Welcome to the AIDSFree Prevention Update, a new 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. You are receiving this email because you previously subscribed to the AIDSTAR-One HIV Prevention Update.

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Lesions Learned from Scale-Up of Voluntary Medical Male Circumcision Focusing on Adolescents: Benefits, Challenges, and Potential Opportunities for Linkages with Adolescent HIV, Sexual, and Reproductive Health Services


Voluntary medical male circumcision (VMMC) programs are underway in 14 priority countries as part of their comprehensive HIV prevention strategies. The authors conducted a literature review and analyzed epidemiological data in the 14 countries to evaluate the extent to which VMMC programs have reached men of different ages and concluded that reaching men in their adolescent years, before their first sexual experience and exposure to HIV, is vital from the epidemiological standpoint. Survey data from several countries showed that while fewer than 25 percent of men had sexual experience by age 15, over 50 percent were experienced by age 18. Since HIV prevalence in most countries peaks among men aged 20 to 29 years, the authors argued, reaching young men before age 20 can have a significant impact on preventing primary HIV infection. Yet the study found that most VMMC programming targets older men (though most VMMC acceptors are under age 20). Tanzania and Zimbabwe have adapted VMMC messages for adolescents; but without formal quality and outcomes assessments, it is difficult to determine the impact of these messages on post-circumcision behavior. The authors called for more research on how to adapt existing VMMC programs to effectively reach young men who are not yet sexually active.

View Abstract

Moving HIV PrEP from Research into Practice


This editorial examined nuances in the interpretation of the Pre-Exposure Prophylaxis Initiative (iPrEx) Open-Label Extension study conducted by Robert Grant and colleagues. This first open-label study of pre-exposure prophylaxis (PrEP) enrolled 1,603 HIV-negative men and transgender women who have sex with men, all participants in the three previous randomized double-blind PrEP studies (iPrEx, Project Prepare or ATN 082, and the U.S. Safety Study). The findings showed high levels of PrEP uptake (76 percent of participants), with better adherence to study protocols reported by older and more educated participants, and by those engaging in more risky sexual behavior. The authors stated that while the iPrEx Open-Label Extension broadens understanding of PrEP, questions remain. Will PrEP increase high-risk sexual behavior and HIV incidence? What is the real-world safety profile for PrEP? Will groups at highest risk use it? Will uptake be as high among people who have not previously participated in a randomized study? Also, might the positive findings of the iPrEx study have been biased by the participation of experienced, motivated participants? The authors called for more research to understand the potential impacts—both negative and positive—of a PrEP scale-up.

View Abstract
The Impact of Community Mobilization on HIV Prevention in Middle and Low Income Countries: A Systematic Review and Critique


Community mobilization (CM) is increasingly seen as “critical” to effective HIV prevention, but its impact on HIV outcomes has not been established. The authors conducted a systematic review of the impact of CM activities on the biomedical, behavioral, and social outcomes of 20 HIV prevention interventions, focusing on two categories: (1) general populations and youth and (2) key populations. They found that CM had limited impacts in the general population, but a tendency toward positive impact in programs targeting key populations, especially in terms of behavioral and social outcomes. Within programs for the general population and youth, CM programs tended to be more successful when both engaging groups that shared a collective identity and addressing the socio-political context of these groups. However, it is not clear if this success could translate into significant changes in biomedical outcomes. Among high-risk groups, CM interventions were effective in reducing rates of sexually transmitted infections and increasing condom use. The authors noted a number of factors, such as variations in naming conventions and a lack of universal consensus on what CM efforts include, that make it difficult to study and analyze the effects of CM, and expressed the hope that several existing studies that include CM will clarify the effects of the approach.

