

HIV This Week: what scientific journals said

Welcome to the forty-third issue of *HIV This Week*! In this issue, we cover **men who have sex with men** (action needed now for HIV prevention in low- and middle-income countries; HIV re-emerging in high-income countries), **serostatus disclosure** (when are women in Abidjan most likely to disclose; family matters in China but will this change?), **disability** (disability-inclusive HIV programmes in northeast India: what is needed?), **TB/HIV** (the one-two punch of antiretroviral treatment and isoniazid preventive therapy in Rio de Janeiro; how declines in drug-resistant tuberculosis in Thailand occurred), **gender** (TIME magazine portrayals of AIDS in Africa; gender-specific, gender-intensified, and gender-imposed constraints on impact mitigation: what are they?; Western Cape understandings of gender identities and roles linked to gender-based violence), **contraception and HIV** (dual protection needed more than ever), **treatment** (longer lives in Denmark mean other risks; three treatment programmes with stark differences in one Uganda hospital), **epidemiology** (did the 1998-1999 civil war in Guinea-Bissau affect HIV transmission?; dramatic increases in survival for HIV-positive injecting drug users in Spain), **ethics** (should new technology override informed consent in HIV testing?), **condoms and culture** (why wasting semen is an issue among the Maasai), **young people** (much left to be done in Jamaica; adolescent sexual and reproductive programmes in Tanzania: are schools the ticket?; condom use at first sex predicts consistent condom use in Croatia), **prevention trials** (what happens when HIV prevention trials stop: maintaining effects in Kibera, Nairobi).

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1. Men who have sex with men

Baral S, Sifakis F, Cleghorn F, Beyrer C. Elevated risk for HIV infection among men who have sex with men in low- and middle-income countries 2000-2006: a systematic review. *PLoS Med.* 2007 Dec;4(12):e339.

Recent reports of high HIV infection rates among men who have sex with men (MSM) from Asia, Africa, Latin America, and the former Soviet Union suggest high levels of HIV transmission among MSM in low- and middle-income countries. To investigate the global epidemic of HIV among MSM and the relationship of MSM outbreaks to general populations, Baral and colleagues conducted a comprehensive review of HIV studies among MSM in low- and middle-income countries and performed a meta-analysis of reported MSM and reproductive-age adult HIV prevalence data. A comprehensive review of the literature was conducted using systematic methodology. Data regarding HIV prevalence and total sample size was sequestered from each of the studies that met inclusion criteria and aggregate values for each country were calculated. Pooled odds ratio (OR) estimates were stratified by factors including HIV prevalence of the country, UNAIDS-classified level of HIV epidemic, geographic region, and whether or not injection drug users (IDUs) played a significant role in a given epidemic. Pooled ORs were stratified by prevalence level; very low-prevalence countries had an overall MSM OR of 58.4 (95% CI 56.3-60.6); low-prevalence countries, 14.4 (95% CI 13.8-14.9); and medium- to high-prevalence countries, 9.6 (95% CI 9.0-10.2). Significant differences in ORs for HIV infection among men who have sex with men were seen when comparing low- and middle-income countries; low-income countries had an OR of 7.8 (95% CI 7.2-8.4), whereas middle-income countries had an OR of 23.4 (95% CI 22.8-24.0). Stratifying the pooled ORs by whether the country had a substantial component of IDU spread resulted in an OR of 12.8 (95% CI 12.3-13.4) in countries where IDU transmission was prevalent, and 24.4 (95% CI 23.7-25.2) where it was not. By region, the odds ratio for men who have sex with men in the Americas was 33.3 (95% CI 32.3-34.2); 18.7 (95% CI 17.7-19.7) for Asia; 3.8 (95% CI 3.3-4.3) for Africa; and 1.3 (95% CI 1.1-1.6) for the low- and middle-income countries of Europe. Men who have sex with men have a markedly greater risk of being infected with HIV compared with general population samples from low- and middle-income countries in the Americas, Asia, and Africa. Odds ratios for HIV infection in men who have sex with men are elevated across prevalence levels by country and decrease as general population prevalence increases, but remain 9-fold higher in medium-high prevalence settings. Men who have sex with men from low- and middle-income countries are in urgent need of prevention and care, and appear to be both understudied and underserved. **Editors' note: These results reveal that high HIV prevalence rates among men who have sex with men are not limited to any one epidemic level, prevalence category, region, or income level. Action is required to improve surveillance; conduct social science, epidemiological, and behavioural research; and effectively promote and protect the human rights of men who have sex with men while advocating against the stigma and discrimination which are undermining HIV prevention efforts.**

Jaffe HW, Valdiserri RO, De Cock KM. The re-emerging HIV/AIDS epidemic in men who have sex with men. *JAMA* 2007 Nov 28;298(20):2412-4.

