sexual relationships and health in certain cultures, yet the motivations for transactional sex, its scale and consequences are still little understood. The aim of this paper is to examine **young women's motivations to exchange sex for gifts or money**, the **way in which they negotiate transactional sex** throughout their relationships, and the **implications of these negotiations for the HIV epidemic**. An ethnographic research design was used, with information collected primarily using participant observation and in-depth interviews in a rural community in North Western Tanzania. The qualitative approach was complemented by an innovative assisted self-completion questionnaire. **Transactional sex underlays most non-marital relationships** and was **not, per se, perceived as immoral**. However, women's motivations varied, for instance: escaping intense poverty, seeking beauty products or accumulating business capital. There was also **strong pressure from peers to engage in transactional sex**, in particular to **consume like others** and **avoid ridicule for inadequate remuneration**. **Macro-level factors** shaping transactional sex (e.g. economic, kinship and normative factors) **overwhelmingly benefited men**, but **at a micro-level there were different dimensions of power**, stemming from individual attributes and immediate circumstances, **some of which benefited women**. **Young women actively used their sexuality as an economic resource**, often entering into relationships primarily for economic gain. Transactional sex is likely to increase the risk of HIV by providing a dynamic for partner change, making more affluent, higher risk men more desirable, and creating further barriers to condom use. Behavioural interventions should directly address how embedded transactional sex is in sexual culture.

For full text access click here: http://www.reproductive-health-journal.com/content/7/1/2

Editors' note: If you want to learn more about ethnographic methodologies, this fascinating paper is an excellent read. Its explicit descriptions of data gathering by participant observation in 9 villages over 3 years give added weight to its dismissal of any Western-centric assumption that assumes poverty is what links sex with material gain. Sexual relationships are complex phenomena influenced by macro-social, micro-social, psychological, and physiological factors in all societies. This study focuses on the social factors that shape sexual relationships in rural northwest Tanzania where material exchange for sex underlies most non-marital relationships, along with physical pleasure, reproduction, self-esteem, and love or other non-material motives. The findings resonate with data from other settings, reinforcing the notion that for HIV prevention strategies to be effective, they must acknowledge the economic importance of sex for young women. While income-generating schemes would be a good start, transactional sex is deeply rooted in this and other cultures, requiring profound cultural change. In the meantime, generation of economic opportunities for girls and young women will increase their bargaining power, while education and communication skills building will increase their negotiating skills for postponement of sex and for male and female condom use.

8. Paediatric treatment

HIV-subtype A is associated with poorer neuropsychological performance compared with subtype D in antiretroviral therapy-naive Ugandan children.

Boivin MJ, Ruel TD, Boal HE, Bangirana P, Cao H, Eller LA, Charlebois E, Havlir DV, Kamya MR, Achan J, Akello C, Wong JK. AIDS. 2010;24:1163-70.

HIV-subtype D is associated with more rapid disease progression and higher rates of dementia in Ugandan adults compared with HIV-subtype A. There are no data comparing neuropsychological function by HIV subtype in Ugandan children. One hundred and two HIV-infected antiretroviral therapy naive Ugandan children 6-12 years old (mean 8.9) completed the Kaufman Assessment Battery for Children, second edition (KABC-2), the Test of Variables of Attention (TOVA), and the Bruininks-Oseretsky Test for Motor Proficiency, second edition (BOT-2). Using a PCR-based multiregion assay with probe hybridization in five different regions (gag, pol, vpu, env, gp-41), HIV subtype was defined by hybridization in env and by total using two or more regions. Analysis of covariance was used for multivariate comparison. **The env subtype was determined in 54 (37 A, 16 D, 1 C) children.** Subtype A and D groups were comparable by demographics, CD4 status, and WHO stage. **Subtype A infections had higher log viral loads** (median 5.0 vs. 4.6, P = 0.02). **Children with A performed more poorly than those with D on all measures**, especially on KABC-2 Sequential Processing (memory) (P = 0.01), Simultaneous Processing (visual-spatial analysis) (P = 0.005), Learning (P = 0.02), and TOVA visual attention (P = 0.04). When adjusted for viral load, Sequential and Simultaneous Processing remained significantly different. Results were similar comparing by total HIV subtype. HIV subtype A children demonstrated poorer neurocognitive performance than those with HIV subtype D. **Subtype-specific neurocognitive deficits may reflect age-related differences in the neuropathogenesis of HIV**. This may have important implications for when to initiate antiretroviral therapy and the **selection of drugs with greater central nervous system penetration**.

