



# AIDSFree Prevention Update



## April 2016

This is the April 2016 edition of the AIDSFree Prevention Update, an initiative of the Strengthening High Impact Interventions for an AIDS-free Generation (AIDSFree) Project. The AIDSFree Prevention Update is your monthly snapshot of current peer-reviewed literature and state-of-the-art program resources, tools, and curricula on HIV prevention.

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## **Use of a Vaginal Ring Containing Dapivirine for HIV-1 Prevention in Women**

**Baeten, J.M., Palanee-Phillips, T., Brown, E.R., et al. *New England Journal of Medicine* (February 2016), e-publication ahead of print.**

This Phase III, randomized, double-blind, placebo-controlled trial compared the efficacy and safety of the dapivirine vaginal ring to that of a placebo ring. From August 2012 through June 2015, 2,629 HIV-1-seronegative women aged 18–45 years participated in the trial at 15 research sites in Malawi, South Africa, Uganda, and Zimbabwe. Participants were assigned in a 1:1 ratio to receive either a silicone elastomer vaginal matrix ring containing 25 mg of dapivirine or a placebo vaginal ring. Women returned for monthly follow-up visits, which included HIV-1 serologic testing, safety monitoring, and individualized adherence counseling. A total of 168 incident HIV-1 infections occurred during the period of product use: 71 in the dapivirine group and 97 (27% higher) in the placebo group. HIV-1 protection rates differed significantly according to age: 61 percent among women aged 25 years or older, and 10 percent among those under age 25, a difference that was correlated with reduced adherence. These results, the authors concluded, showed that a vaginal ring containing an antiretroviral drug can provide protection against HIV-1 acquisition for women with higher rates of adherence.

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## **Successful Implementation of HIV Preexposure Prophylaxis: Lessons Learned From Three Clinical Settings**

**Marcus, J.L., Volk, J.E., Pinder, J., et al. *Current HIV/AIDS Reports* (February 2016), e-publication ahead of print.**

This article summarized the strengths and weaknesses of three delivery models for pre-exposure prophylaxis (PrEP): a health maintenance organization (HMO), a clinic for sexually transmitted infections (STIs), and a primary care practice in the United States. HMO settings have the infrastructure to provide continuity of care to PrEP patients through electronic-based adherence counseling, HIV risk assessment, and reminders about regular laboratory testing. However, the HMO underperformed in many clinical practice settings (due to high demand), and thus required additional staffing. STI clinics routinely serve higher-risk clients than primary care settings, making these clinics ideal for reaching a PrEP-eligible population. However, STI clinics lack systems for providing continuity of care—clients typically visit on a drop-in or episodic basis—and clinics may need to modify practices to facilitate the longitudinal care required for successful PrEP delivery. The primary care model demonstrated that non-HIV specialists can successfully deliver PrEP among routine services. However, since primary care physicians (PCPs) deliver adherence and risk reduction counseling, PrEP clients who miss a follow-up appointment may not come to the PCP's attention, and thus may be lost to follow-up before such counseling and support are delivered. The authors concluded that PrEP could be successfully implemented in a variety of settings, and called for actions to streamline the delivery at each type of setting.

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## **HPTN 068: A Randomized Control Trial of a Conditional Cash Transfer to Reduce HIV Infection in Young Women in South Africa: Study Design and Baseline Results**

**Pettifor, A., MacPhail, C., Selin, A., et al. *AIDS and Behavior* (February 2016), e-publication ahead of print.**

This individually randomized controlled trial was the first study to examine the impact of a conditional cash transfer intervention on HIV infection among young women. In a rural area in northeastern South Africa, 2,533 women (age 13–20 years) and their households were randomized in a 1:1 ratio to the intervention arm (monthly cash payments, conditional on the young woman completing 80 percent school attendance), or the control arm (no cash payments). HIV testing was performed at enrollment and at 12-, 24-, and 36-month visits. Findings showed that despite a low HIV prevalence at baseline, a number of individual, partner, household, and school-level factors were associated with HIV and herpes simplex virus type 2 infection. Over one-third (34.3%) of girls reported worrying about having enough to eat during the past 12 months. After adjusting for age, the authors found that factors at all levels were associated with significantly increased odds of HIV infection; partner-level factors had the strongest association. One-fifth of participants reported having a partner five or more years older, and 14 percent reported engaging in transactional sex. The authors concluded that interventions like cash transfers, which address structural factors such as poverty, have the potential to reduce HIV risk in young women in South Africa.