Since the first report of AIDS in 5 men who have sex with men (MSM) from Los Angeles, MSM have accounted for a higher proportion of AIDS cases than any other group in countries such as the United States (44%), Canada (65%), and Australia (64%). Although MSM first brought HIV to the world's attention and, even in the absence of external funding, were the first to promote risk reduction strategies, prevention efforts for MSM appear to have faltered. In this article, Jaffe and colleagues examine current HIV epidemiology in MSM, discuss why the epidemic may be re-emerging, and describe what can be done to address it, particularly in the United States. Despite advances in HIV care,

almost 6000 MSM with AIDS in the United States died in 2005, and living with HIV is challenging. However, despite strong evidence for a re-emerging HIV epidemic in MSM, silence on this subject is nearly pervasive. Community mobilization of MSM was an important feature of the early response to HIV when the aphorism "silence equals death" captured the need for action. Many community-based organizations were founded to address this challenge, and the need for their advocacy and health promotion activities remains critically important today. Because most HIV transmission between adults is the result of voluntary behaviour, individuals can substantially influence the likelihood that they will either acquire or transmit HIV. A good example of an approach to personal responsibility is the "HIV Stops With Me" social marketing campaign, which emphasizes the role that HIV-positive individuals can take in ending the epidemic. Advances can occur through open discussion, increased HIV testing, funding to develop and implement evidence-based public health interventions, leadership from the gay community and public health officials, and recognition of the role of personal action. Failure to address difficult issues implies that the HIV epidemic in men who have sex with men must be accepted as inevitable; this cannot be allowed to happen. The tragedy of the epidemic for an earlier generation of MSM must not be repeated. **Editors' note: Effective HIV prevention strategies recognize that the job is never done. Re-invigorated, adequately resourced, and sustained community mobilisation for safer sex social norms is needed in many high-income countries where the number of men who have sex with men who are living with HIV is increasing.**

2. Serostatus disclosure

Brou H, Djohan G, Becquet R, Allou G, Ekouevi DK, Viho I, Leroy V, Desgrées-du-Loû A; ANRS 1201/1202/1253 Ditrane Plus Study Group. When do HIV-infected women disclose their HIV status to their male partner and why? A study in a PMTCT programme, Abidjan. *PLoS Med.* 2007 Dec;4(12):e342.

In Africa, women tested for HIV during antenatal care are counselled to share with their partner their HIV test result and to encourage partners to undertake HIV testing. Brou and colleagues investigate, among women tested for HIV within a prevention of mother-to-child transmission of HIV (PMTCT) programme, the key moments for disclosure of their own HIV status to their partner and the impact on partner HIV testing. Within the Ditrane Plus PMTCT project in Abidjan, 546 HIV-positive and 393 HIV-negative women were tested during pregnancy and followed-up for two years after delivery. Circumstances, frequency, and determinants of disclosure to the male partner were estimated according to HIV status. The determinants of partner HIV testing were identified according to women's HIV status. During the two-year follow-up, disclosure to the partner was reported by 96.7% of the HIV-negative women, compared to 46.2% of HIV-positive women ($\chi^2 = 265.2$, degrees of freedom [df] = 1, $p < 0.001$). Among HIV-infected women, privileged circumstances for disclosure were just before delivery, during early weaning (at 4 mo to prevent HIV postnatal transmission), or upon resumption of sexual activity. Formula feeding by HIV-infected women increased the probability of disclosure (adjusted odds ratio 1.54, 95% confidence interval 1.04-2.27, Wald test = 4.649, df = 1, $p = 0.031$), whereas household factors such as having a co-spouse or living with family reduced the probability of disclosure. The proportion of male partners tested for HIV was 23.1% among HIV-positive women and 14.8% among HIV-negative women ($\chi^2 = 10.04$, df = 1, $p = 0.002$). Partners of HIV-positive women who were informed of their wife's HIV status were more likely to undertake HIV testing than those not informed (37.7% versus 10.5%, $\chi^2 = 56.36$, df = 1, $p < 0.001$). In PMTCT programmes,

specific psychosocial counselling and support should be provided to women during the key moments of disclosure of HIV status to their partners (end of pregnancy, weaning, and resumption of sexual activity). This support could contribute to improving women's adherence to the advice given to prevent postnatal and sexual HIV transmission. **Editors' note: This study emphasises that there are "tellable" moments when HIV-positive women are more likely to disclose their status to their sexual partner - an essential step in obtaining understanding and moral support within the couple. Disclosure contributes to women's capacity to adhere to advice to prevent postnatal and sexual HIV transmission. Furthermore, men who were informed of their partner's HIV status, whether positive or negative, were much more likely to undertake HIV testing themselves.**

Li L, Sun S, Wu Z, Wu S, Lin C, Yan Z. Disclosure of HIV status is a family matter: field notes from China. *J Fam Psychol.* 2007 Jun;21(2):307-14.

This study examines the role that family plays in disclosure of HIV in China. In-depth semistructured interviews were conducted with 30 individuals living with HIV infected through different routes. The vast majority of participants were between the ages of 20 and 39 years old (93.4%) and about a third (36.7%) were women. Two primary disclosure processes, involuntary and voluntary, are described. In both processes, family members other than the patient are usually the first to know HIV status. Positive impacts of disclosure include strengthening family relations and help with medical care and counselling, whereas negative impacts include fear, isolation, avoidance, and psychological burden. This study illustrates that family is an intricate part of the disclosure process in China and demonstrates the importance of including families in HIV interventions. **Editors' note: This is the first systematic and in-depth description of HIV disclosure in China. Both voluntary and involuntary disclosure involve the family. In the former, HIV-positive people weigh the effect that disclosure would have on their families and when they decide to disclose it is often to a family member of the same generation (i.e. spouse or sibling) first. In the latter, parents are often chosen by a health care provider to bear the responsibility of informing the HIV-positive person. China is experiencing rapid social change and the practice of telling family members first may decline with the "Four Free One Care" national campaign. It provides four free services (medical assistance, anonymous HIV tests, education for orphans, and prenatal treatment for pregnant women) and one care service for elderly people who have lost children to AIDS.**

3. Disability

Morrow M, Arunkumar M, Pearce E, Dawson HE. Fostering disability-inclusive HIV/AIDS programs in northeast India: a participatory study. *BMC Public Health* 2007;267:125.