View Abstract

New in Behavioral Interventions

A Systematic Review of the Effects of Behavioral Counseling on Sexual Risk Behaviors and HIV/STI Prevalence in Low- and Middle-Income Countries


The authors of this review found that behavioral counseling (BC) programs and interventions exerted limited to moderate effects on risky sexual behaviors and prevalence of HIV and sexually transmitted infections (STIs) in low- and middle-income countries. The authors examined 30 studies published between 1990 and 2011 that used multi-arm or pre-post designs and provided post-intervention data. They presented results on BC interventions in five groups: (a) people living with HIV; (b) people who use drugs and alcohol; (c) serodiscordant couples; (d) key populations for HIV prevention; and (e) people at low to moderate HIV risk. Changes in sexual behavior and HIV or STI prevalence were at best moderate across all target groups. The authors added that some studies indicated improvements in sexual behaviors and biological indicators following BC interventions, but it was unclear whether the improvements were due to BC interventions or to services already available in the communities. The authors concluded that BC strategies alone are insufficient for reducing sexual transmission risk in people living with HIV, people who abuse drugs and/or alcohol, and those at high risk for HIV transmission. However, additional research is needed to clarify the efficiency of BC interventions for serodiscordant couples and people at low to moderate risk for HIV.

View Abstract
The Role of Relationship Types on Condom Use among Urban Men with Concurrent Partners in Ghana and Tanzania


Multiple concurrent partnerships are considered one of the important drivers of HIV transmission. This study examined how different combinations of concurrent partnerships (with a wife, girlfriend, casual partner, and/or sex worker in various combinations) affect condom use. The authors looked at survey data from a sample of heterosexual men aged 18–49 years from Ghana (*n* = 807) and Tanzania (*n* = 800) who had at least three sexual partners in the last three months before the study. Each man self-reported condom use at last vaginal sex for each of his last three partners. Study participants reported 34 (Ghana) and 32 (Tanzania) relationship type combinations, the most prevalent being three girlfriends (GH: 37.5 percent of men; TZ: 34.8 percent of men). The authors focused on condom use with girlfriends, since this was the only relationship type with a sufficient sample size. In both countries, men viewed a girlfriend as a steady partner. The study found that men were more likely to use a condom with a girlfriend if their other partner was a wife than if the partner was a sex worker. The authors concluded that condom use seems to be associated with the types of partners that comprise men’s concurrent relationships. More research is needed to see how different combinations of relationships influence HIV risk behaviors and condom use.

**View Abstract**

New in Biomedical Interventions

Male Circumcision and HIV Transmission: What Do We Know?


Despite the wealth of information on the effectiveness of male circumcision (MC) interventions in HIV prevention, the exact mechanism of protection through circumcision remains unclear. The authors summarized available research published between 1982 and 2013 on the biophysical mechanisms that protect men from HIV transmission during heterosexual intercourse. They suggested several research priorities for understanding how MC can reduce the risk of HIV infection, including studies of keratin thickness of inner and outer foreskins in healthy men, using non-invasive methods such as stratum corneum infrared densitometry. Additionally, assessing physical resistance to viral entry (using non-invasive methods such as trans-epithelial water loss, moisture content of the stratum corneum and skin surface pH can provide more information than keratin thickness alone. The authors noted that quantitative research could help measure the exact relationship between HIV transmission and the wetness of the preputial area. They also suggested assessing how modified forms of circumcision affect HIV transmission. For example, some cultures practice a longitudinal cut, rather than a full removal of the foreskin. More studies are needed to understand whether these modified forms of MC can have an effect on HIV transmission via male genital tissues, and whether they provide the same mechanism of protection afforded by MC.

**View Abstract**
**Uptake of Pre-exposure Prophylaxis, Sexual Practices, and HIV Incidence in Men and Transgender Women Who Have Sex with Men: A Cohort Study**


This cohort study assessed the effect of pre-exposure prophylaxis (PrEP) on the uptake, adherence, and sexual practices of HIV-negative men and transgender women who have sex with men, all of whom were previously enrolled in PrEP trials. During the 72-week open-label extension study, the authors measured drug concentrations in plasma and dried blood spots in seroconverters and a random sample of seronegative participants. Of 1,603 eligible participants, 1,230 (77 percent) wanted to receive PrEP. The study found high uptake of PrEP across a range of demographic subgroups among study participants who had access to PrEP at no charge through an experienced health care provider. Participants who engaged in risky sexual behavior and those with sexually transmitted infections were more likely to accept PrEP. Reasons for not wanting PrEP included concerns about side effects (50 percent), not wanting to take a pill every day (16 percent), and preference for other prevention methods (14 percent). In terms of adherence, the study found overall retention to be lower with younger participants. Main reasons for interrupting the treatment include side effects (3–7 percent), effects of an unrelated comorbidity (1 percent), relocation, or travel (2–4 percent). The study also found that PrEP users reported safer sexual behaviors.