For abstract access click here:
http://ovidsp.tx.ovid.com/sp-2.3.1b/ovidweb.cgi?&S=KDGPFPBOFGDDPLMMNCDLOEDCNGFJAA00&Abstract=S.sh.15%7c1%7c1

Editors' note: The findings of this study implicating subtype A in poorer neurocognitive performance in children are somewhat surprising, given that subtype D is most commonly associated with dementia in adults in Uganda. Given that the children were at an earlier stage of disease, the difference may be in viral tropism, the cell type that HIV infects and replicates in. CCR5 viruses, the predominant form in early infection, infect macrophages, which are the principal cells that transport the virus through the blood-brain barrier, and microglia, which are the other major target cell for HIV in the central nervous system. This may explain the effects reported here during the sensitive period of brain development in children. Further

studies are needed to confirm these findings and describe the neurodevelopmental trajectory of children with HIV infection by subtype but they do suggest that consideration of subtype will be important in determining which children should be started early on antiretroviral treatment. In any case, WHO recommends that ART should be started for all HIV-infected infants diagnosed in the first year of life, irrespective of CD4 count or WHO clinical stage. See: http://www.who.int/hiv/pub/paediatric/infants/en/index.html

Retention of HIV-infected and HIV-exposed children in a comprehensive HIV clinical care programme in Western Kenya.

Braitstein P, Katshcke A, Shen C, Sang E, Nyandiko W, Ochieng VO, Vreeman R, Yiannoutsos CT, Wools-Kaloustian K, Ayaya S. Trop Med Int Health. 2010;15:833-41

The aim of the study is to describe incidence rates and risk factors for loss-to-follow-up among HIV-infected and HIV-exposed children in a large HIV treatment programme in Western Kenya. The USAID-AMPATH Partnership has enrolled >100 000 patients (20% children) at 23 clinic sites throughout western Kenya. **Loss-to-follow-up is defined as being absent from the clinic for >3 months if on combination antiretroviral treatment and >6 months if not.** Included in this analysis were children aged <14 years, HIV exposed or infected at enrolment, and enrolled between April 2002 and March 2009. The incidence rates for loss-to-follow-up are presented per 100 child-years (CY) of follow-up. Proportional hazards models with time-independent and time-dependent covariates were used to model factors associated with loss-to-follow-up. Weight for height Z-scores were calculated using EpiInfo, with severe malnutrition being defined as a Z-score </=-3.0. Immune suppression was defined as per WHO age-specific categories. There were 13 510 children eligible for analysis, comprising **3106 children who at enrolment were HIV infected and 10 404 children who were HIV exposed.** The **overall incidence rate of loss-to-follow-up was 18.4 (17.8-18.9) per 100 child-years.** Among HIV-infected children, 15.2 (13.8-16.7) and 14.1 (13.1-15.8) per 100 CY became lost-to-follow-up, pre- and post- antiretroviral therapy initiation, respectively. **The only independent risk factor for becoming lost-to-follow-up among the HIV-infected children was severe immune suppression** (AHR: 2.17, 95% CI: 1.51-3.12). Among the HIV-exposed children, 20.1 per 100 (19.4-20.7) became lost-to-follow-up. Independent risk factors for loss-to-follow-up among them were being **severely low weight for height** (AHR: 1.69, 95% CI: 1.25-2.28), **being orphaned at enrolment** (AHR: 1.57, 95% CI: 1.23-1.64), **being CDC Class B or C** (AHR: 1.41, 95% CI: 1.14-1.74), and **having received combination antiretroviral therapy** (AHR: 1.56, 95% CI: 1.23-1.99). Protective against becoming lost-to-follow-up among the HIV exposed were testing HIV positive (AHR: 0.26, 95% CI: 0.21-0.32), older age (AHR: 0.90, 95% CI: 0.85-0.96), enrolling in later time periods, and receiving food supplementation (AHR: 0.58, 95% CI: 0.32-1.04). There is a high rate of loss-to-follow-up among these highly vulnerable children, particularly among the HIV exposed. These data suggest that **HIV-infected and HIV-exposed children are at especially high risk for loss-to-follow-up if they are sick or malnourished**.

