AIDSFree Prevention Update

December 2015

This is the December 2015 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.

In this issue:

In Focus

Estimating Efficacy in a Randomized Trial with Product Nonadherence: Application of Multiple Methods to a Trial of Preexposure Prophylaxis for HIV Prevention

Feasible, Efficient and Necessary, without Exception – Working with Sex Workers Interrupts HIV/STI Transmission and Brings Treatment to Many in Need

Recruiting Male Partners for Couple HIV Testing and Counselling in Malawi’s Option B+ Programme: An Unblinded Randomised Controlled Trial

Behavioral Prevention

Adolescent HIV Risk Reduction in the Bahamas: Results from Two Randomized Controlled Intervention Trials Spanning Elementary School through High School

Biomedical Prevention

A 15-year Study of the Impact of Community Antiretroviral Therapy Coverage on HIV Incidence in Kenyan Female Sex Workers

Tracing Defaulters in HIV Prevention of Mother-to-child Transmission Programmes through Community Health Workers: Results from a Rural Setting in Zimbabwe

Are Geographical "Cold Spots" of Male Circumcision Driving Differential HIV Dynamics in Tanzania?

The AIDSFree Prevention Update is made possible by the generous support of the American people with support from the U. S. President’s Emergency Plan for AIDS Relief (PEPFAR) and the U. S. Agency for International Development (USAID) under the Cooperative Agreement Strengthening High Impact Interventions for an AIDS-free Generation (AIDSFree), number AID-OAA-A-14-00046. AIDSFree is implemented by JSI Research & Training Institute, Inc. with partners Abt Associates Inc., Elizabeth Glaser Pediatric AIDS Foundation, EnCompass LLC, IMA World Health, The International HIV/AIDS Alliance, Jhpiego Corporation, and PATH. The authors’ views expressed in this publication do not necessarily reflect the views of USAID or the U. S. Government.
Combination Prevention

**Effect of a Congregation-based Intervention on Uptake of HIV Testing and Linkage to Care in Pregnant Women in Nigeria (Baby Shower): A Cluster Randomised Trial**

**Official Invitation Letters to Promote Male Partner Attendance and Couple Voluntary HIV Counselling and Testing in Antenatal Care: An Implementation Study in Mbeya Region, Tanzania**

**Uptake and Yield of HIV Testing and Counselling among Children and Adolescents in Sub-Saharan Africa: A Systematic Review**

Structural Prevention

**HIV Epidemic and Human Rights among Men Who Have Sex with Men in sub-Saharan Africa: Implications for HIV Prevention, Care, and Surveillance**

**HIV-Alcohol Risk Reduction Interventions in Sub-Saharan Africa: A Systematic Review of the Literature and Recommendations for a Way Forward**

**Arresting HIV: Fostering Partnerships between Sex Workers and Police to Reduce HIV Risk and Promote Professionalization within Policing Institutions: A Realist Review**

**Oral and Injectable Contraceptive Use and HIV Acquisition Risk Among Women in 4 African Countries: A Secondary Analysis of Data from a Microbicide Trial**

Epidemiology

**Trends in HIV Prevalence in Pregnant Women in Rural South Africa**
**Estimating Efficacy in a Randomized Trial with Product Nonadherence: Application of Multiple Methods to a Trial of Preexposure Prophylaxis for HIV Prevention**


The authors used data from the Partners Pre-exposure Prophylaxis (PrEP) study to estimate the effectiveness of PrEP if all participants maintained continuously high (daily) adherence. Partners study participants (4,747 serodiscordant heterosexual couples) were randomized to receive tenofovir (TDF), co-formulated TDF/emtricitabine (FTC), or placebo. Among participants with an estimated 100 percent probability of high adherence, the risk of HIV acquisition diminished by 81 percent for TDF and 88 percent for TDF/FTC relative to placebo. A 90 percent probability of high adherence reduced the estimated risk of HIV acquisition by 78 percent for TDF and 84 percent for TDF/FTC relative to placebo. Among those predicted to have poor adherence, the risk of HIV acquisition was greater for TDF and TDF/FTC, consistent with an expected lack of protective effect when no study medication is consumed. The authors concluded that the efficacy of PrEP with consistent high adherence is greater than 80 percent with either TDF alone or TDF/FTC.