Manipur and Nagaland in northeast India are among the Indian states with the highest prevalence of HIV. Most prevention and care programs focus on identified "high risk" groups, but recent data suggest the epidemic is increasing among the general population, primarily through heterosexual sex. People with disability (PWD) in India are more likely than the general population to be illiterate, unemployed, and impoverished, but little is known of their HIV risk. This project aimed to enable HIV programs in Manipur and Nagaland to be more disability-inclusive. The objectives were to: explore HIV risk and risk perception in relation to PWD among HIV and disability programmers, and PWD themselves; identify HIV-related

education and service needs and preferences of PWD; and utilise findings and stakeholder consultation to draft practical guidelines for inclusion of disability into HIV programming. Data were collected through a survey and several qualitative tools. The findings revealed that participants believe PWD in these states are potentially vulnerable to HIV transmission due to social exclusion and poverty, lack of knowledge, gender norms, and obstacles to accessing HIV programs. Neither HIV nor disability organisations currently address the risks, needs, and preferences of PWD. The Guidelines produced in the project and disseminated to stakeholders emphasise opportunities for taking action with minimal cost and resources, such as using the networks and expertise of both HIV and disability sectors, producing HIV material in a variety of formats, and promoting accessibility to mainstream HIV education and services. The human rights obligations and public health benefits of modifying national and state policies and programs to assist this highly disadvantaged population are also highlighted. **Editors' note: This work highlights an important, underrepresented population with an increased risk of contracting HIV. People with disabilities often experience humiliation and social stigma. They may be vulnerable to exploitation, sexual abuse, and assumptions that they are not sexually active, along with decreased access to HIV prevention and care. HIV programmes and disability services providers need to work with disabled people to enable rapid and effective responses to the HIV-related needs of people with visual, hearing, physical, and intellectual impairments.**

4. TB/HIV

Golub JE, Saraceni V, Cavalcante SC, Pacheco AG, Moulton LH, King BS, Efron A, Moore RD, Chaisson RE, Durovni B. The impact of antiretroviral therapy and isoniazid preventive therapy on tuberculosis incidence in HIV-infected patients in Rio de Janeiro, Brazil. *AIDS* 2007 Jul 11;21(11):1441-1448.

Tuberculosis is a common complication and leading cause of death in HIV infection. Antiretroviral therapy (ART) lowers the risk of tuberculosis, but may not be sufficient to control HIV-related tuberculosis. Isoniazid preventive therapy (IPT) reduces tuberculosis incidence significantly, but is not widely used. Golub and colleagues analysed tuberculosis incidence in 11 026 HIV-infected patients receiving medical care at 29 public clinics in Rio de Janeiro, Brazil, between 1 September 2003 and 1 September 2005. Data were collected through a retrospective medical record review. The authors determined rates of tuberculosis in patients who received neither ART nor IPT, only ART, only IPT, or both ART and IPT. The overall tuberculosis incidence was 2.28 cases/100 person-years (PY) [95% confidence interval (CI) 2.06-2.52]. Among patients who received neither ART nor IPT, incidence was 4.01/100 PY. Patients who received ART had an incidence of 1.90/100 PY (95% CI 1.66-2.17) and those treated with IPT had a rate of 1.27/100 PY (95% CI 0.41-2.95). The incidence among patients who received ART and IPT was 0.80/100 PY (95% CI 0.38-1.47). Multivariate Cox proportional hazards modelling revealed a 76% reduction in tuberculosis risk among patients receiving both ART and IPT (adjusted relative hazard 0.24; P < 0.001) after adjusting for age, previous tuberculosis diagnosis, and CD4 cell counts at baseline. The use of both IPT and ART in HIV-infected patients is associated with significantly reduced tuberculosis incidence. In conjunction with expanded access to ART, the wider use of IPT in patients with HIV will improve tuberculosis control in high burden areas. **Editors' note: Overall tuberculosis incidence among Rio HIV-positive patients was 20-fold higher than for the general population of Brazil. Providing both antiretroviral drugs and isoniazid**

preventive therapy clearly has a more substantial impact on HIV-related tuberculosis than either strategy alone. Relatively simple screening measures can rule out active tuberculosis. Isoniazid is inexpensive, generally well tolerated, and carries a low risk of drug resistance. Scaling up its use for HIV-infected individuals should be a high priority.

Sungkanuparph S, Eampokalap B, Chottanapund S, Bed ST, Manosuthi W. Declining prevalence of drug-resistant tuberculosis among HIV/tuberculosis co-infected patients receiving antiretroviral therapy. *J Med Assoc Thai* 2007;90:884-8.