For abstract access click here: http://www3.interscience.wiley.com/journal/123441259/abstract

Editors' note: The findings from this study of a large, geographically and ethnically diverse population observed over years likely have application for other populations of HIV-affected children in East Africa. About 50% of adults lost-to-follow-up are deceased and the associations seen here for loss-to-follow-up of HIV–exposed children (severely low weight for height, advanced clinical disease, and severe immunosuppression) suggest that mortality is an important cause of disappearance from the clinic. With priority being given to retention of children with HIV infection who are on antiretroviral treatment (to prevent disease progression and drug resistance) followed by children with HIV infection not yet eligible for treatment (to provide prophylaxis and timely initiation of antiretroviral treatment), it is perhaps not surprising that HIV-exposed children have the highest rates of loss-to-follow-up. The findings suggest that food supplementation for HIV-exposed children could reduce loss-to-follow-up, both by improving nutritional status and by acting as an incentive to continue in care pending an HIV diagnosis. In the end, those taking care of children ultimately decide whether to take a child to the clinic. Qualitative studies to determine the

factors influencing their decisions would inform changes in clinical services aimed at reducing loss-to-follow-up.

9. Sexually transmitted infections

Increased risk of HIV acquisition among Kenyan men with human papillomavirus infection.

Smith JS, Moses S, Hudgens MG, Parker CB, Agot K, Maclean I, Ndinya-Achola JO, Snijders PJ, Meijer CJ, Bailey RC. J Infect Dis. 2010;201:1677-85.

Few data on the effect of human papillomavirus (HPV) infection on human immunodeficiency virus (HIV) acquisition are available. **HIV-seronegative, sexually active, 18-24-year-old Kenyan men** participating in a randomized trial of male circumcision provided exfoliated penile cells from 2 anatomical sites (glans/coronal sulcus and shaft) at baseline. The GP5+/6+ polymerase chain reaction assay ascertained a **wide range of HPV DNA types at the baseline visit.** The risk of HIV infection was estimated using Kaplan-Meier methods and hazard ratios from proportional hazards models. **Of 2168 uncircumcised men with baseline HPV data, 1089 (50%) were positive for HPV DNA**. The **cumulative incidence of HIV infection by 42 months was 5.8%** (95% confidence interval [CI], 3.6%-7.9%) **among men with HPV-positive glans/coronal sulcus specimens**, **versus 3.7%** [95% CI, 1.8%-5.6%] **among men with HPV-negative glans/coronal sulcus specimens** (P = .01). Controlling for subsequent circumcision status, baseline herpes simplex virus type 2 serostatus, and sexual and sociodemographic risk factors, the **hazard ratio for HIV infection among men with HPV-positive glans/coronal sulcus specimens was 1.8 (95% CI, 1.1-2.9)**, compared with men with HPV-negative glans/coronal sulcus specimens. The results suggest an independent increased risk of HIV seroconversion among HPV-positive men. If this finding is confirmed in other studies, HPV prevention could be another tool for HIV prevention.