**View Abstract**

**Feasible, Efficient and Necessary, without Exception – Working with Sex Workers Interrupts HIV/STI Transmission and Brings Treatment to Many in Need**


This summary, based on information from 18 articles and highlighting decades of evidence, argued that protecting sex workers is feasible and necessary for controlling HIV and sexually transmitted infection (STI) epidemics globally. The authors also called for expanded access to antiretroviral therapy (ART) care and supportive interventions for sex workers. They based their recommendations on several common findings from the selected articles. First, despite the importance of sex work to HIV/STI transmission, estimated resources for supporting targeted interventions total less than 1 percent of program expenditures in countries with generalized HIV epidemics. Second, interventions must be brought to scale. In Asia, large-scale implementation of basic interventions in sex work settings, supported by structural change, has turned around several rapidly expanding HIV epidemics. Third, community mobilization is vital. For example, where sex work establishments (as opposed to individual workers) enforced condom use, condom use increased, while HIV/STI transmission decreased. Fourth, given the very high HIV burden and transmission risk in sex work, expanding ART coverage for HIV-positive workers, along with prevention for the most active workers, would substantially enhance prevention. The authors concluded that targeted treatment and prevention interventions with sex workers should be scaled up to reduce their high HIV/STI burden and avert serious morbidity and mortality among sex workers themselves.

**View Abstract**
Recruiting Male Partners for Couple HIV Testing and Counselling in Malawi’s Option B+ Programme: An Unblinded Randomised Controlled Trial


This study compared two strategies for recruiting male partners for couples HIV testing and counseling (CHTC)—invitation-only versus invitation plus tracing (a visit to a male partner by the community health worker) —at a maternity hospital in Malawi. The authors randomly assigned 200 pregnant women who had tested HIV-positive and had not yet had CHTC to either the invitation-only group (n=100) or the invitation-plus-tracing group (n=100). In the invitation-only group, women’s male partners were invited to present to the antenatal clinic. In the invitation-plus-tracing group, partners were invited and were traced if they did not present. One week after the initial visit, women were asked to present with partners for a couples’ visit at which a research nurse delivered information on pregnancy topics, including nutrition, alcohol, malaria, antenatal care-seeking, facility delivery, and the importance of CHTC. While more than half of women were able to recruit male partners to CHTC with an invitation alone, the addition of tracing enabled nearly three-quarters of women to bring their partners to CHTC. Additionally, women in the invitation-plus-tracing group were less likely to default early from the Option B+ program, and more likely to initiate safer sex practices. The authors concluded that an invitation-plus-tracing strategy was effective at increasing CHTC uptake and recommended its further scale-up.

View Abstract

Behavioral Prevention

Adolescent HIV Risk Reduction in the Bahamas: Results from Two Randomized Controlled Intervention Trials Spanning Elementary School through High School


The authors of this article used data from two studies that examined the effects of a longitudinal, school-based, combined parent-child HIV prevention intervention conducted during pre- and mid-adolescence. The study involved 598 students in New Providence, Bahamas who had enrolled in the studies in both grade 6 (2005) and grade 10 (2009). The student intervention in both studies included interactive discussions, role-plays, and games to increase knowledge and skills regarding sexual-risk avoidance. Also, in both studies, the students’ parents were randomized to participate with their children in a parental monitoring and communication intervention, an intervention about career planning, or no intervention. Findings showed high intention to use condoms in all groups. However, only students whose parents had attended interventions reported significantly higher condom use, suggesting the importance of parents to HIV prevention in youth. Additionally, while recipients of only the grade-6 intervention showed protective effects that were sustained over time, recipients of both grade 6 and grade 10 interventions appeared to receive additional benefits spanning a greater time period. These findings suggested that school-based programs delivered at different developmental periods are important, both to reach youth who may have missed the intervention earlier in adolescence and to reinforce the effects of the earlier intervention.

View Abstract
A 15-year Study of the Impact of Community Antiretroviral Therapy Coverage on HIV Incidence in Kenyan Female Sex Workers


The authors of this 15-year prospective study hypothesized that increasing access to community antiretroviral therapy (ART) coverage would lead to lower HIV incidence in female sex workers (FSWs) in Mombasa District, Kenya, independent of their individual-level HIV risk factors. HIV-negative FSWs were interviewed about their risk behavior, and received testing for sexually transmitted infections (STIs) including HIV during outreach visits to local bars. The women also had a monthly physical examination with collection of blood and genital specimens for diagnosis of HIV and STIs. Between February 1993 and December 2012, 1,404 FSWs contributed 4,335 woman-years of follow-up. The authors reported that the estimated HIV prevalence peaked in 2000 at 13.4 percent, and declined to 5.6 percent in 2012. The ART rollout began in 2003, and by 2012, an estimated 52 percent of HIV-positive individuals were receiving treatment. This study, the authors said, showed that community ART coverage was inversely associated with HIV incidence, and that each 10 percent increase in coverage was associated with a 23 percent reduction in FSWs’ risk of HIV acquisition. The intervention had no impact on herpes simplex virus type-2 incidence, suggesting that the effect of community ART coverage may be specific to HIV. The authors concluded that increasing ART coverage in the community might reduce FSWs’ risk of contracting HIV.