Drug-resistant tuberculosis (DR-TB) is a serious threat in developing countries where the prevalence of both HIV and TB are high. Antiretroviral therapy (ART) has been more accessible in these countries. The present study aimed to determine the impact of ART on the prevalence of DR-TB among HIV/TB co-infected patients. A retrospective cohort study was conducted among HIV-infected patients with culture-proved TB from 1999 to 2004. Susceptibilities of *Mycobacterium tuberculosis* to antituberculous drugs and rate of ART use were studied. There were 225 patients, mean age 35.8 years, 72.4% male and median CD4, 44 cells/mm³. Patients who had received ART increased from 18.5% in 1999 to 92.1% in 2004 (p<0.001). The prevalence of DR-TB in the years 1999 and 2004 were 48% and 7.9%, respectively (p<0.001). The prevalence of isoniazid- and rifampicin-resistance significantly declined in 2004 when compared with those in 1999 (p<0.05). The declines in the prevalence of DR-TB, INH- and RFP-resistance in HIV/TB co-infected patients are possibly attributable to the use of ART. In addition to the survival benefit from ART in HIV-infected patients, increasing use of ART among HIV-infected patients may eliminate DR-TB in this population. **Editors' note: The prevalence of drug-resistant tuberculosis is higher in HIV-infected patients. Although many factors may have contributed to the decline in drug-resistant tuberculosis in Thailand, substantial increases in the number of people on antiretroviral therapy must have played a role. HIV-treatment programmes can therefore have positive spin-offs for the general population when they reduce the amount of resistant tuberculosis circulating in a country.**

5. Gender

Brijnath B. It's about TIME: engendering AIDS in Africa. *Cult Health Sex*. 2007 Jul-Aug;9(4):371-86.

This paper analyses how TIME magazine represents sub-Saharan African women in its coverage of HIV. As rates of infection escalate across the continent, researchers are increasingly emphasising the need to understand the socioeconomic and cultural contexts that make women particularly vulnerable to infection. Yet popular media representations of AIDS continue to rely on older colonial imageries of Africa as the feminised, diseased 'dark continent'. This article identifies three major themes in TIME's representation of sub-Saharan African women and HIV: the metaphor of Africa as a woman in crisis, the construction of women as the means of transmission, and the engendered nature of the debate about the impact of international development policies. It is argued that the reliance on familiar cultural narratives often obscures the epidemiological, economic, and cultural realities within which sub-Saharan women live. Not merely a consequence of unprotected sex, AIDS in sub-Saharan Africa is also the result of global economics and politics, reflecting the inequities between the West and Africa, male and female, white and black. The paper concludes with a call for further research on the role of representations of HIV and its

actual routes of transmission. **Editors' note: Western media influence the discourse on AIDS at many levels. TIME magazine, which has a circulation of 28 million people, has taken a special interest in AIDS in sub-Saharan Africa. This article underscores the difference between the magazine's conceptual framework and the lived experience for many women which is rooted in the structural violence of poverty and women's limited choices which determine with whom they will have sex and under what conditions.**

Seeley J, Grellier R, Barnett T. Gender and HIV/AIDS impact mitigation in sub-Saharan Africa--recognising the constraints. *SAHARA J* 2004;1:87-98.

In discussions of gender and HIV, attention has focused on prevention. This is a vital area. However, Seeley and colleagues argue that there is also a need to focus more attention on the resulting impact of the epidemic, because inequalities that promote the spread of infection are also hampering containment and impact mitigation. The authors propose a framework highlighting the gendered constraints exacerbated by the epidemic. These constraints are reviewed under the following headings: Gender-specific constraints: stemming from the specific nature of gender relations themselves, such as the availability of labour in agriculture, business and for household tasks, as well as access to services and markets, and the incidence of gendered violence. Gender-intensified disadvantages: stemming from the uneven and often inequitable distribution of resources between men and women, including cultural/religious conventions, and the social rules and norms that regulate property rights, inheritance practices and resource endowments. Gender-imposed constraints: resulting from biases and partialities of those individuals who have the authority and power to allocate resources. These include provision of credit, information, agricultural extension and health care. The differential involvement of men and women in development programmes affects access to resources, as does political participation, including involvement in the formulation of policies aimed at poverty reduction. These constraints take us beyond gender relations and sexual behaviour. But women's lives will not change in the short term. The challenges they face in mitigating the impact of HIV will not be addressed by focusing only on their specific vulnerability to HIV infection. Unequal gender relations and the nature of 'development' need to be changed too. **Editors' note: This conceptual framework is helpful in understanding vulnerability to HIV and its impacts. Gender inequality and the inequitable distribution of resources are constraining both prevention and impact mitigation. Denial by governments and donors of the entrenched nature of these disparities and of the need for sustained social changes stands in the way of addressing women's lack of access to information, skills, assets, credit, and technology.**

Strebel A, Crawford M, Shefer T, Cloete A, Henda N, Kaufman M, Simbayi L, Magome K, Kalichman S. Social constructions of gender roles, gender-based violence and HIV/AIDS in two communities of the Western Cape, South Africa. *SAHARA J*. 2006 Nov;3(3):516-28.