For full text access click here: http://www.journals.uchicago.edu/doi/full/10.1086/652408

Editors' note: This is the third study to report associations between human papillomavirus infection in men and risk of acquiring HIV infection. A South African cross-sectional study (*HIV This Week* Issue 64 Auvert) found urethral HPV associated with HIV infection in heterosexual young men but it was unclear which infection came first and a Californian prospective study (*HIV This Week* Issue 69 Chin-Hong) among men who have sex with men did not control for herpes simplex virus-2 infection. This study among sexually active heterosexual men aged 18 to 24 years found that 50% had HPV detected at baseline and of these 91% had HPV in the glans/coronal sulcus specimens. These men were significantly more at risk of acquiring HIV, with HPV found in this location independently associated with increased risk of HIV infection. There are several hypotheses about the biological plausibility of HPV increasing susceptibility to HIV, including up-regulation of T-cells, stimulation of cytokines, and providing a portal of entry for HIV. If these findings are confirmed, preferably as rapidly as possible, vaccinating young men against HPV with the bivalent (HPV-16, -18) or quadrivalent (HPV-16, -18, -6, and -11) vaccines could prove an important addition to the HIV prevention toolbox.

10. Faith-based responses (Civil Society)

YOUR Blessed Health: an HIV-prevention program bridging faith and public health communities.

Griffith DM, Campbell B, Allen JO, Robinson KJ, Stewart SK. Public Health Rep. 2010;125 Suppl 1:4-11.

African American faith-based institutions are not necessarily equipped to balance their moral and spiritual missions and interpretation of religious doctrine with complex health issues such as human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS). YOUR Blessed Health is a faith-based, six-month pilot project designed to increase the capacity of faith-based institutions and faith leaders to address HIV and sexually transmitted infections (STIs) in 11- to 19-year-old African Americans. In addition to **increasing the knowledge and skills of young people**, the intervention seeks to **change**

churches' norms to provide more open settings where young people can talk with faith leaders about sex, relationships, sexually transmitted infections, and HIV. YOUR Blessed Health **expands the roles of adult faith leaders, particularly pastors' spouses, to include health education** as they implement the intervention in their congregations and communities. The intervention includes a **flexible menu of activities** for faith leaders to select from **according to their institutional beliefs, doctrines, and culture**.

For full text access click here: http://www.publichealthreports.org/archives/issueopen.cfm?articleID=2344

Editors' note: Flint, Michigan now has more than the Michael Moore film 'Roger and Me' to its credit. This innovative pilot project, YOUR Blessed Health, engaged the African-American faith community through 12 churches across 6 denominations and 2 housing communities in Flint. Among its unique features was the customization of the programme to fit the beliefs and doctrines of each church so that HIV transmission and prevention could be effectively discussed, balancing moral and spiritual missions and interpretations of church doctrine with the public crisis of HIV among African-Americans. The intent was to change how these issues were addressed both now and in the long term so that churches become more open and accepting settings for the discussion of behaviours and factors that put young people at risk of acquiring HIV. Another unique feature was engaging pastors' spouses as lead trainers – they understand the pastor's vision and the church's culture – to counter young people's sense of invincibility with accurate facts about HIV. Faith-based organisations in all religions have an important role to play in addressing the HIV epidemic in positive ways that can make a real difference. They can only do this when there is a will for open discussion of the issues and the design and implementation of context-specific solutions.

11. Male circumcision

Male circumcision for HIV prevention - a cross-sectional study on awareness among young people and adults in rural Uganda.

Wilcken A, Miiro-Nakayima F, Hizaamu RN, Keil T, Balaba-Byansi D. BMC Public Health. 2010;10:209.

