AIDSFree Prevention Update

July 2015

This is the July 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

Starting Antiretroviral Treatment Early Improves Outcomes for HIV-Infected Individuals

Factors Associated with Adherence to Antiretroviral Therapy among Adolescents Living with HIV/AIDS in Low- and Middle-Income Countries: A Systematic Review

Targeting the SAVA (Substance Abuse, Violence, and AIDS) Syndemic among Women and Girls: A Global Review of Epidemiology and Integrated Interventions

Behavioral Prevention

Relative Risk for HIV Infection among Men Who Have Sex with Men Engaging in Different Roles in Anal Sex: A Systematic Review and Meta-Analysis on Global Data

Biomedical Prevention

Understanding Adherence to Daily and Intermittent Regimens of Oral HIV Pre-Exposure Prophylaxis among Men Who Have Sex with Men in Kenya

Risk of HIV-1 Acquisition among Women Who Use Different Types of Injectable Progestin Contraception in South Africa: A Prospective Cohort Study

Implementation and Operational Research: Uptake of Services and Behaviors in the Prevention of Mother-to-Child HIV Transmission Cascade in Zimbabwe
Combination Prevention

Innovative Strategies for Scale Up of Effective Combination HIV Prevention Interventions in Sub-Saharan Africa

Structural Prevention

Relationship Power, Communication, and Violence among Couples: Results of a Cluster-Randomized HIV Prevention Study in a South African Township

A Randomized Controlled Trial to Increase HIV Preventive Information, Motivation, and Behavioral Skills in Ugandan Adolescents

Structural Interventions for HIV Prevention among Women Who Use Drugs: A Global Perspective

Sexually Transmitted Infection Screening Uptake and Knowledge of Sexually Transmitted Infection Symptoms among Female Sex Workers Participating in a Community Randomised Trial in Peru


Epidemiology

Global Epidemiology of HIV among Women and Girls Who Use or Inject Drugs: Current Knowledge and Limitations of Existing Data

Reports, Guidelines & Tools

WHO Consolidated Strategic Information Guidelines for HIV in the Health Sector
Starting Antiretroviral Treatment Early Improves Outcomes for HIV-Infected Individuals

National Institutes of Health (May 27, 2015).

Current World Health Organization guidelines for HIV treatment recommend that HIV-positive individuals begin antiretroviral therapy (ART) when CD4+ cell counts fall to 500 cells/mm³ or less. However, interim findings from the Strategic Timing of Antiretroviral Treatment (START) trial (2011–2016) show that earlier ART initiation reduces the risk of AIDS, other serious illnesses, and death. The trial, implemented in 35 countries, was the first large-scale randomized clinical trial to test the impact of early ART enrollment. The study enrolled 4,685 ART-naive HIV-positive men and women with CD4+ cell counts above 500 cells/mm³. Half of the participants were randomized to begin ART immediately; the other half deferred treatment until their CD4+ cell reached 350 cells/mm³. Data from March 2015 identified 41 instances of AIDS, serious non-AIDS events, or death among those enrolled in the early treatment group, compared to 86 events in the deferred treatment group. The interim analysis found that the risk of developing serious illnesses or death was reduced by 53 percent among those in the early treatment group, compared to those in the deferred group. These findings were consistent throughout low-, middle-, and high-income countries and across geographic regions. Though the trial continues through 2016, all participants have been offered treatment based on these findings. The study implementers recommended that all asymptomatic HIV-positive individuals begin antiretrovirals, regardless of CD4+ cell count.

Factors Associated with Adherence to Antiretroviral Therapy among Adolescents Living with HIV/AIDS in Low- and Middle-Income Countries: A Systematic Review


This review summarized findings from 15 quantitative observational studies of factors associated with adolescent adherence to antiretroviral therapy (ART) in 10 low- and middle-income countries (LMICs). The eligible studies included a total of 4,363 participants between the ages of 10 and 19, recruited mainly from pediatric and non-specific hospitals, clinics, and treatment centers. The authors categorized the factors associated with adherence into four broad themes related to the (1) adolescent, (2) caregiver, (3) medication, and (4) physical, social, and/or health care environment. Rates of adherence varied widely across studies, ranging from 16 percent to 99 percent. Analysis showed significant associations between good adherence and lack of awareness of serostatus, previous hospitalizations, younger age, and lack of awareness of caregiver’s health problems. By contrast, orphan status, stunted growth, low mental health scores, and sexual activity were correlated with worse adherence across the studies. Adolescents living with married, divorced, or widowed caregivers had significantly better ART adherence than those living with unmarried caregivers. Although their analysis identified specific factors that support ART adherence among adolescents living in LMICs, the authors concluded that more research is still needed to identify the range of influences on ART adherence as these adolescents grow into adulthood.
Targeting the SAVA (Substance Abuse, Violence, and AIDS) Syndemic among Women and Girls: A Global Review of Epidemiology and Integrated Interventions