The links between gender roles, gender-based violence, and HIV risk are complex and culturally specific. In this qualitative study Strebel and colleagues investigated how women and men in two black communities in the Western Cape, South Africa, constructed their gender identities and roles, how they understood gender-based violence, and what they believed about the links between gender relations and HIV risk. First the authors conducted 16 key informant interviews with members of relevant stakeholder organisations. Then they held eight focus group discussions with community members in single-sex groups. Key findings included the perception that although traditional gender roles were still very much

in evidence, shifts in power between men and women were occurring. Also, gender-based violence was regarded as a major problem throughout communities, and was seen to be fuelled by unemployment, poverty and alcohol abuse. HIV was regarded as particularly a problem of African communities, with strong themes of stigma, discrimination, and especially 'othering' evident. Developing effective HIV interventions in these communities will require tackling the overlapping as well as divergent constructions of gender, gender violence, and HIV which emerged in the study. **Editors' note: Knowledge and understanding of the specific social context of communities, including social constructions of gender and masculinities as well as shifting gender dynamics, is key to the design and implementation of effective prevention programmes addressing HIV and gender-based violence.**

6. Contraception and HIV

Baeten JM, Lavreys L, Overbaugh J. The influence of hormonal contraceptive use on HIV-1 transmission and disease progression. *Clin Infect Dis.* 2007 Aug 1;45(3):360-9.

Women account for nearly one-half of new human immunodeficiency virus type 1 (HIV-1) infections worldwide, including the majority of infections in Africa. Biological and epidemiological studies suggest that hormonal contraceptive use could influence susceptibility to HIV-1, as well as infectivity and disease progression for those who become infected. However, not all studies have shown this relationship, and many questions remain. Safe and effective contraceptive choices are essential for women with and at risk for HIV-1 infection. Thus, understanding the effect, if any, of hormonal contraception on HIV-1 disease among women is a public health priority. **Editors' note: Epidemiological and laboratory data suggest biologically plausible effects of hormonal contraception on HIV susceptibility, infectiousness, and disease progression but the findings are inconsistent. What is clear now is that hormonal contraception offers no protection against HIV. This underscores the importance of dual protection with condoms, greater involvement of men in reproductive health, and integrated sexual and reproductive health programming.**

7. Treatment

Lohse N, Hansen AB, Gerstoft J, Obel N. Improved survival in HIV-infected persons: consequences and perspectives. *J Antimicrob Chemother.* 2007 Sep;60(3):461-3.

A human immunodeficiency virus (HIV) patient in 2007 has the option to commence an antiretroviral regimen that is extremely efficacious in suppressing the virus and has few side effects. In a recent study, Lohse and colleagues estimated the median remaining lifetime of a newly diagnosed 25-year-old HIV-positive person to be 39 years. The prospect of a near-normal life expectancy has implications for the people living with HIV as well as for the handling of the disease in the healthcare system. Patients can now on a long-term perspective plan their professional career, join a pension plan, and start a family. Further, they may expect to be treated equally with other members of society with respect to access to mortgage, health insurance, and life insurance. As the infected population ages, more patients will contract age-related diseases, and the disease burden on some individuals may even come to be dominated by non-HIV-related conditions that may have a worse prognosis and therefore become more important than HIV-related conditions. Despite the improvements in antiretroviral therapy, there is still an excess mortality among HIV patients, which appears to be only partially attributable to immunodeficiency, with lifestyle

factors potentially playing a pronounced role. Consequently, an effort to further increase survival must target risk factors for both HIV-related and -unrelated mortality. The continuation of the positive trend may be achieved by increased HIV testing, earlier initiation of antiretroviral therapy, improved drug adherence, prevention and treatment of HIV-unrelated co-morbidity, and collaboration with other medical specialists to treat an ageing co-morbidity-acquiring HIV population. **Editors' note: In Denmark, the estimated median remaining lifetime for a 25 year old person living with HIV has increased from 8 years in 1995-96 to 23 years in 1997-99 to 33 years in 2000-05. In the absence of hepatitis C co-infection it is 39 years in comparison with 51 years for a 25 year old without HIV infection. Increased life expectancy as a result of antiretroviral therapy is highly encouraging but, as pointed out here, attention needs to turn to age-related illness and behavioural risks affecting prognosis.**

Larsson EC, Okong P, Thorson A, Ekström AM. Antiretroviral treatment of HIV in Uganda: a comparison of three different delivery models in a single hospital. *Trans R Soc Trop Med Hyg* 2007 Sep;101(9):885-92.

This exploratory study examined health workers' perspectives and the type of HIV care received in three different delivery models of antiretroviral treatment (ART) at St. Francis Hospital, Kampala, Uganda. Two of the clinics were financed by external donors and the third through out-of-pocket payments. Key informant interviews with health workers investigated potential challenges with ART care, and exit interviews with patients collected data on the care received. Despite the fact that all three clinics were located in the same hospital, services offered and quality of care varied extensively. Health staff at all ART clinics identified the lack of collaboration between different HIV programmes and low patient adherence as the main challenges. More women than men accessed ART through the externally financed programmes. These programmes provided more comprehensive care because of higher staff density and more frequent laboratory monitoring compared to the private clinic. Despite these shortcomings and the fact that prescriptions were often renewed without a preceding medical check-up at the private clinic, many chose to pay a monthly average equivalent of US\$60 for ART in return for privacy and access to drugs without HIV disclosure requirements. Stigma and fear of abandonment were thought to be the main barriers for access to ART. **Editors' note: Three antiretroviral programmes in the same hospital have major differences in services provided, disclosure requirements, population served, and financing models. Purchasing privacy in the private clinic may lead to treatment interruptions from cash shortages, with a higher resultant risk of antiretroviral drug resistance. Lack of coordination between programmes is an inefficient use of human resources and leads to concurrent registration which contributes to black market activity and medication sharing. Comparative studies such as this can inform rationalisation of services to maximize limited resources.**

8. Epidemiology

Månsson F, Alves A, Silva ZJ, Dias F, Andersson S, Biberfeld G, Fenyö EM, Norrgren H. Trends of HIV-1 and HIV-2 prevalence among pregnant women in Guinea-Bissau, West Africa: possible effect of the civil war 1998-1999. *Sex Transm Infect.* 2007 Oct;83(6):463-7.

