Welcome to the eighteenth issue of *HIV This Week*! This issue kicks off with open access publications (their advantages if you want to be cited and influence research, policy and programming), male circumcision (acceptability in traditionally non-circumcising communities in 9 African countries), condoms (the new female nitrile condom - just how cost-effective could it be?), living with HIV (the profiles of women who disclose in Barbados; individual and structural constraints perpetuating multiple layers of stigma among Asians and Pacific Islanders in the US), gender (HIV risk behaviour and gender-based violence in rural South Africa), epidemiology (knowing the distribution of CD4 counts in a population improves health planning for treatment roll out; HIV subtype distributions around the world), network research (mapping social influence can be key in designing programmes), sexual behaviour (unsafe sexual practices among sex workers in Meru, Kenya), TB/HIV (moving faster towards universal access), and young people (internet programming to improve knowledge and attitudes in China).

To find out how you can access a majority of scientific journals free of charge, please see the last page of this issue or check the *HIV This Week* blog on the UNAIDS website at [http://hivthisweek.unaids.org](http://hivthisweek.unaids.org).

We want to be as helpful to you as we can, so please let us know what your interests are and what you think of *HIV This Week* by sending a comment to hivthisweek@unaids.org or by posting one on the *HIV This Week* blog. If you would like to recommend an article for inclusion in *HIV This Week*, please let us know.

Don’t forget that you can find a wealth of information on the HIV epidemic and responses to it at [http://www.unaids.org](http://www.unaids.org).

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1. Open access publications


Open access (OA) to the research literature has the potential to accelerate recognition and dissemination of research findings, but its actual effects are controversial. This was a longitudinal bibliometric analysis of a cohort of OA and non-OA articles published between 8 June 2004 and 20 December 2004 in the same journal (PNAS: Proceedings of the National Academy of Sciences). Article characteristics were extracted, and citation data were compared between the two groups at three different points in time: at "quasi-baseline" (December 2004, 0-6 months after publication) and in October 2005 (10-16 months after publication). Potentially confounding variables, including number of authors, authors' lifetime publication count and impact, submission track, country of corresponding author, funding
organization, and discipline, were adjusted for in logistic and linear multiple regression models. A total of 1,492 original research articles were analyzed: 212 (14.2% of all articles) were OA articles paid by the author, and 1,280 (85.8%) were non-OA articles. The average number of citations of OA articles was higher compared to non-OA articles (April 2005: 1.5 [SD 2.5] versus 1.2 [SD 2.0]; P=0.002; October 2005: 6.4 [SD 10.4] versus 4.5 [SD 4.9]; P<0.001). In a logistic regression model, controlling for potential confounders, OA articles compared to non-OA articles remained twice as likely to be cited (OR 2.1, 95%CI 1.5-2.9) in the first 4-10 months after publication (April 2005), with the odds ratio increasing to 2.9 (95%CI 1.5-5.5) 10-16 months after publication (October 2005). Articles published as an immediate OA article on the journal site have higher impact than self-archived or otherwise openly accessible OA articles. We found strong evidence that, even in a journal that is widely available in research libraries, OA articles are more immediately recognized and cited by peers than non-OA articles published in the same journal. OA is likely to benefit science by accelerating dissemination and uptake of research findings. Editors’ note: Open access journals have a novel business plan compared to the standard model for medical and other scientific journals to which only paid-up subscribers have access. Successful authors who have passed stringent peer review pay to have their articles published using funds usually from their institution or research grants. Open access articles can be from an open access journal or a subscriber-only access journal. They are placed, without embargo, in at least one widely and internationally recognized open access repository (such as PubMed Central). The author(s) or copyright owner(s) irrevocably grant(s) to any third party, in advance and in perpetuity, the right to use, reproduce or disseminate the research article in its entirety or in part, in any format or medium, provided that no substantive errors are introduced in the process, authorship is attributed and correct citation and bibliographic details are given. As you can see in this study, open access journals and articles, get your message out. More widespread knowledge dissemination is more likely to influence research, policy, and programmes.