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## **Behavioral Prevention**

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### **Intimate Partner Violence as a Factor Associated with Risky Sexual Behaviours and Alcohol Misuse amongst Men in South Africa**

**Mthembu, J.C., Khan, G., Mabaso, M.L., and Simbayi, L.C. *AIDS Care* (February 2016), e-publication ahead of print.**

This study explored whether intimate partner violence (IPV) perpetration by men was a risk factor for engaging in other high-risk behaviors, especially risky sexual behaviors and alcohol misuse. The authors used data from a multilevel intervention study on alcohol abuse and HIV prevention among 975 South African men aged 18 years and older. They were recruited from informal drinking places within 12 communities in Cape Town townships, and asked to complete a confidential survey. Over one-third (39.9%) of participants reported having been involved in IPV. Men who reported having a child were more likely than childless men to perpetrate IPV. Men who reported having a casual sexual partner were significantly more likely to be involved in IPV, and those with possible alcohol dependence were three times more likely to perpetrate IPV compared to abstainers. However, men who reported using a condom at last sex were significantly less likely to engage in IPV than those who had not used condoms. The authors concluded that fatherhood, having a casual sexual partner, not using a condom at last sex, and alcohol dependence were significantly associated with self-reported perpetration of IPV. They added that interventions to reduce IPV need to address risky sexual and drinking behaviors among men, as well as power dynamics and gendered norms among couples.

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### **Conditional Cash Transfers and Uptake of and Retention in Prevention of Mother-to-Child HIV Transmission Care: A Randomised Controlled Trial**

**Yotebieng, M., Thirumurthy, H., Moracco, K.E., et al. *The Lancet HIV* (February 2016), 3(2), doi: 10.1016/S2352-3018(15)00247-7.**

This study in Kinshasa, Democratic Republic of Congo examined whether small, increasing cash payments conditional on attending scheduled clinic visits and receiving proposed services can increase the proportion of HIV-positive pregnant women who attend clinics and receive available services for prevention of mother-to-child transmission (PMTCT) through six weeks postpartum. Participants, comprising 433 newly diagnosed HIV-positive women up to 32 weeks pregnant, were randomly assigned to the intervention group (217) or the control group (216). Intervention participants received standard care plus escalating cash payments, starting at US\$5 and increasing by \$1 at every visit, provided that they complied with care (attending scheduled clinic appointments, giving a blood sample for CD4 cell count, accepting antiretroviral treatment if referred, and delivering in a health facility). At six weeks postpartum, 146 (68%) of participants in the intervention group had attended all of their scheduled visits on time and accepted all available PMTCT services, compared with 116 (54%) of participants in the control group. Results were similar after adjustment for marital status, age, and education. The authors concluded that cash incentives resulted in increased retention along the PMTCT cascade and uptake of available services, and called for additional research on the cost-effectiveness of these incentives.

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### **Changing Antiretroviral Eligibility Criteria: Impact on the Number and Proportion of Adults Requiring Treatment in Swaziland**

**Bock, N., N., Emerson, R.C., Reed, J.B., et al. *Journal of Acquired Immune Deficiency Syndromes* (March 2016), 71(3):338–344, doi: 10.1097/QAI.0000000000000846.**

The authors used data from the nationally representative Swaziland HIV Incidence Measurement Survey from February to May 2012 to examine the potential prevention impact of current treatment guidelines. Specifically, they investigated whether a test-and-treat strategy mandating earlier treatment (at 350–499 CD4+ cells/ml) would have greater population-level benefits than the standards laid out in 2012 (350 cells/ml). The study used CD4+ cell enumeration, viral load measurements, and antiretroviral therapy (ART) treatment status of 927 participants to determine the additional number and proportion of untreated adults, and of the entire estimated HIV-positive adult population, that would benefit from this expanded eligibility. Findings showed that 50 percent of enrolled participants reported no ART use; 35 percent were eligible for ART at the 2012 CD4+ count threshold; and 25 percent were eligible under the expanded CD4+ criterion). In multivariate analysis, participants on treatment were likely to be older than 44 years and to have known their HIV status before the survey. Additionally, 46 percent of those eligible but not on treatment reported that they had not visited a health facility for HIV-related care since diagnosis. The authors recommended implementing a test-and-treat approach in Swaziland and estimated that this would result in an additional 21 percent of the HIV-positive adult population added to the treatment rolls.