View Abstract

Tracing Defaulters in HIV Prevention of Mother-to-child Transmission Programmes through Community Health Workers: Results from a Rural Setting in Zimbabwe


This retrospective cohort study assessed the effects of community-health-worker-based defaulter tracing (CHW-DT) on retention in care and mother-to-child HIV transmission in Zimbabwe. The authors analyzed records from 1,878 HIV-positive pregnant women and their newborns in a rural prevention of mother-to-child transmission (PMTCT) program between 2010 and 2013. They compared retention rates at delivery, nevirapine (NVP) initiation at three days postpartum, and HIV testing and cotrimoxazole (CTX) initiation at six weeks postpartum, before and after the introduction of CHW-DT. Under the CHW-DT system, introduced in April 2012, all defaulting pregnant mothers and their newborns were traced and received home visits by volunteers, who provided counseling on ante- and perinatal PMTCT services and infant vaccination. Post-intervention, cumulative retention increased only moderately, and only in certain periods, relative to pre-intervention retention (87.3% versus 85.7%, respectively, before delivery; 81.0% and 82.9% until NVP initiation; 41.7% and 52.3% until CTX initiation; 34.4% and 47.0% until infant HIV testing; and 32.6% and 29.7% until HIV test result collection). The authors concluded that the CHW-DT intervention did not increase retention or reduce perinatal HIV transmission significantly. They argued that community health workers can complement, but not replace, necessary improvements in service provision by the regular health system.

View Abstract
Are Geographical "Cold Spots" of Male Circumcision Driving Differential HIV Dynamics in Tanzania?


The authors applied spatial epidemiology techniques to data from three rounds (from 2004 through 2012) of Demographic and Health Surveys in Tanzania to understand transmission dynamics in areas with low and high male circumcision (MC) prevalence, and the impact of voluntary medical male circumcision (VMMC) on HIV incidence. They identified two MC "cold spots" where analysis indicated a significantly low MC/high HIV prevalence association. MC prevalence within the cold spots in 2004 was 41.83 percent, declining slightly to 40.93 percent in 2012. MC prevalence outside the cold spots remained nearly unchanged during that period (91.66 to 91.67 percent). Males located within the MC cold spots had a higher risk of HIV infection relative to males located outside these areas. The authors concluded that MC could be an important factor in the geographical distribution of Tanzania’s HIV epidemic, and that the ongoing scale-up of VMMC may have a considerable impact on the epidemic. They added that the HIV infection burden could be concentrating in the female population in MC cold spots, and the risk of HIV infection for females located in these areas could be increasing over time. Therefore, programmers should consider adding initiatives to target women along with VMMC programs.

View Abstract

---

**Combination Prevention**

Effect of a Congregation-based Intervention on Uptake of HIV Testing and Linkage to Care in Pregnant Women in Nigeria (Baby Shower): A Cluster Randomised Trial


Between January 2013 and August 2014, this two-arm cluster randomized trial compared the effects of a congregation-based intervention versus standard referral for testing on uptake of HIV testing by pregnant women in rural Enugu State, Nigeria. The church-based Healthy Beginning Initiative provided free, integrated, on-site laboratory tests during baby showers in 20 intervention churches, while women at baby showers at 20 control churches received referral to a health facility (the standard of care). The 3,002 participants in both intervention and control groups received three study visits: one at baseline (recruitment), one during the baby shower, and one at 6–8 weeks after delivery. The primary outcome was a confirmed HIV test during pregnancy. HIV prevalence did not differ between groups. However, women in the intervention group were more likely than those in the control group to be linked to care before delivery, and were more likely to access care and receive antiretroviral therapy during pregnancy. The authors concluded that a culturally adapted, congregation-based approach delivered by trained volunteer health advisors can be used effectively to increase HIV testing in pregnant women in remote regions of the country.