2. Male circumcision


Based on epidemiological, clinical and experimental evidence, male circumcision could have a significant impact on the HIV epidemic in selected areas. Westercamp and Bailey reviewed studies of the acceptability of male circumcision in sub-Saharan Africa to assess factors that will influence uptake of circumcision in traditionally non-circumcising populations. Thirteen studies from nine countries were identified. Across studies, the median proportion of uncircumcised men willing to become circumcised was 65% (range 29-87%). Sixty nine percent (47-79%) of women favoured circumcision for their partners, and 71% (50-90%) of men and 81% (70-90%) of women were willing to circumcise their sons. Because the level of acceptability across the nine countries was quite consistent, additional acceptability studies that pose hypothetical questions to participants are unnecessary. The authors recommend pilot interventions making safe circumcision services available in conjunction with current HIV prevention strategies and evaluating the safety and acceptability of circumcision. Editors’ note: The determinants of male circumcision in traditionally circumcising populations, such as cultural identity, do not appear to be major barriers to circumcision in non-circumcising communities in these countries. The studies suggest that sanctions...
against male circumcision in traditionally non-circumcising communities tend to be less severe than the converse, i.e. not being circumcised in a circumcising community.

3. Condoms

Dowdy DW, Sweat MD, Holtgrave DR. Country-wide distribution of the nitrile female condom (FC2) in Brazil and South Africa: a cost-effectiveness analysis. AIDS 2006;20:2091-98.

Dowdy and colleagues conducted cost-effectiveness analysis assessing HIV infections averted annually and incremental cost per HIV infection averted for country-wide distribution of the new nitrile female condom (FC2) among sexually active individuals, 15-49 years, with access to publicly distributed condoms in Brazil and South Africa. In Brazil, expansion of FC2 distribution to 10% of current male condom use would avert an estimated 604 (range 412-831) HIV infections at $20,683 (range 13,497-29,521) per infection averted. In South Africa, 9577 (range 6,539-13,270) infections could be averted, at $985 (range 633-1,412) per infection averted. The estimated cost of treating one HIV-infected individual is $21,970 (range 18,369-25,719) in Brazil and $1,503 (range 1245-1,769) in South Africa, indicating potential cost savings. The incremental cost of expanded distribution would be reduced to $8,930 (range 5,864-13,163) per infection averted in Brazil and $374 (range 237-553) in South Africa by acquiring nitrile female condoms through a global purchasing mechanism and increasing distribution threefold. Sensitivity analyses show model estimates to be most sensitive to the estimated prevalence of sexually transmitted infections, total sexual activity, and fraction of nitrile female condoms properly used. The authors conclude that expanded distribution of FC2 in Brazil and South Africa could avert substantial numbers of HIV infections at little or no net cost to donor or government agencies. Nitrile female condoms (FC2) may be a useful and cost-effective supplement to the male condom for preventing HIV. Editors' note: The results of this cost-effectiveness analysis, which varied inputs within each of the country analyses, including the unit costs of product acquisition and distribution, will be of great interest to the current UN team, led by UNFPA, which is negotiating public prices for this new nitrile female condom.

4. Living with HIV


Kumar and colleagues determined the prevalence of self-disclosure of HIV status among the postparturient HIV-infected women and described the correlates of disclosure among all known HIV-infected postparturient women in Barbados who delivered during 1997 through 2004. Sociodemographic data are routinely collected from all HIV-infected postparturient women. Data on disclosure were collected through one-to-one interview of the consenting women included in this study. One hundred thirty nine women were studied. Forty women (28.8%) had self-disclosed their HIV status to other people including their current sex partner. Among women who did not disclose their HIV status to anybody, 30 (30%) gave fear of stigmatization as the reason for nondisclosure, while 23 (23%) did not disclose their status as they feared abnormal reaction from their current sex partner and possible violence directed at them. Women who had disclosed their HIV status were more likely to use condoms during all sexual encounters, less likely to have had a subsequent pregnancy from a
different sex partner, more likely to have a partner who had been tested for HIV, and more likely to be attending the centralized HIV clinic for follow-up and care compared to those who did not disclose. A substantial proportion of HIV-infected postparturient women never disclosed their result to a partner or a close relative. Lack of disclosure may have limited their ability to engage in preventive behaviours or to obtain the necessary emotional support for coping with their serostatus or illness.