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## **The Safety of Tenofovir–Emtricitabine for HIV Pre-Exposure Prophylaxis (PrEP) in Individuals With Active Hepatitis B**

Solomon, M.M., Schechter, M., Liu, A.Y., et al. *Journal of Acquired Immune Deficiency Syndromes* (March 2016), 71(3): 281–286, doi: 10.1097/QAI.0000000000000857.

The Iniciativa Profilaxis Pre-Exposición study (an arm of the iPrEx study) randomized 2,499 men who have sex with men and transgender women to once-daily oral tenofovir/emtricitabine (FTC/TDF) versus placebo to evaluate the safety and efficacy of this PrEP regimen for HIV prevention among subjects with hepatitis B virus (HBV). Over 60 percent of the participants were HBV-susceptible at screening. Of these, fewer than 25 percent had ever received an HBV vaccine; and of those who had received a vaccine, fewer than half had received all three recommended doses. Twelve participants (six in each study arm) had chronic HBV infection. The authors reported that once the FTC/TDF was stopped, five of the six participants in the active arm had a normal liver function test, and none showed evidence of hepatitis flares. Genotypes from these five participants showed no evidence of antiviral drug resistance. The authors concluded that PrEP can be safely started and stopped in persons with HBV infection who do not have cirrhosis or transaminase elevations at PrEP initiation. However, they urged routine liver function (and possibly HBV viral load) testing for these individuals during PrEP treatment, to ensure that the emergence of HBV resistance to FTC/TDF has not occurred.

[View Full Study](#)

## **HIV Providers' Likelihood to Prescribe Pre-Exposure Prophylaxis (PrEP) for HIV Prevention Differs by Patient Type: A Short Report**

Adams, L.M., and Balderson, B.H. *AIDS Care* (February 2016), e-publication ahead of print.

The authors carried out a survey across the United States to examine HIV care providers' perceptions of PrEP and their likelihood of prescribing it to different patient groups. Data were collected from a cross-sectional internet-based survey of 260 members of the American Academy of HIV Medicine in June 2014. The survey consisted of 53 questions covering providers' demographic characteristics; type of medical practice; procedures for addressing patients' sexual health, attitudes, and beliefs about PrEP; and likelihood of prescribing PrEP to different types of patients. The survey showed that providers' likelihood of prescribing PrEP differed across patient types. When deciding about PrEP prescriptions, they considered patients' adherence, regular follow-up care, and medication costs. They were most likely to prescribe PrEP to men who have sex with men (MSM) who have an HIV-positive partner, and least likely to prescribe to high-risk heterosexuals or people who inject drugs (PWID). Given that the U.S. Centers for Disease Control recommends PrEP for MSM, heterosexuals, and PWID, the authors called for further research to determine factors that prevent providers from prescribing PrEP to heterosexuals and PWID.

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## **Classification and Rates of Adverse Events in a Malawi Male Circumcision Program: Impact of Quality Improvement Training**

**Kohler, P.K., Namate, D., Barnhart, S., et al. *BMC Health Services Research* (February 2016), 16(1): 61, doi: 10.1186/s12913-016-1305-x.**

The authors evaluated the safety and quality of a voluntary medical male circumcision (VMMC) program in Lilongwe, Malawi before and after a group problem-solving quality improvement (QI) intervention. The project entailed retrospective chart audits, case-conference adverse event (AE) classification, and provider training. To establish a baseline, a seven-member multi-disciplinary team audited 3,000 client records; providers described challenges and lessons learned during provision of care; and client flow was traced through the clinic. The authors reported 266 AE cases. Of these, 257 (97%) were procedure-related; 6 (0.2%) were classified as mild, 218 (7.3%) as moderate, and 33 (1.1%) as severe. Case conference reviews concluded that 89 percent of AEs were not treated appropriately. After implementation of the QI plan, a second audit of 2,540 cases showed that reports of AEs decreased by 48 percent; reports of moderate and severe AEs decreased by 75 percent. The authors concluded that a group problem-solving QI intervention improved post-operative assessment, clinical management, and AE reporting. They recommended that lessons learned from this process be applied to during VMMC rollout in other resource-limited settings.