Sentinel surveys in Bissau, the capital of Guinea-Bissau, have shown low prevalence of HIV-1 but high HIV-2 prevalence before 1998. Guinea-Bissau experienced a civil war in 1998-1999. Månsson and colleagues aimed to examine specifically the trends of HIV prevalence from antenatal surveys in

Bissau, Guinea-Bissau in 1987-2004, and whether the civil war in 1998-1999 could have an effect on HIV prevalence levels after the conflict. Since 1987, anonymous HIV testing in delivering women has been performed at the maternity clinic, Simão Mendes National Hospital, Bissau, as part of the national sentinel surveillance programme. Consecutive sampling was performed for approximately 3 months between September and December each year. Serological analyses were performed at the National Public Health Laboratory in Guinea-Bissau. A total of 20 422 women were tested for HIV between 1987 and 2004. The total HIV-1 prevalence increased from 0.0% in 1987 to 4.8% in 2004 and the total HIV-2 prevalence decreased from 8.3% in 1987 to 2.5% in 2004. The HIV-1 prevalence increased from 2.5% in 1997 to 5.2% in 1999, but stabilized in subsequent years. There was a significant increase in HIV-1 prevalence in the years 1987-2004 and a significant decline in HIV-2 prevalence over the same period. The civil war in 1998-1999 may have sparked HIV-1 transmission, as HIV-1 prevalence more than doubled between 1997 and 1999, but there is no evidence of a long-term effect on the trends of HIV-1 or HIV-2 prevalence. **Editors' note : Civil war can provoke changed sexual behaviour, including increased commercial sex, transitory sexual relations, and sexual abuse, as well as weakened health structures leading to unsafe injections and blood transfusion. These may increase HIV transmission if HIV is present; however, there are examples of HIV transmission slowing during conflicts related to reduced mobility and other factors. Long-term monitoring helps determine trends and reduces the risk of jumping to conclusions. In this case, it is unclear whether the war had an effect but peace time certainly has been associated with stability in HIV prevalence.**

Muga R, Langohr K, Tor J, Sanvisens A, Serra I, Rey-Joly C, Muñoz A. Survival of HIV-infected injection drug users (IDUs) in the highly active antiretroviral therapy era, relative to sex- and age-specific survival of HIV-uninfected IDUs. *Clin Infect Dis*. 2007 Aug 1;45(3):370-6.

In the era of highly active antiretroviral therapy (HAART), it remains unclear whether human immunodeficiency virus (HIV)-infected injection drug users (IDUs) have durations of survival similar to those for comparable HIV-uninfected IDUs. The goal of this study was to compare survival durations of HIV-infected and HIV-uninfected IDUs for the period 1987-2004. Demographic data, drug use characteristics, and biological markers were obtained at the time of admission to a substance abuse treatment program. The outcome of interest was the duration of survival after admission, and the primary exposure was HIV infection. Vital status was ascertained by means of the mortality register by the end of 2004. Three calendar periods, which were defined on the basis of use of specific therapies, were considered: 1987-1991 (the antiretroviral monotherapy era), 1992-1996 (the dual combination therapy era and the era when methadone was introduced in Spain), and 1997-2004 (the era of HAART and of established methadone programs). Muga and colleagues used Cox regression methods allowing for late entries to handle the contribution of persons who survived a given period and entered the following period with nonzero time. The authors compared HIV-uninfected and HIV-infected IDUs with adjustments for age, sex, and duration of follow-up after admission. A total of 1209 IDUs were admitted to the hospital during the period from January 1987 through December 2004, and 1181 were eligible for the study. The majority (81.3%) of patients were men. The mean age (+/- standard deviation) at admission was 27.8+/-5.6 years, and the mean duration of injection drug use (+/- standard deviation) was 7.6+/-5.0 years. The prevalences of HIV and hepatitis C virus infections were 59.0% and 92.3%, respectively, and the total duration of follow-up was 10,116 person-years. Although survival duration for HIV-uninfected IDUs in 1997-2004 was similar to the duration in earlier periods, the duration for HIV-infected IDUs improved significantly since 1997 ($P<.01$). Furthermore, among patients admitted in the last period, the survival durations

for HIV-uninfected and HIV-infected IDUs were virtually the same (relative hazard, 0.89; 95% confidence interval, 0.44-1.81). The duration of survival of HIV-infected IDUs has improved substantially since 1997, reaching rates similar to the rates for HIV-seronegative IDUs who accessed the health care system in the era of HAART. **Editors' note: Antiretroviral treatment has had dramatic effects on survival for injecting drug users, a fact that is not well appreciated. In Spain, improved survival was likely also related to access to methadone substitution therapy, prophylaxis for opportunistic infections, harm reduction intervention, and regular clinical care.**

9. Ethics

Smith CB, Battin MP, Francis LP, Jacobson JA. Should rapid tests for HIV infection now be mandatory during pregnancy? Global differences in scarcity and a dilemma of technological advance. *Developing World Bioeth* 2007;7:86-103.