Medical male circumcision is now part of a comprehensive approach to HIV prevention. It has been shown that awareness of the protective effect of male circumcision leads to high acceptability towards the introduction of medical male circumcision services within countries. The objective of this survey was to identify factors determining awareness of male circumcision for HIV prevention. The authors interviewed 452 participants (**267 adults >24 years of age; 185 youths 14-24 years**) living in three rural Ugandan districts in 2008. Using a standardized questionnaire, they assessed socio-demographic parameters, awareness of male circumcision for HIV prevention, general beliefs/attitudes regarding male circumcision and male circumcision status. Determinants for awareness of male circumcision for HIV prevention were examined with multiple logistic regression models. Out of all adults, 52.1% were male (mean+/-SD age 39.8+/-11 years), of whom 39.1% reported to be circumcised. Out of all youths, 58.4% were male (18.4+/-2.5), 35.0% circumcised. **Adults were more aware of male circumcision for HIV prevention than youths** (87.1% vs. 76.5%; p=0.004). In adults, **awareness was increased with higher educational level** compared to no school: primary school (adjusted OR 9.32; 95%CI 1.80-48.11), secondary (5.04; 1.01-25.25), tertiary (9.91; 0.76-129.18), university education (8.03; 0.59-109.95). **Younger age and male sex** were **further significant determinants of increased awareness**, but not marital status, religion, district, ethnicity, employment status, and circumcision status. In youths, they found a borderline statistically significant decrease of awareness of male circumcision for HIV prevention with higher educational level, but not with any other socio-demographic factors. Particularly Ugandans with low education, youths, and women, playing an important role in decision-making of male circumcision for their partners and sons, should be increasingly targeted by information campaigns about positive health effects of male circumcision.

For full text access click here: http://www.biomedcentral.com/1471-2458/10/209

Editors' note: While Ugandans wait for a clear endorsement by the government and community leaders of male circumcision for HIV prevention, information from the media and from nongovernmental and community-based organizations is increasing the understanding of those who will make the decisions at family level about male circumcision. Women are involved as mothers and sexual partners in such decisions, fathers can discuss male circumcision with their sons, and community advocates can raise the call for safe male circumcision services. As this study demonstrates, there is already a high level of awareness in rural Uganda. In such situations, the risk often increases that unsafe circumcision by untrained, poorly equipped operators working in unsanitary conditions will result in avoidable morbidity, mutilations, and mortality.

12. People who inject drugs—risk environment

Policing drug users in Russia: risk, fear, and structural violence.

Sarang A, Rhodes T, Sheon N, Page K. Subst Use Misuse. 2010;45:813-64.

Sarang and colleagues undertook qualitative interviews with 209 persons who inject drugs (primarily heroin) in **three Russian cities: Moscow, Barnaul, and Volgograd**. They explored the accounts of persons who inject drugs about HIV and health risk. Policing practices and how these violate health and self, emerged as a primary theme. Findings show that **policing practices violate health and rights directly, but also indirectly, through the reproduction of social suffering**. **Extrajudicial policing practices** produce fear and terror in the day-to-day lives of drug injectors, and ranged from the mundane (**arrest without legal justification**; the **planting of evidence to expedite arrest or detainment**; and the **extortion of money or drugs for police gain**) to the extreme (**physical violence as a means of facilitating "confession"** and as an **act of "moral" punishment without legal cause or rationale**; the use of methods of **"torture"**; and **rape**). They identify the concept of police bespredel-living with the sense that there are "no limits" to police power-as a key to **perpetuating fear and terror**, **internalized stigma**, and a **sense of fatalist risk acceptance**. Police besprediel is analyzed as a form of structural violence, contributing to **"oppression illness."** Yet, the authors also identify cases of resistance to such oppression, characterized by **strategies to preserve dignity and hope**. They identify hope for change as a resource of risk reduction as well as escape, if only temporarily, from the pervasiveness of social suffering. Future drug use(r)-related policies, and the state responses they sponsor, should set out to promote public health while protecting human rights, hope, and dignity.