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## **Loss to Follow-Up among Youth Accessing Outpatient HIV Care and Treatment Services in Kisumu, Kenya**

**Ojwang', V.O., Penner, J., Blat, C., et al. *AIDS Care* (November 2015), 28(4), pp. 500–507, doi: 10.1080/09540121.2015.1110234.**

This study examined the incidence of loss to follow-up (LTFU) and sociodemographic and clinical characteristics associated with LTFU. The authors analyzed data from 924 HIV-positive youth (aged 15–21 years) who accessed outpatient HIV care and treatment services in select facilities in Kisumu, Kenya between July 2007 and September 2010. The primary outcome for this analysis was LTFU, defined as a patient missing his/her last appointment four or more months ago. The authors reported that 529 (57%) of patients were LTFU; of these, 418 (79%) were female. Male patients and non-pregnant females were equally likely to become LTFU. Patients who had never initiated antiretroviral therapy (ART) were 50 percent more likely to become LTFU compared to those who had ever started ART. Those who had disclosed their status to anyone (family or friends), were 43 percent less likely to become LTFU compared to those who had never disclosed. Additional factors associated with LTFU were pregnancy during the study period and CD4 cell count >350. The authors concluded that interventions to identify and enroll youth into care earlier, support disclosure, and initiate ART earlier may improve retention of youth in care and treatment.

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### **Global Health Diplomacy, Monitoring & Evaluation, and the Importance of Quality Assurance & Control: Findings from NIMH Project Accept (HPTN 043): A Phase III Randomized Controlled Trial of Community Mobilization, Mobile Testing, Same-Day Results, and Post-Test Support for HIV in Sub-Saharan Africa and Thailand**

**Kevany, S., Khumalo-Sakutukwa, G., Singh, B., et al. *PLOS ONE* (February 2016), 11(2):e0149335. doi: 10.1371/journal.pone.0149335.**

The authors described the methodology, results, and effects of quality assurance and control (QAC) monitoring during the three-year implementation of the Project Accept trial (HPTN 043), a community-based HIV counseling and testing study conducted in sub-Saharan Africa and Thailand. The QAC monitoring comprised steps to the intervention's three components—mobile voluntary counseling and testing (MVCT), community mobilization (CM), and post-test support services (PTSS). Supervisors observed a random sample of 5 to 10 percent of sessions each month, and evaluated staff against multiple criteria on scales of 1–5. A score of 5 indicated 100 percent adherence, 4 indicated 95 percent adherence, and 3 indicated 90 percent adherence. The authors reported that the QAC scores of MVCT and CM staff across the study sites were 4 or higher, and continued to improve over time. QAC scores for the PTSS component were initially lower, because of the wide range of activities in the PTSS component and new staff hires or changes in staff responsibilities, but increased to 4 by Year 2. The authors concluded that the constant staff monitoring and support provided by QAC monitoring is essential to ensure quality implementation in large-scale interventions.

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### **The Role of Partners' Educational Attainment in the Association between HIV and Education amongst Women in Seven Sub-Saharan African Countries**

**Harling, G., and Bärnighausen, T. *Journal of the International AIDS Society* (February 2016), 19(1): 20038, doi: 10.7448/IAS.19.1.20038.**

The authors analyzed data from 14 Demographic and Health Surveys from seven sub-Saharan African countries with generalized HIV epidemics, investigating whether educational parity between partners was associated with HIV serostatus in women aged 15–34. Findings showed that partners tended to have similar attainments in both urban and rural areas of every survey. This correlation was not associated with HIV prevalence; however, there was a small but significant individual-level association between educational differences within relationships and women's likelihood of being HIV-positive. Women aged 25–34 with secondary or higher education and a more educated partner had lower HIV prevalence. Overall, in all surveys, each person's educational level was associated with a specific level of risk of HIV infection, with risk rising among those with only primary education. In almost all countries, the relative odds of HIV infection fell for more educated individuals. Educational attainment and HIV prevalence varied widely across survey countries. The authors concluded that efforts to locate HIV-positive or at-risk women should consider not only the women's own characteristics but also those of their sexual partners.

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## **Monitoring HIV and AIDS Related Policy Reforms: A Road Map to Strengthen Policy Monitoring and Implementation in PEPFAR Partner Countries**

Lane, J., Verani, A., Hijazi, M., et al. *PLOS ONE* (February 2016), 11(2):e0146720, doi: 10.1371/journal.pone.0146720.