The authors examined meta-analytic epidemiology and intervention studies published between 2000 and 2015 that addressed aspects of the substance abuse, violence, and AIDS (SAVA) syndemic among women and girls who use drugs worldwide. Their findings suggested that gender-based violence (GBV), including physical and sexual violence, significantly increased the risk of HIV and other sexually transmitted infections among women and girls who use drugs. The authors noted that experiencing physical and other types of GBV also decreased the likelihood of being tested for HIV and obtaining and staying in HIV care; and increased the likelihood of poor adherence to antiretrovirals among these groups. They suggested several interventions to remediate SAVA: (1) models for screening, a brief intervention, and referral to treatment and services, possibly also integrated with HIV counseling and testing; (2) integrated behavioral and HIV prevention interventions; (3) extended, integrated treatments to address trauma and prevent HIV or promote adherence to medication; and (4) primary prevention models implemented at the community or structural level. The authors concluded that their findings underscore the need for a comprehensive strategy to target the drivers of the SAVA syndemic, particularly in low-income and middle-income countries.

View Abstract

Behavioral Prevention

Relative Risk for HIV Infection among Men Who Have Sex with Men Engaging in Different Roles in Anal Sex: A Systematic Review and Meta-Analysis on Global Data


The authors of this review examined global data on the relative HIV risk of different modes of anal sex among men who have sex with men (MSM). They analyzed 21 papers published before September 2013 and conducted a meta-analysis of HIV prevalence and relative risk for HIV infection for two time periods: 1981–1985 and 1986–2010. Their analysis showed that men engaging in receptive anal intercourse only (MRAI) were 6.9 and 1.8 times more likely to be HIV-positive in 1981–1985 and 1986–2010, respectively; and 6.2 times more likely to develop incident HIV infection overall, compared to men engaging in insertive anal intercourse only (MIAI) during those time periods. Overall, MRAI and men engaging in both insertive and receptive anal sex were 6.2 and 6.6 times more likely to develop incident HIV infection compared to MIAI. This study is the first to provide concrete data evidence that sexual positioning is significantly associated with HIV transmission among MSM. The authors concluded that despite relatively lower prevalence and incidence of HIV in men engaging in insertive anal sex only, the prevalence and incidence of HIV were invariably high among men engaging in any variation of anal sex.

View Abstract
Understanding Adherence to Daily and Intermittent Regimens of Oral HIV Pre-Exposure Prophylaxis among Men Who Have Sex with Men in Kenya


The authors used data from a randomized, placebo-controlled, blinded trial of pre-exposure prophylaxis (PrEP) to evaluate safety, acceptability, and adherence to treatment in men who have sex with men at two centers in Kenya from 2009 to 2010. Sixty-two participants were randomized to receive emtricitabine/tenofovir or the placebo either daily or intermittently (prescription: Mondays/Fridays/after sex, maximum one dose/day), and their adherence was analyzed either according to a "strict" (by prescription) or "relaxed" model. The men were followed for four months. In the multivariate model that combined daily and relaxed adherence (allowing some off-prescription doses), the authors found that lower adherence was significantly associated with frequent travels in the past month, and marginally associated with transactional sex during the past month. In the secondary analysis, which used the strict (per prescription) definition for intermittent adherence, lower adherence was associated with transactional sex in the past month, and longer time in the study (per each additional month of follow-up). Additionally, daily dosing (versus intermittent dosing) and the ability to generate income were associated with higher adherence. The authors concluded that adherence interventions should address challenges related to mobility, sex work, and long-term PrEP.

View Abstract

Risk of HIV-1 Acquisition among Women Who Use Different Types of Injectable Progestin Contraception in South Africa: A Prospective Cohort Study


The authors used prospective data from the Vaginal and Oral Interventions to Change the Epidemic (VOICE) trial, a randomized, placebo-controlled trial conducted in four African countries, to investigate the safety and efficacy of three formulations of tenofovir for prevention of HIV-1 infection in women. The VOICE trial was implemented from 2009 to 2011, with a 12-month follow-up. For this study, the authors only analyzed data from 3,141 South African participants who used depot medroxyprogesterone acetate (DMPA) and norethisterone enanthate (NET-EN), to assess whether these two injectable progestin-only contraceptives presented different risks of HIV-1 acquisition. Among these women, 1,788 used only DMPA, 1,097 used only NET-EN, and 256 used both injectable types at different times during follow-up. The authors found that during 2,733.7 person-years of follow-up, 207 incident HIV-1 infections occurred (incidence 7.57 per 100 person-years). The risk of HIV-1 acquisition was 50 percent higher among DMPA users than among NET-EN users. Moreover, the increased risk persisted after controlling for important demographic and behavioral factors and in several sensitivity analyses. The authors concluded that NET-EN may be a better alternative drug for DMPA, with a lower HIV risk, and recommended that women who prefer an injectable consider switching from DMPA to NET-EN.