Cross-sectional findings have shed considerable light on the relationships between illness stigma and psychological outcomes among persons living with HIV in the United States. However, no studies have examined the possible long-term consequences of illness stigma on mental health among Asians and Pacific Islanders living with HIV, a group particularly vulnerable to HIV stigma due to ingrained sociocultural norms. This 2-year longitudinal study examined the relationship between five HIV-stigma factors (social rejection, negative self-worth, perceived interpersonal insecurity, financial insecurity, discretionary disclosure) and changes in psychological distress dimensions (self-esteem, hopelessness, dread, confused thinking, sadness, anxiety) among a convenience sample of 44 HIV-seropositive Asians and Pacific Islanders in New York City from 2002 to 2004. Undocumented Asians independently endorsed higher levels of perceived interpersonal insecurity and lower levels of self-esteem than documented participants at both baseline and 2-year follow-up. Results from hierarchical multiple regression analyses indicated that baseline social rejection and perceived interpersonal insecurity were significantly associated with changes in self-esteem at 2-year follow-up, controlling for baseline self-esteem and physical symptoms at follow-up. An interaction effect between baseline financial insecurity and discretionary disclosure was significantly associated with dread at 2-year follow-up. The authors conclude that findings highlight the importance of stigma reduction interventions that: (1) recognize multiple layers of stigma based sexual orientation, gender, and immigration status; and (2) address both individual and structural constraints that perpetuate HIV-stigma among Asians and Pacific Islanders in the United States.

5. Gender


Dunkle and colleagues examined associations between the perpetration of intimate partner violence and HIV risk behaviour among young men in rural South Africa enrolling in a randomized controlled trial of the behavioural intervention, Stepping Stones. In structured interviews with 1275 sexually experienced men aged 15-26 years from 70 villages in the rural Eastern Cape, the men were asked about the type, frequency, and timing of violence against female partners, as well as a range of questions about HIV risk behaviours. A total of 31.8% of men reported the perpetration of physical or sexual violence against female main partners. Perpetration was correlated with higher numbers of past year and lifetime sexual partners, more recent intercourse, and a greater likelihood of reporting casual sex partners, problematic substance use, sexual assault of non-partners, and transactional sex. Men who
reported both physical and sexual violence against a partner, perpetration both before and within the past 12 months, or more than one episode of perpetration, reported significantly higher levels of HIV risk behaviour than men who reported less severe or less frequent perpetration of violence. The authors conclude that young men who perpetrate partner violence engage in significantly higher levels of HIV risk behaviour than non-perpetrators, and more severe violence is associated with higher levels of risky behaviour. HIV prevention interventions must explicitly address the links between the perpetration of intimate partner violence and HIV risk behaviour among men, as well as the underlying gender and power dynamics that contribute to both. Editors’ note: Addressing gender-based violence is one of the seven focal areas of the Global Coalition on Women and AIDS, precisely because of the strong link that has been documented between both physical and sexual violence and HIV.

6. Epidemiology


The variability in CD4+ cell counts within and among HIV-positive and -negative African populations has not been explained but has important implications for understanding the incidence of HIV-related opportunistic infections, especially tuberculosis, in both individuals and populations. In HIV-negative African adults, CD4+ cell counts vary within populations (range 169-603 cells/μl) and among populations (means vary from 699 to 1244 cells/μl), with similarly wide variations in HIV-positive adults. Williams and colleagues developed dynamic mathematical models to predict the distribution of CD4+ cell counts in HIV-positive adults using the distribution in HIV-negative adults. Under the assumption that survival is independent of the CD4+ cell count before seroconversion, the authors fitted the observed distributions in HIV-positive adults. At a CD4+ cell count of 200 cells/μl, the median life expectancy of HIV-positive Zambians (4.0 years) was predicted to be 1.7 times that of HIV-positive South Africans (2.3 years). The authors conclude that the model provides a way to estimate the changing distribution of CD4+ cell counts and, hence, the changing incidence of HIV-related opportunistic infections as the epidemic matures. This could substantially improve the planning of health services, including the need and demand for antiretroviral therapy. Better data are needed to test the model and its assumptions more rigorously and to fully understand the variability in CD4+ cell counts within and among populations.