Since testing for HIV infection became possible in 1985, testing of pregnant women has been conducted primarily on a voluntary, 'opt-in' basis. Faden, Geller and Powers, Bayer, Wilfert, and McKenna, among others, have suggested that with the development of more reliable testing and more effective therapy to reduce maternal-foetal transmission, testing should become either routine with 'opt-out' provisions or mandatory. Smith and colleagues ask, in the light of the new rapid tests for HIV, such as OraQuick, and the development of antiretroviral treatment that can reduce maternal-foetal transmission rates to <2%, whether that time is now. Illustrating their argument with cases from the United States (US), Kenya, Peru, and an undocumented Mexican worker in the US, the authors show that when testing is accompanied by assured multi-drug therapy for the mother, the argument for opt-out or mandatory testing for HIV in pregnancy is strong, but that it is problematic where testing is accompanied by adverse events such as spousal abuse or by inadequate intrapartum or follow-up treatment. The difference is not a 'double standard', but reflects the presence of conflicts between the health interests of the mother and the foetus - conflicts that would be abrogated by the assurance of adequate, continuing multi-drug therapy. In light of these conflicts, where they still occur, careful processes of informed consent are appropriate, rather than opt-out or mandatory testing. **Editors' note: The continued debate over mandatory, opt-out, provider-offered, and opt-in testing is non-productive. Technologies advances should never override respect for the principle of informed consent for medical procedures. Mandatory HIV testing is not an effective public health measure and has never been recommended by WHO/UNAIDS. Nevertheless, provision of antiretroviral treatment for women who need it, whether pregnant or not, is in the interests of both the woman and her children and should be a high priority.**

10. Condoms and culture

Coast E. Wasting semen: context and condom use among the Maasai. *Cult Health Sex* 2007;9:387-401.

Motivations for condom use are intricate and the behaviour of individuals and couples takes place in complex sociocultural settings. This study examines in detail the sociocultural context of condom use among the Maasai, an east African agropastoralist population. A review of the ethno-demographic literature demonstrates the sociocultural significance of semen in a range of settings. A detailed description of Maasai values relating to semen is followed by an analysis presenting results from a sample survey and focus group discussions.

Whilst reported knowledge of AIDS was high (100%), unprompted reporting of condoms as a way of preventing HIV infection was low. When asked directly about knowledge of condoms, awareness appeared high but levels of detailed condom knowledge were very low. Of those individuals who reported that they knew what a condom was, only 17% said that they knew how they worked. Focus group discussions reveal strongly held opinions and beliefs connected to condoms and their use, including their contraceptive effects, negative impact on quality of sex, the wasting of semen, and the 'otherness' of condoms. The implications of these findings for condom provision and uptake are considered. **Editors' note: The giving and receiving of semen is valued highly in Maasai culture. Learning the reasoning behind preferences to use or not use condoms can be educational and may be surprising. Understanding "why" and "why not" is the first step in designing programmes to prevent sexual transmission of HIV that will be effective. In the long run, an effective vaginal microbicide might be more acceptable in the Maasai cultural context than male or female condoms.**

11. Young People

Norman LR, Figueroa JP, Wedderburn M, Byfield L, Bourne D, Gebre Y. Trends in HIV risk perception, condom use and sexual history among Jamaican youth, 1996-2004. *Int J Adolesc Med Health*. 2007 Apr-Jun;19(2):199-207.

As the number of HIV cases continues to increase among youth, aged 15-24 years, it becomes critically important to identify the factors that are contributing to this increase. Trends in perceived risk and risk behaviours were examined among youth by sex and age in an attempt to address this concern. National-level cross-sectional data across three time periods (1996, 2000, 2004) gathered from youths, aged 15-24 years in Jamaica for six outcomes were examined (perceived risk, ever had sex, initiation of sex before age 14, multiple sexual partnerships, condom use at last sex with regular and non-regular partners). Trend analyses were employed for each outcome for the total sample and separately by sex and age. A significant positive increase in condom use emerged; males reported higher levels of condom use at last sex with most recent regular partner (55.7% in 1996, 67.9% in 2004, $p < 0.01$). Condom use by females with regular and non-regular partners did not increase. There was no significant change in the percent of youths reporting multiple partnerships, the percent initiating sex or age at first sex. Youths did perceive themselves to be at greater risk for HIV in 2004 than in 1996 (40.0% vs. 17.6%, $p < 0.001$). These analyses revealed inadequate protective behaviour adoption by Jamaican youths. Prevention programs targeting youths need to be expanded significantly, be culturally relevant, and also address social vulnerability. **Editors' note: Cross-sectional studies such as these four years apart are measuring characteristics of different cohorts of young people aged 15-24 years rather than changes in one group of individuals followed over time. Some of the trends noted here are positive but much needs to be done in Jamaica, particularly on condom use by young women, age at first sex, and multiple partnerships.**

Plummer ML, Wight D, Wamoyi J, Nyalali K, Ingall T, Mshana G, Shigongo ZS, Obasi AI, Ross D A. Are schools a good setting for adolescent sexual health promotion in rural Africa? A qualitative assessment from Tanzania. *Health Educ Res*. 2007 Aug;22(4):483-99.