View Abstract
Official Invitation Letters to Promote Male Partner Attendance and Couple Voluntary HIV Counselling and Testing in Antenatal Care: An Implementation Study in Mbeya Region, Tanzania


This study in Mbeya Region, Tanzania assessed the acceptability and effectiveness of written invitations for male partners to attend joint antenatal care (ANC) and couples voluntary testing and counseling (CVCT). Data were collected from a prospective, longitudinal cohort at three health centers at different locations in Mbeya Region. ANC clients (n=318) received a letter inviting their partners to attend the next routine ANC visit, explaining that information on pregnancy, parenthood, and other important health issues would be given (but not mentioning HIV testing). Nearly all women who returned to the clinic (98%) reported handing the letter to their partners, and said that partners who received an invitation were supportive. Partner attendance rate ranged between 31 percent and 75.8 percent, and averaged 53.5 percent across all sites. When the partner attended a joint ANC session, 81 percent of the couples received CVCT, (in the remaining 19%, only the women tested). Women overall found the experience very positive—saying that the counselor was helpful (95%), the experience was good (91%), and there were no difficulties during mutual disclosure of HIV status (90%). The authors concluded that official invitation letters are a feasible intervention in a resource-limited sub-Saharan context, and an effective way to encourage men to attend ANC and CVCT.

View Abstract

Uptake and Yield of HIV Testing and Counselling among Children and Adolescents in Sub-Saharan Africa: A Systematic Review


This electronic review of literature on HIV testing and counseling (HTC) among children and adolescents (5–19 years) from 2010 to 2013 investigated the acceptability, yield, and prevalence of different HTC strategies for this group in sub-Saharan Africa (SSA). A total of 21 studies across eight countries (Kenya, Malawi, South Africa, Sudan, Tanzania, Uganda, Zambia, and Zimbabwe) were included. Seven studies used provider-initiated testing and counselling (PITC) in either inpatient or outpatient settings. Six studies were conducted in the context of seroprevalence surveys; of these, two provided HTC in the home environment, and four used a mobile or outreach approach. Four studies reported data from mass testing campaigns that used outreach or home-based strategies. A family-centered approach was used in five studies, and one study reported results from a school-linked testing campaign among primary schoolchildren aged 5–11 years. The authors reported that acceptance, yield, and prevalence were highest when testing was offered in inpatient settings (86.3%, 12.2%, and 15.4%, respectively) and outpatient settings (69.5%, 7.4%, and 11.3%) as part of PITC. Outreach HTC strategies had the lowest acceptance (60.4%), yield (0.6%), and prevalence (1.3%). The authors concluded that HTC approaches delivered within communities outside of a health care facility have a high acceptance among this priority age group.

View Abstract
HIV Epidemic and Human Rights among Men Who Have Sex with Men in Sub-Saharan Africa: Implications for HIV Prevention, Care, and Surveillance


This review paper examined the HIV epidemic among men who have sex with men (MSM) in sub-Saharan Africa (SSA) and highlighted factors that facilitate its spread. The authors organized by these categories:

- **Epidemiology**: Studies under this category demonstrated the concentrated nature of the HIV epidemic and transmission risk among MSM in SSA; the public health impact of ignoring the epidemic on the continent’s current HIV prevention efforts; and the need to prioritize HIV prevention and care, surveillance, and research programs for MSM.

- **Social determinants**: Among MSM, internalized homophobia leads to negative attitudes and actions that can manifest as shame, fear, anxiety, and loss of self-worth. Additionally, stigma affects social vulnerability and is fundamental to access to health care.

- **Stigma, discrimination, the law, and HIV risk among MSM**: Many countries in SSA criminalize male-to-male sexual relationships. These laws obstruct HIV prevention, care, and health policies that target MSM, while prompting behaviors and practices that facilitate HIV transmission.

The authors urged implementation of rights-based standards, along with continued collaborative partnerships, collective advocacy, and concerted action to ensure that MSM and all HIV-positive individuals in SSA have access not only to HIV prevention and care, but also to the full range of rights that help ensure equal opportunities for health and wellness.