View Abstract
Implementation and Operational Research: Uptake of Services and Behaviors in the Prevention of Mother-to-Child HIV Transmission Cascade in Zimbabwe


The authors of this study investigated the uptake of services in the cascade of services for maternal and infant prevention of mother-to-child HIV transmission (PMTCT) in 2011–2012 in Zimbabwe; determined factors associated with vertical transmission of HIV; and examined patterns of service use for HIV-exposed infants. They tested 8,800 biological mothers and their eligible infants for HIV infection, and conducted interviews about PMTCT service use. They found that 94 percent of all women attended one or more antenatal care (ANC) visits during pregnancy, and 64 percent attended four or more ANC visits. Among HIV-positive women, 59 percent reported receiving antiretroviral therapy (ART) or antiretroviral (ARV) prophylaxis; and 37 percent reported receiving a CD4 test. Among their HIV-exposed infants, 63 percent received ARV prophylaxis, and 44 percent received cotrimoxazole. Analysis showed that factors associated with receipt of maternal ART or ARV prophylaxis included four or more antenatal care visits, institutional delivery, and disclosure of serostatus. The authors concluded that in contrast to some previous reports, these results suggested that most pregnant and postpartum women are not completely lost from the PMTCT cascade. However, these women do not use services to prevent and treat HIV infection. The authors recommended keeping HIV-positive pregnant and postpartum women in HIV-specific services to prevent vertical transmission in Zimbabwe.

View Abstract

Innovative Strategies for Scale Up of Effective Combination HIV Prevention Interventions in Sub-Saharan Africa


This review highlighted key drivers of the epidemic in sub-Saharan Africa (SSA) and discussed innovative strategies for the scale-up of effective combination HIV prevention strategies, with a focus on treatment as prevention. While many countries are implementing combination HIV prevention strategies, extreme rates of poverty, combined with weak health systems and health inequalities, and the failure to prioritize HIV prevention among key populations, continue to drive the epidemic. The authors emphasized that while knowing one’s HIV status is the first step in accessing prevention and treatment services, and may positively influence sexual risk behavior, more than half of the people living with HIV in SSA remain undiagnosed. To be effective, interventions addressing behavior change need to be combined with biomedical interventions, such as pre-exposure prophylaxis, voluntary medical male circumcision, and treatment as prevention. The authors emphasized that innovative strategies, such as home-based HIV testing and counseling, could lead to higher service uptake, especially among men. Treatment strategies that expand access into the community may also enhance linkages. The authors concluded that the SSA context requires multiple strategies to (1) expand knowledge of HIV status, and (2) scale up innovative strategies to increase access to counseling, testing, and treatment. They called for strong community leadership to implement and scale up effective combination prevention programs.

View Abstract
**Relationship Power, Communication, and Violence among Couples: Results of a Cluster-Randomized HIV Prevention Study in a South African Township**


From June 2010 through April 2012, the authors studied 290 heterosexual couples from a high-HIV-prevalence South African township to examine the effects of HIV prevention interventions on power dynamics within relationships. The first intervention, the Couples Health CoOp (CHC), engaged both men and their female partners; in the second intervention, women received the Women’s Health CoOp (WHC), and men received the Men’s Health CoOp (MHC). The interventions consisted of two three-hour sessions delivered one week apart by community peer leaders. Sessions included modules on a variety of topics, including alcohol and other drug use, sexually transmitted infections, HIV, safer sex methods, gender roles, effective communication and conflict resolution skills, dealing with stress, and preventing violence. At the six-month follow-up, only CHC participants reported positive changes in power within their relationships. For the second measure of relationship power—equity in shared decision-making—the most substantial improvements occurred in the WHC model. The authors also found that women from MHC/WHC couples were less likely to report experiencing violence during the follow-up period, compared with women in the CHC arm. This study highlighted the need for both gender-separate and joint couples’ interventions to address gender-based inequities in settings where women remain at high risk of HIV infection.