For full text access click here: http://informahealthcare.com/doi/abs/10.3109/10826081003590938

Editors' note: Reading this article you will learn more than you may have wanted to know about policing practices in these three Russian cities and, in particular, about police *bespredel*, no limits or restrictions on police power. Being a drug user is not against the law in Russia, while possession and transport are, so planting evidence creates opportunities for arrests. Formal arrest quotas encourage this behaviour and 'police taxes', routine extortion of small amounts of money, provide police officers with supplemental income. Coerced provision of sexual services without payment to police is referred to as *subbotnik*, a term used for semi-volunteer work without payment on non-working days for the benefit of the State. The impact of the policing risk environment described here on HIV risk is both direct (unsafe needle-syringe practices and sex) and indirect through the loss of hope, dignity, self-esteem, and any sense of agency. To learn more about what should be done to address the risk environment and decriminalise drug users, read *The Vienna Declaration* http://www.viennadeclaration.com/. More than 15,000 scientists and others have signed on so far to its call for evidence-informed, human-rights-based drug policies.

13. Young people

The situation of Romanian HIV-positive adolescents: results from the first national representative survey.

Buzducea D, Lazăr F, Mardare EI. AIDS Care. 2010 16:1-8.

Young people are one of the groups most affected by HIV worldwide. For over a decade after the fall of the Communism, Romania accounted for over 50% of the total paediatric cases in Europe (Buzducea & Lazăr, 2008; Mărdărescu, 2008) with **an estimated 10,000 children infected in hospital settings (nosocomial) between 1986 and 1992.** Although about 3000 of these children died of AIDS, many of them have survived almost 20 years. This paper presents the methodology and the results of the first representative research on adolescents living with HIV registered with medical services in Romania (N=534 subjects) attending the nine Regional Centres for HIV Surveillance (August-October 2006). The general objective of the research was to assess **the situation of 15-19 year-old young people living with HIV from Romania and the dynamics of their risk behaviours in respect to virus transmission** (O'Leary, 2002). Based on the research findings, the implications for practice are discussed and specific interventions are recommended to better respond the needs of young people living with HIV.

For abstract access click here:
http://www.informaworld.com/smpp/content~db=all?content=10.1080/09540120903280927

Editors' note: Of the 11, 187 known people living with HIV in Romania in 2006, over 7000 were young people aged 15 to 19 years. This study in nine regional treatment centres interviewed every third young person in this age group on a broad array of aspects of their lives. Over 40% were sexually active with the average age of first sexual contact being 16.2 years, following the general pattern of Romanian youth. 70% overall reported that 'they are at ease to use condom' but only 59% said that they would buy a condom. Over 75% have chosen to keep their diagnosis confidential, primarily due to fear of stigmatisation and marginalisation, with 89.3% are of the view that people living with HIV lose their jobs when employers find out their status. School drop out in this cohort of young people is high, due to health concerns and family overprotection. Although many are socially isolated, others have willingly engaged in prevention campaigns and peer education programmes. Empowering these long-term survivor young people to use male and female condoms and to adhere to treatment, while offering vocational training to help them find jobs, will increase their health and wellbeing as well as their social integration.

14. Economics

Estimating the cost of care giving on caregivers for people living with HIV and AIDS in Botswana: A cross-sectional study.

Ama NO, Seloilwe ES. J Int AIDS Soc. 2010;13:14.

Community home-based care is the Botswana Government's preferred means of providing care for people living with HIV. However, primary (family members) or volunteer (community members) caregivers experience poverty, are **socially isolated, endure stigma and psychological distress, and lack basic care-giving education**. Community home-based care also imposes considerable costs on patients, their caregivers and families in terms of time, effort and commitment. An analysis of the costs incurred by caregivers in providing care to people living with HIV will assist health and social care decision makers in planning the most appropriate ways to meet future service needs of people living with HIV and their caregivers. This study estimated the cost incurred in providing care for people living with HIV through a stratified sample of 169 primary and volunteer caregivers drawn from **eight community home-based care groups in four health districts in Botswana**. The results show that the mean of the total monthly cost (explicit and indirect costs) incurred by the caregivers was $(90.45 +/- 9.08) while the mean explicit cost of care giving was $(65.22 +/- 7.82). **This mean of the total monthly cost is about one and a half times the caregivers' mean monthly income of $66.00 (+/- 5.98) and more than six times the Government of**