**View Abstract**

**Implementing Comprehensive Prevention of Mother-to-Child Transmission and HIV Prevention for South African Couples: Study Protocol for a Randomized Controlled Trial**


Male participation in antenatal care is suggested as an important factor leading to increased levels of prevention of mother-to-child transmission (PMTCT) uptake among pregnant women. However, in many areas, including South Africa, the impact of male involvement in PMTCT remains unclear and untested. This study will determine whether male partner involvement coupled with a behavioral intervention could significantly reduce infant HIV incidence in the Mpumulange providence of South Africa. Recruitment of participants began in April 2014 and the follow-up is expected by April 2018. The cluster randomized controlled study will enroll two cohorts of HIV-positive pregnant women with six community health centers randomly assigned as experimental, and six as control sites. In one cohort, women will attend without their male partner \((n = 720)\); in the second \((n = 720)\), male partners will attend. These cohorts will determine whether male participation itself, or combined with a behavioral PMTCT intervention, provides a significant effect on reduced HIV infection ante-, peri-, and postnatally. All participants will attend three group sessions and one individual or couple counseling intervention session antenataly, and two individual or couple counseling sessions postpartum. Biomedical assessments will be done at baseline and at 32 weeks of pregnancy, and also at six weeks, six months, and twelve months postpartum. This study will be the first to examine the effectiveness of male participation on PMTCT uptake in rural South Africa.

**View Abstract**
Reaching the Unreached: Treatment as Prevention as a Workable Strategy to Mitigate HIV and Its Consequences in High-Risk Groups


Data from the HIV Prevention Trials Network (HPTN) 052 study showed significant reduction in HIV transmission among serodiscordant, predominantly heterosexual African couples when the infected partner was treated with antiretroviral therapy (ART). Treatment as prevention (TasP) has since been incorporated into national and international guidelines for HIV disease management. The authors of this article argued that in resource-limited countries, high-risk populations often drive the epidemic, and should thus be the focus of TasP interventions. The authors acknowledged the challenges of reaching key populations (including stigma and discrimination) and the complexity of preventing HIV in these communities. They emphasized the need for trained clinicians who can offer a safe environment and pointed out proven approaches that could be deployed to enhance testing, treatment, adherence, and support for hard-to-reach populations: e.g., mobile services, home visits, and targeted messaging, among others. Because high-risk individuals often have multiple challenges, facilities offering TasP will enhance their success by offering allied functions, including case management, mental health, drug counseling, and other treatment services. The authors also urged planners to include interventions to address social determinants such as housing and unemployment. They concluded that despite the complexity of TasP in key populations, providing ART in high-risk populations can significantly reduce HIV transmission both among key populations and in the wider community.

View Abstract

New in Combination Interventions

Adherence to Antiretroviral Medications among Persons Who Inject Drugs in Transitional, Low and Middle Income Countries: An International Systematic Review


The authors of this literature review examined adherence to antiretroviral therapy (ART) in transitional-, low-, and middle-income countries (TLMIC) among people who inject drugs (PWID) and persons with a history of injection drug use. The authors conducted a systematic review of articles and conference presentations presented between 1996 and 2012 that reported adherence to ART among these groups in TLMIC. They found 15 articles from seven countries that met the inclusion criteria (including documentation of ongoing ART therapy) in a sample of current or past opiate users, and measurement of ART adherence, and follow-up data. ART adherence was associated with different methods of measuring adherence in Eastern Europe and East Asia. The review found that adherence levels reported in the articles ranged from 33 percent to 97 percent; mean weighted adherence was 72 percent. The authors noted that adherence in TLMIC remains suboptimal, and is probably well below the levels needed to achieve positive treatment outcomes for individuals and a population-level effect on HIV transmission. The authors called for more research on ART adherence among PWID in TLMIC, and recommended using standardized methods for reporting adherence to ART in this group.