Hemelaar and colleagues estimated the global and regional distribution of HIV-1 subtypes and recombinants in 2004, by combining molecular epidemiological data on HIV-1 subtype distribution in individual countries with country-specific estimates of the number of people living with HIV. HIV-1 subtype data were collected for 23,874 HIV-1 samples from 70 countries, which together accounted for 89% of all people living with HIV worldwide in 2004. The proportions of HIV-1 infections due to various subtypes detected in each country were combined with the number of HIV infected people in the respective countries to generate regional and global HIV-1 subtype distribution estimates. Subtype C accounted for 50% of all infections worldwide in 2004. Subtypes A, B, D and G accounted for 12%, 10%, 3% and 6%.
respectively. The subtypes F, H, J and K together accounted for 0.94% of infections. The circulating recombinant forms CRF01_AE and CRF02_AG each were responsible for 5% of cases, and CRF03_AB for 0.1%. Other recombinants accounted for the remaining 8% of infections. All recombinant forms taken together were responsible for 18% of infections worldwide. The authors conclude that combining data on HIV-1 subtype distribution in individual countries with country-specific estimates of the number of people living with HIV provided a good method to generate estimates of the global and regional HIV-1 genetic diversity in 2004. The results could serve as an important resource for HIV scientists, public health officials and HIV vaccine developers. Editors’ note: The extent to which samples which are sub-typed in reference laboratories represent the overall sub-type distribution in a country can vary significantly. Recording epidemiological information for samples would strengthen sub-type surveillance considerably since it could then be linked to sub-type information and estimates of sub-population sizes. The WHO/UNAIDS HIV Vaccine Initiative is supporting laboratory strengthening in countries to improve both country and global estimates of HIV sub-type distributions.

7. Network research


Risk networks can transmit HIV or other infections; social networks can transmit social influence and thus help shape norms and behaviours. This primarily-theoretical paper starts with a review of network concepts, and then presents data from a New York network study to study patterns of sexual and injection linkages among IDUs and other drug users and nonusers, men who have sex with men, women who have sex with women, other men and other women in a high-risk community and the distribution of HIV, sex at group sex events, and health behaviours in this network. It then discusses how risk network microstructures might influence HIV epidemics and urban vulnerability to epidemics; what social and other forces (such as “Big Events” like wars or ecological disasters) might shape networks and their associated norms, practices and behaviours; and how network theory and research have and may continue to contribute to developing interventions against HIV epidemics. Editors’ note: Mapping social influence networks, as well as sexual and/or injecting networks can help identify key nodal points for adoption and dissemination of new social norms for behaviour.

8. Sexual behaviour


Schwandt and colleagues examined the practices of anal intercourse and dry sex within a cohort of female sex workers in Kenya, focusing on the prevalence and perceived risk of the practices, demographic and behavioural correlates, and association with sexually transmitted infections. The authors conducted a survey among female sex workers in Meru, Kenya, with 147 participants randomly sampled from an existing cohort of self identified female sex workers. 40.8% of participants reported ever practising anal intercourse and 36.1% reported
ever practising dry sex. Although the majority of women surveyed believed anal intercourse and dry sex to be high risk practices for HIV infection compared with vaginal sex, about one third of women reported never or rarely using condoms during anal intercourse and about 20% reported rarely using condoms during dry sex. Reported consistent condom use was lower with both of these practices than with penile-vaginal intercourse. Anal intercourse was associated with experience of recent forced sexual intercourse, while dry sex was not. Anal intercourse was almost always initiated by clients, whereas dry sex was likely to be initiated by the women themselves. Sex workers reported charging higher fees for both practices than for vaginal intercourse. Both practices were associated with reported symptoms and diagnoses of STI. The authors conclude that both anal intercourse and dry sex were common in this sample, and although perceived as high risk practices, were not adequately protected with condom use. Education and other interventions regarding these high risk sexual behaviours need to be translated into safer practices, particularly consistent condom use, even in the face of financial vulnerability.