View Abstract

HIV-Alcohol Risk Reduction Interventions in Sub-Saharan Africa: A Systematic Review of the Literature and Recommendations for a Way Forward


The authors reviewed 19 peer-reviewed studies on HIV-alcohol risk reduction interventions in sub-Saharan Africa and summarized their findings and characteristics. All the interventions (implemented in Angola, Nigeria, South Africa, Uganda, Zambia, and Zimbabwe) promoted individual behavior change using strategies such as peer education, health trainings and workshops, and health education videos. The authors reported that 12 of the 16 interventions that reported on sexual risk behavior outcomes (condom use) found significant effects, while four interventions found no significant effects. While studies targeting youth in schools had limited efficacy, those targeting women who use drugs, sex workers, and clients at clinics for testing and diagnosis were more efficacious. These showed significant effects in reducing alcohol consumption or changing HIV-alcohol or sexual risk behaviors. Studies targeting drinking venue patrons were efficacious when delivered as a short intervention in a community setting, but not when delivered in these venues by peers. Studies targeting soldiers showed efficacy when implemented at the community level, but not at military bases. The authors concluded that community-based interventions, when embedded into ongoing prevention and treatment programs of various kinds, may be effective in addressing HIV-alcohol risk behaviors in the short term.

View Abstract
Arresting HIV: Fostering Partnerships between Sex Workers and Police to Reduce HIV Risk and Promote Professionalization within Policing Institutions: A Realist Review


This review highlighted examples of positive partnerships between police and sex workers or sex worker organizations to prevent HIV transmission and examined factors contributing to the success of these partnerships. Despite the continuing criminalization of sex work, there are examples in the literature in which programs that focused on sex workers collaborated with police to increase policemen’s understanding of the sex industry, and to solicit police support in ensuring sex workers’ access to services. For example, the Resourcing Health and Education in the Sex Industry (RhED) program in Victoria, Australia uses a social model of health to promote physical, emotional, and social health among sex workers through harm minimization, health promotion, social inclusion, and community participation. RhED’s Ugly Mugs project liaises with local police to report and prosecute perpetrators of violence against sex workers. Another program, Thailand’s Sex Workers in Network Group, provides services for male sex workers in Bangkok, and includes an intern program for police recruits, designed to build mutual respect to enable sex workers to access prevention and treatment services without fear of arrest. The authors emphasized that developing police strategies, instructions, and standard operating protocols has been shown to have some impact in addressing HIV risk among key affected populations, including sex workers.

View Abstract

Oral and Injectable Contraceptive Use and HIV Acquisition Risk Among Women in 4 African Countries: A Secondary Analysis of Data from a Microbicide Trial


The authors estimated the association between self-reported use of injectable hormonal contraceptives or HCs (depot medroxyprogesterone acetate, or DMPA, or norethisterone oenanthate, or NET-EN) or oral contraceptive pills and HIV acquisition risk among 2,830 African women enrolled in the analysis. The HIV Prevention Trials Network (HPTN) 035 microbicide trial, a multi-site, randomized, controlled trial, compared BufferGel and 0.5 percent PRO 2000 gel against two comparator arms (hydroxycellulose placebo and no gel). During the study, participants were given HIV testing and were interviewed about self-reported contraceptive use and sexual behaviors. The authors reported that they did not observe a significant increased risk of HIV acquisition among women using injectable or oral contraceptive methods. They did not observe statistically significant interactions between baseline age or herpes simplex virus status and HC method. They concluded that these findings supported the World Health Organization’s recommendation that women at high risk for HIV, including those using progestogen-only injectable HC, should be strongly advised to always use condoms in addition to other HIV prevention measures.

View Abstract
This study assessed HIV prevalence trends in 5,075 pregnant women in the rural Vulindlela sub-district of KwaZulu-Natal, South Africa following the introduction and scale-up of antiretroviral therapy (ART), and described risk factors associated with HIV transmission. The authors conducted cross-sectional surveys from October through November of each year from 2001 to 2013 among pregnant women presenting at primary health care clinics for their first prenatal care visit. The time periods 2001 to 2003 were defined as pre-ART, 2004 to 2008 as early ART, and 2009 to 2013 as contemporary ART rollout, to correspond with the substantial scale-up of ART program. The authors reported that overall, HIV prevalence increased during each period (35.3%, 39.0%, and 39.3%, respectively). However, age-stratified analysis revealed nuances. Among teenage women (<20 years), HIV prevalence declined during these same periods (22.5%, 20.7%, and 17.2%), while increasing significantly in women 30 years and older. Moreover, teenage girls with male partners aged 20–24 and >25 years had a 1.7-fold and 3-fold higher HIV prevalence, respectively. The authors concluded that targeted interventions for pregnant women, especially for those in age-disparate relationships, are needed to change the trajectory of this HIV epidemic.

View Abstract

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@aidsfree.org. The selection of material, the summaries, and any other editorial comments are the responsibility of the Editorial Board and do not represent any official endorsement by AIDSFree or USAID. The authors and/or publishers retain copyright of the original published materials.

Click here to subscribe.