In fall 2012, the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) funded workshops in the Africa and Americas regions to strengthen stakeholders' capacity to monitor and implement HIV-related policy reforms in PEPFAR-supported countries. Participants (33 in the Africa region and 31 in the Americas region) received training on PEPFAR's *Road Map for Monitoring and Implementing Policy Reforms* (Road Map). This article described the results of a three-month follow-up evaluation of participants' experiences. The majority of respondents considered the workshops useful; 85 percent of respondents from the Africa workshop and 100 percent of respondents from the Americas workshop said they felt they were better prepared to monitor policy reforms after the workshops. While some countries made quick progress in implementing elements of the action plans developed during the workshops, other countries struggled to gain traction. Reasons included inability to meet or lack of time, personnel, or governmental support. Additionally, participants requested more follow-up, real examples of policy monitoring indicators and best practices, country-specific training in monitoring and evaluation, and development of a participant listserv. The authors concluded that the Road Map was a useful tool for strengthening policy development, monitoring capacity, and moving closer to an AIDS-free generation.

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## **Engagement of Men in Antenatal Care Services: Increased HIV Testing and Treatment Uptake in a Community Participatory Action Program in Mozambique**

Audet, C.M., Blevins, M., Chire, Y.M., et al. *AIDS and Behavior* (February 2016), e-publication ahead of print.

This study, implemented from June 2012 through March 2015, investigated the impact of a community-based intervention on male engagement in antenatal care (ANC) services; and the impact of male partner engagement on uptake of ANC services, including antiretroviral therapy (ART) and health center delivery in four rural communities in Mozambique. The authors partnered with the traditional birth attendants (TBAs) and trained a new type of male-to-male community health agent, "male champions" (MCs), who focused on counseling male partners to create male-friendly community norms around engagement in spousal/partner pregnancies. Male engagement was defined as accompanying a partner to ANC services at least once during the pregnancy. During the intervention period, MCs reached 2,928 male partners and TBAs reached 4,024 pregnant women. Compared to baseline, the intervention period was associated with increased male engagement at first ANC (5% versus 34%) or any ANC appointment (10% versus 37%); male partner testing during ANC (9% versus 34%); women testing for HIV during ANC (81% versus 92%); and attendance at three ANC appointments (33% versus 40%) during the pregnancy. The authors concluded that given the increased acceptability of the intervention and reports from MCs and TBAs, it is likely that male engagement in ANC will become a social norm in this community.

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## HIV Prevalence and Risk Behaviors among People Who Inject Drugs in Songkhla, Thailand: A Respondent-Driven Sampling Survey

Visavakum, P., Punsuwan, N., Manopaiboon, C., et al. *The International Journal on Drug Policy* (February 2016), pii: S0955-3959(16)00053-0. doi: 10.1016/j.drugpo.2016.01.021.

From March to October 2010, the authors used respondent-driven sampling (a recommended methodology for sampling hard-to-reach populations) to describe the characteristics of people who inject drugs (PWID) in Songkhla and subsequently to help inform the development of evidence-based interventions and a more robust surveillance system. A total of 202 participants were interviewed and tested for HIV and other sexually transmitted infections. The authors found that the most-injected drug in the past month was heroin (injected by 90%), followed by methamphetamine (22%) and midazolam (2%). One-third (37%) of participants injected multiple drugs, and most (87%) had been injecting for more than two years. Moreover, 7 percent of participants reported sharing equipment during their last injection. Among those reporting having had sexual intercourse in the past three months, only 27 percent reported using a condom during their last sex act. HIV prevalence was high (22%). The authors also reported that 42 percent of participants were currently on methadone treatment. However, only a few received new needles (10%) and condoms (11%) from drop-in centers and/or peer outreach workers. Findings from this survey, the authors said, enhance understanding of the HIV epidemic among PWID in Songkhla, and the programmatic response to it.

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The *AIDSFree Prevention Update* provides a representative sample of summaries and abstracts of recent articles on global HIV prevention issues from a variety of scientific, peer-reviewed journals. It also includes state-of-the-art program resources, such as tools, curricula, program reports, and unpublished research findings.

We would like the *AIDSFree Prevention Update* to be as helpful to you as possible. If you would like to recommend a recently published, web-accessible article or other information for inclusion, please let us know by sending an email to [info@aid-free.org](mailto:info@aid-free.org).

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