View Abstract
Combination HIV Prevention Interventions: The Potential of Integrated Behavioral and Biomedical Approaches


To assess the effectiveness of integrated behavioral and biomedical interventions, the authors conducted a literature review on efficacy data and factors associated with the acceptability and uptake of three biomedical HIV prevention approaches: microbicides, pre-exposure prophylaxis (PrEP), and HIV vaccination. They searched online databases to identify published articles in peer-reviewed journals that either (a) provided efficacy data or evaluated the acceptability of microbicides, PrEP, or an HIV vaccine or (b) discussed strategies for optimizing the implementation and dissemination of combination HIV prevention interventions. The study showed that microbicides and HIV vaccination have limited efficacy for HIV prevention, but PrEP has been shown to be effective. The authors noted that while many efficacious biomedical prevention strategies exist, numerous factors may affect their acceptability, uptake, and dissemination among key populations. The review showed that there are no available strategies to effectively incorporate biomedical and behavioral interventions, and identified concerns about the potential negative consequences of biomedical HIV prevention on behavioral prevention interventions, such as condom use. Additionally, challenges such as access to services, cost, and patient comfort can impede dissemination of biomedical HIV prevention methods. The authors called for more research to identify strategies for effectively integrating and evaluating combination HIV prevention interventions, and stressed that these interventions should be tailored to specific populations.

View Abstract

Towards an Integrated Framework for Accelerating the End for the Global HIV Epidemic among Young People


The authors of this opinion paper highlight approaches to, challenges, and gaps in HIV prevention programming for young people and adolescents (aged 13–24 years)—a group of global concern in terms of HIV-related morbidity and mortality—and advocated for an adapted, integrated combination prevention approach for this group. While numerous biomedical interventions exist, their use with young people raises challenges, including the absence of appropriate testing for safe use in young people and adolescents, and limited knowledge and low adherence to medication in this population. The authors noted that existing evidence-based behavioral, biomedical, and structural interventions could be adapted for young people. Meta-analysis has shown that behavioral interventions are effective in reducing risky sexual behavior among young people—for example, by increasing condom use and increasing sexual negotiation skills. The authors added that community mobilization strategies have been shown effective in achieving large-scale uptake of HIV prevention strategies among adolescents and youth. Furthermore, cost-effective, technology-driven, evidence-based interventions can be effective for reaching young people, who are often already using that technology. The authors concluded that an integrated implementation approach consisting of tailored biomedical, behavioral, and structural interventions is necessary for successful HIV prevention programming among young people.

View Abstract
Community Mobilization and Empowerment Interventions as Part of HIV Prevention for Female Sex Workers in Southern India: A Cost-Effectiveness Analysis


The authors of this cost-effectiveness analysis found that the addition of community mobilization (CM) and empowerment interventions to a core package of HIV prevention interventions could improve the impact of HIV prevention interventions for female sex workers (FSWs). The analysis was based on data gathered between 2004 and 2011 from two districts in Karnataka, India: Belgaum and Bellary. A package of core HIV prevention services provided by Avahan’s nongovernmental organization partners included outreach through peers, behavior change communication, condom distribution, and clinical services for sexually transmitted infections (STIs). To empower FSWs, CM services and actions to create an "enabling environment" were added to core services. Incremental costs for CM and empowerment were US$307,711 in Belgaum and US$592,903 in Bellary. The incremental mean impact of CM and empowerment was 1,256 infections averted in Belgaum, and 2,775 infections averted in Bellary, compared to regions where no CM and empowerment activities were implemented. The authors concluded that investing in CM and empowerment was cost-effective, and noted that with the CM activities, the FSWs also received broader benefits, including access to income generation, education, and other social entitlements. They recommended including sustained funding for CM and empowerment activities as part of HIV prevention for FSWs in India, and suggested that program managers consider scaling up similar interventions in other countries.