African adolescents are at high risk of poor sexual health. School-based interventions could reach many adolescents in a sustainable and replicable way, if enrolment, funding, and infrastructure are adequate. This study examined pupils', recent school leavers', parents',

and teachers' views and experiences of rural Tanzanian primary schools, focusing on the implications for potential sexual health programmes. From 1999 to 2002, participant observation was conducted in nine villages for 158 person-weeks. Half of Year 7 pupils were 15-17 years old, and few went on to secondary school, suggesting that primary schools may be a good venue for such programmes. However, serious challenges include low enrolment and attendance rates, limited teacher training, little access to teaching resources, and official and unofficial practices that may alienate pupils and their parents, e.g. corporal punishment, pupils being made to do unpaid work, forced pregnancy examinations, and some teachers' alcohol or sexual abuse. At a national level, improved teacher training and supervision are critical, as well as policies that better prevent, identify, and correct undesired practices. At a programme level, intervention developers need to simplify the subject matter, introduce alternative teaching methods, help improve teacher-pupil and teacher-community relationships, and closely supervise and appropriately respond to undesired practices. **Editors' note: Substantial long-term efforts to improve infrastructure, resources, and teacher capacity and supervision are required in many low-income countries. Nonetheless, primary school-based adolescent and sexual health programmes may be the best way to reach adolescents in cost-effective, large-scale, and fairly in-depth ways.**

Stulhofer A, Graham C, Bozicevic I, Kufirin K, Ajdukovic D. HIV/AIDS-Related Knowledge, Attitudes And Sexual Behaviors as Predictors of Condom Use Among Young Adults in Croatia. *Int Fam Plan Perspect*. 2007 Jun;33(2):58-65.

Although Croatia is still in an early stage of HIV infection, the rising rates of infection in other central and eastern European countries suggest the need to understand HIV knowledge, attitudes and sexual behaviours among young adults in Croatia. Data from a multistage probability sample of 1,093 Croatians aged 18-24 surveyed in 2005 were used in regression models that examined the associations between HIV-related knowledge, attitudes, and sexual behaviour, and predictors of condom use at first and last sexual intercourse and condom use consistency. For both men and women, condom use at first intercourse and positive attitudes toward condom use were the most robust predictors of condom use at last intercourse and consistent condom use. In addition, for women, having peers with less traditional attitudes regarding sexuality was associated with consistent condom use (odds ratio, 1.3). Risky sexual behaviours are common among young adults in Croatia. Pragmatic and comprehensive sex education programs should target young people before they become sexually active. **Editors' note: In Croatia, as elsewhere, using a condom the first time one has sex predicts consistent condom use. Rather than questioning "when do you have to use a condom" young people need to be asking "when will it be time to stop using condoms". In Croatia, where only one-fifth of respondents reported consistent condom use in the last 12 months there is clearly a lot of ground to cover.**

12. Prevention trials

Ngugi EN, Chakkalackal M, Sharma A, Bukusi E, Njoroge B, Kimani J, Macdonald KS, Bwayo JJ, Cohen CR, Moses S, Kaul R; The Kibera HIV Study Group . Sustained Changes in Sexual Behavior by Female Sex Workers After Completion of a Randomized HIV Prevention Trial. *J Acquir Immune Defic Syndr*. 2007 Aug 15;45(5):588-94.

Behavioural interventions in female sex workers (FSWs) are associated with changes in sexual behaviour and reduced rates of sexually transmitted infections (STIs) and HIV. Ngugi

and colleagues examined the sustainability of such interventions. HIV-uninfected Kenyan FSWs were enrolled in a clinical trial that provided free male condoms, community and clinic-based counselling, and STI management. After trial completion, scaled-back community-based resources remained in place. More than a year later, women were invited to complete a follow-up behavioural questionnaire and to undergo STI and HIV counselling and testing. Individual changes in sexual behaviour were assessed by paired analysis. One hundred seventy-two women participated in the resurvey 1.2 years after trial termination. Client numbers had risen (paired t test, $P < 0.001$), but condom use had also increased ($P < 0.001$); Regular partners accounted for a greater proportion of unprotected FSW sexual encounters (35% vs. 10%; $P < 0.001$). Only 9 (5.2%) of 172 women had a conventional STI, and the follow-up HIV incidence of 1.6 per 100 person years was similar to that during the trial period (3.7 per 100 person years). Incident STIs and HIV were associated with the frequency of unprotected sex and younger age. Less intensive community-based risk reduction services after clinical trial termination may support ongoing reductions in STIs and HIV among high-risk female sex workers. **Editors' note: Following the end of this prevention trial which included monthly antibiotic prophylaxis, client numbers which had fallen in the trial from 16.2 to 2.8 per week rose to 6.1. Condom use which had increased during the trial continued to increase but more slowly with the result that unprotected casual encounters increased from 23.3 to 35.6 per year, in part related to an increase in the proportion of clients who were regular clients. Community-based risk reduction services after clinical trial termination need to provide a robust framework for sustained changes in sexual behaviour, addressing needs and building skills among younger women while sustaining safer sex community norms.**

That was *HIV This Week*, signing off.

Editors' notes on journal access

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