Botswana's financial support to the caregivers. In addition, the cost incurred per visit by the caregivers was $15.26, while the total expenditure incurred per client or family in a month was $184.17. The study, therefore, concludes that as the cost of providing care services to people living with HIV is very high, the Government of Botswana should **substantially increase the allowances paid to caregivers and the support it provides for the families of the clients**. The overall costs for such a programme would be quite low compared with the huge sum of money budgeted each year for health care and for HIV and AIDS.

For full text access click here: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2880016/?tool=pubmed

Editors' note: Community home-based care is defined as care given to an individual in his or her own home by his or her family. Costing such care can reveal the gap between what the primary caregiver and volunteers incur in costs and what government provides in a monthly stipend to offset those costs. Community home-based care is not a cheap endeavour. Beyond transport, food, and direct costs of care, it involves important opportunity costs in terms of foregone income from the loss of jobs and job opportunities, absenteeism, and workday interruptions as well as the cost of supervising caregivers. This study involving 8 community home-based care groups in four health districts of Botswana revealed an urgent need to adjust monthly allowances both to maintain the morale of those already providing care and to persuade others to take up care-giving activities. Extending the programme to cover all health districts and making health districts that are already in the programme more equitable should also be among the considerations as policy makers respond to these findings.

The cost of treatment and care for people living with HIV Infection

Beck EJ, Harling G,Gerbase S and DeLay P. Curr Opin HIV AIDS. 2010;5:215-24

Increasing number of people living with HIV will require expanded access to health services. Countries need **robust and contemporary strategic information on the cost of care to monitor and evaluate the effectiveness, efficiency, equity, and acceptability of services**. Published HIV cost literature from July 1999 to December 2008 was reviewed. Articles were identified using specific databases and scored, based on explicit criteria relating to the services covered, utilization data, cost data used and quality of the study. One hundred and fifteen articles were identified, 47% came from North America, 29% from Europe, 17% from Africa and 8% from Asia; no studies from Latin America could be identified. The mean score across all studies was 33.7 out of a maximum of 64, with a median of 34 and a range of 11–51. Mean score did not change significantly over time (Pearson's R8¼0.3; P>0.05). **Great variation was observed in the methods used to estimate cost data across the studies identified**, including **range of services**, **patients covered** and **outcomes costed**. Progress in the quantity and quality of studies published since 1999 has been limited. **More consistent costing methods and more comprehensive coverage** – both by country and level of care – are needed in order **for policymakers and other stakeholders to be able to optimally monitor and evaluate the cost and cost–effectiveness of country services for HIV treatment and care**, especially as population costs are likely to increase with more people living with HIV on antiretroviral therapy.

For abstract access click here:
http://journals.lww.com/co-hivandaids/Abstract/2010/05000/The_cost_of_treatment_and_care_for_people_living.5.aspx

Editors' note: As this systematic review reveals, surprisingly few peer-reviewed costing studies have been published over a decade (n=115) of which 76% were conducted in North America or Europe. This is despite the steadily increasing number of people on antiretroviral treatment in Africa and Asia. Although this review found that comparisons are complicated by differences in sources of information, adjustments made, and the variety of methodologies used, costing studies can be very useful nonetheless at the national and district levels. Financial information is a key component of the evidence that policymakers need to consider when

planning, implementing, and reviewing treatment programmes. Clearly, adoption of the use of standardized costing methodologies would make cost estimates more comparable but more importantly, adequate funding to conduct well-designed costing studies can help ensure that local decisions are informed by the efficiencies and scope for improvement that such studies can reveal.

That was ***HIV this week***, signing off.

Editors' notes on journal access

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