Xia and colleagues described knowledge of primary and secondary sexual partner’s HIV serostatus and sexual practices, including serosorting, among men who have sex with men living in California. In 2002 the authors re-contacted men who self-identified as gay/bisexual in the 2001 California Health Interview Survey, a state-wide biennial random-digit-dial survey interviewing more than 50,000 adults on a variety of health topics, and interviewed them by telephone about injection drug use, their own and partner’s HIV serostatus, and sexual risk behaviours. Among 220 men who reported a primary partner, 86% (95% CI 77-92) knew their primary partner’s serostatus; 62% (95% CI 52-70) of the 250 men who reported a secondary partner knew their most recent secondary partner’s HIV serostatus. Knowledge of one’s most recent secondary partner’s HIV serostatus was inversely related to history of injecting recreational drugs (OR 0.22, P<0.01), and reporting a primary partner in the past year (OR 0.37, P<0.05). Two-fifths (41%) of HIV-positive men and three-fifths (62%) of HIV-negative men engaged in serosorting (serocordant unprotected anal intercourse) with their primary partners, whereas 33% HIV-positive men and 20% HIV-negative men did so with their most recent secondary partners. The authors concluded that this population-based survey documented the extent to which men who have sex with men know their partners’ serostatus and practise serosorting behaviours. The findings emphasize the need for studies to report serocordant and serodiscordant unprotected sex separately, as the former presents significant lower risk of HIV transmission. Editors’ note: This is a cross-sectional study and the authors’ conclusion that serosorting clearly lowers HIV risk needs confirmation from analytical epidemiological studies. Furthermore, unprotected sex between HIV-positive concordant partners does carry a risk of superinfection with a different HIV strain and the possibility of more rapid disease progression.

9. TB/HIV

As we scale up towards universal access to comprehensive HIV prevention, treatment, care and support services it is important to consider the tuberculosis programme as an important partner in identifying those who are HIV infected and eligible for antiretroviral therapy (ART). In a study to assess the proportion of adults (15-49 years) eligible for ART identifiable through tuberculosis services in 18 sub-Saharan African countries, Bwire and colleagues estimated the number of tuberculosis patients needed to screen to identify one adult eligible for ART for each country. The proportion of all adults eligible for ART that could be identified through the tuberculosis programme ranged from 2-18% (10% on average). The number of tuberculosis patients needed to be screened to identify one patient eligible for ART ranged from 1.4 to 4.2, compared to 8.6 to 65.4 if adults aged 15-49 are randomly screened. Tuberculosis services are thus an important entry point for identifying people who are eligible for ART. Editors’ note: TB services have been considered to be ‘low hanging fruit’ in terms of access to HIV-positive patients who may be in need of antiretroviral treatment. The findings of this study strongly support this belief.

10. Young people

Lou CH, Zhao Q, Gao ES, Shah IH. Can the Internet be used effectively to provide sex education to young people in China? J Adolesc Health 2006;39:720-8.

Lou and colleagues assessed the feasibility and effectiveness of sex education conducted through the internet in two high schools and four colleges of a university in Shanghai, China. Half of these were assigned to the intervention group and the other half to the control group. The programme consisted of offering sexual and reproductive health knowledge, service information, counselling and discussion to all students in the intervention group. The intervention phase lasted for 10 months and was implemented through a special website, with web pages, online videos, Bulletin Board System and expert mailbox. In total, 624 students from the intervention and 713 from the control schools and colleges participated in the baseline survey, and 97% of them were followed up post-intervention to assess changes. The median scores for overall knowledge and each specific aspect of reproductive health, such as reproduction, contraception, condom, sexually transmitted infections and HIV, were significantly higher in the intervention group as compared with those in the control group (P<0.0001), although no significant differences were found between these two groups in the baseline survey. Group by time interaction effects in ordinal logistic regression analysis were found on knowledge score (P<0.0001) and in attitude of high school students toward sex-related issues (P<0.05), suggesting that the programme increased subjects’ knowledge significantly and changed high school students’ attitudes to being less liberal toward sex but more positive toward providing contraceptive services for unmarried people. The authors conclude that providing sex education to students in Shanghai through the internet was found feasible and effective. The internet-based sex education programme increased students’ reproductive health knowledge effectively and changed their attitudes towards sex-related issues. The internet thus offers an important and hitherto untapped potential for providing sex education to students and young people in China.

That was HIV This Week, signing off.
Editors' notes on journal access

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Other journals offer free access to full-text articles after a certain period of time (see lists at High Wire Press http://highwire.stanford.edu/lists/freeart.dtl and PubMed Central http://www.pubmedcentral.nih.gov/).

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