Use of Digital Media Technology for Primary Prevention of STIs/HIV in Youth


The authors of this literature review presented seven factors that can affect the effectiveness of digital media technology (DMT) interventions for the primary prevention of sexually transmitted infections (STIs) and HIV in adolescents and young adults aged 11–29 years. They reviewed 29 articles that reported on the cognitive, psychosocial, behavioral, or biological outcomes of DMT interventions to prevent sexually transmitted infections and HIV. Seven issues emerged that should be addressed to improve design and evaluation of DMT-based HIV prevention interventions: (a) balancing the focus (targeting broad-based groups versus a specific sub-group), (b) developing a framework for DMT intervention, (c) applying DMT in resource-limited contexts, (d) keeping up with the rapidly changing nature of DMT, (e) building in measures of biological outcomes, (f) designing interventions with comparison and control groups to assess the impact of DMT, and (g) addressing limited temporal follow-up. The authors added that implementing DMT interventions would require availability of (or support for) infrastructure to support digital technology, and emphasized that targeting interventions to specific groups based on gender, ethnicity, or age may increase their effectiveness.
Rethinking HIV Prevalence Determination in Developing Countries


The authors of this article described the advantages of routinely collecting HIV prevalence data generated during routine HIV testing and counseling (HTC) and routine prevention of mother-to-child transmission (PMTCT). This model would utilize information and communications technology, the Internet, and the mobile telephone system to connect HTC and PMTCT centers to a national database. Data from the national database archive could then be analyzed to determine HIV prevalence, but also to identify predominant risk factors in specific geographic locations. Geographic risks would be assessed by aggregating all sites providing HTC and PMTCT services enrolled into the system, using specific geographic identifier data as a unit of analysis. This would facilitate the design of intervention programs to target the behavioral or other risk factors for that area. The authors noted the challenges associated with collecting data through HTC and PMTCT surveillance systems, including the absence of a standardized process for collecting data and incorporating it into data management systems. Technical challenges, such as power outages and Internet connectivity, as well as non-technical challenges, such as lack of political will, poor technical support, and lack of funding, could also stymie implementation of this approach. Challenges notwithstanding, the expansion would allow access to data from a larger and more diverse cadre of respondents, compared to the sentinel surveillance data that is presently being derived from antenatal clinics.

**View Abstract**

New in Reports, Guidelines, & Tools

PEPFAR 3.0 – Controlling the Epidemic: Delivering on the Promise of an AIDS-Free Generation


The U.S. President's Emergency Plan for AIDS Relief (PEPFAR) released a new report titled *PEPFAR 3.0 – Controlling the Epidemic: Delivering on the Promise of an AIDS-free Generation*. The report documents the program’s progress and unveils PEPFAR’s strategy for working with partners to achieve an AIDS-free generation. Now in its third phase (2013 – present), PEPFAR is focusing on achieving transparency and accountability in the HIV response, and on accelerating core interventions to control the epidemic. PEPFAR is investing resources strategically to reach key high-risk populations with evidence-based programs. The report also provides insight into PEPFAR’s five Action Agendas—Impact, Efficiency, Sustainability, Partnership, and Human Rights—as the foundation for achieving an AIDS-free generation.

On World AIDS Day PEPFAR also announced the following initiatives:

- $210 million partnership with the Bill & Melinda Gates Foundation and the Nike Foundation to reduce new HIV infections in adolescent girls and young women
- $116.5 million investment in health systems for disease response
- $200 million partnership with Children’s Investment Fund Foundation for the Children’s HIV/AIDS Treatment Initiative (ACT) in 10 African countries

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- $200 million partnership with Children’s Investment Fund Foundation for the Children’s HIV/AIDS Treatment Initiative (ACT) in 10 African countries
• Partnership with the multi-agency Global Pediatric Antiretroviral Commitment-to-Action to accelerate innovation and save children's lives
• $21.5 million partnership with the Millennium Challenge Corporation to ensure data quality and transparency.

View Report (PDF, 1.1 MB)

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.

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