**View Abstract**

**A Randomized Controlled Trial to Increase HIV Preventive Information, Motivation, and Behavioral Skills in Ugandan Adolescents**


This study focused on the impact of an Internet-based HIV prevention program, CyberSenga, on information, motivation, and behavioral skills among adolescents. The participants (366 sexually experienced and inexperienced youth aged 13 years and older) were randomly assigned to either the five-week CyberSenga (intervention group), covering topics such as how HIV is contracted, how to reduce HIV risk, motivation to have sex or abstain, and condom use skills, or the treatment-as-usual (control) group receiving the sexual health education offered at their schools. Half of the intervention participants were further randomized to a booster session. Follow-up data were collected at three and six months post-intervention. The authors reported that at six months post-baseline, the control group correctly answered 72.4 percent of HIV prevention-related questions; the intervention-only and intervention+booster groups correctly answered 77.6 percent and 82.8 percent of questions, respectively. Intentions to be abstinent did not change over time for any of the groups. However, at the six-month follow-up, intentions to use condoms became stronger, with the intervention+booster group showing the strongest intentions to use condoms, followed by the intervention-only group. The authors concluded that as the Internet becomes more affordable, and therefore more widely accessible, programs such as CyberSenga have the potential for wide dissemination to reach a greater number of young people.

**View Abstract**
Structural Interventions for HIV Prevention among Women Who Use Drugs: A Global Perspective


The authors provided a global overview of contextual sources of HIV risk among women who use drugs (WWUD) and structural interventions (SIs) to address WWUDs' vulnerability to HIV. They argued that there is a need to modify SIs to meet the needs of WWUDs—for example, engaging more women's peer networks—and identified challenges to policies that affect WWUD disproportionately, if not exclusively. Additions to existing harm reduction programs, such as providing on-site child care; employing female, nonjudgmental staff; offering mobile services; and being located in relatively safe and discreet areas, can make these programs more accessible to women. Additionally, given the potentially harsher consequences to women of revealing their drug use, and their reluctance to interact with men (possibly ensuing from histories of abuse), SIs for WWUD have also involved offering “women-only” hours and services, such as women-only drug treatment programs. The authors suggested that a potentially powerful set of SIs for WWUD could integrate health and social service models, such as “one-stop shops” that enable WWUD to access multiple services at one site. Thus, women could receive a constellation of services at a single site, including harm reduction; screening, treatment, and care for substance use, HIV, tuberculosis, hepatitis, sexually transmitted infections, mental health, trauma, and interpersonal violence; and other physical, social, and emotional health services.

View Abstract

Sexually Transmitted Infection Screening Uptake and Knowledge of Sexually Transmitted Infection Symptoms among Female Sex Workers Participating in a Community Randomised Trial in Peru


The authors analyzed the uptake of health screening and preventive behaviors among female sex workers (FSWs) in mid-sized Peruvian cities that were associated with a community randomized trial on preventing sexually transmitted infections (STIs), including HIV. The study interventions included mobile FSW outreach to increase condom use and care-seeking for screening, diagnosis, and treatment of STIs by FSWs. The authors conducted cross-sectional surveys among 4,156 FSW (2,063 from control and 2,093 from intervention cities) at baseline in 2002–2003, during 2005, and at the end of the intervention in 2006. Among FSWs surveyed in 2006, 4 percent in the control arm and 75 percent in the intervention arm reported receiving services from, or ever participating in activities with the mobile study outreach team. FSWs in the intervention group were more likely to report condom use with the last non-client; ever seeking an STI screening exam; ever receiving HIV testing; receiving recent HIV testing; knowledge of STIs; and awareness of female and male STI symptoms. Among intervention participants, there was also a trend towards increased frequency of recent screening exams at a public STI clinic. The authors concluded that mobile outreach and peer services can play a significant role in health promotion interventions for FSWs in Peru.

View Abstract


The author reviewed 22 studies on sexuality and HIV education interventions to explore whether including content on gender and power affects programmatic efficacy; and how effective curriculum-based programs have addressed gender and power. Of the 10 studies that included gender and power content, 80 percent led
to significant decreases in at least one of the health outcomes examined (pregnancy, childbearing, or sexually transmitted infections [STIs]). Among the 12 programs that did not address gender and power, by contrast, only two (17 percent) recorded significantly reduced rates of pregnancy or STIs. Additionally, in the 17 studies that included a post-intervention follow-up of one year or longer, 78 percent demonstrated reduced adverse health outcomes, compared to 25 percent of interventions with no follow-up. Clinic-based programs were far more likely to reduce adverse health outcomes than programs implemented in other settings (such as school-based programs). The author noted some common characteristics among all programs, including interactive and learner-centered approaches that focused on gender and power in relationships; fostered critical thinking about how gender norms or power manifest and operate; and promoted valuing oneself and recognizing one’s own power. The author concluded that discussion of gender and power should be considered a key characteristic of effective sexuality and HIV education programs.

**Global Epidemiology of HIV among Women and Girls Who Use or Inject Drugs: Current Knowledge and Limitations of Existing Data**


The authors conducted a literature review focused on women and girls who use and/or inject drugs to explore risk factors and determine HIV prevalence and mortality rates among these groups. They found that although crude mortality rates were consistently lower among women who use and inject drugs compared with men, standardized mortality ratios were higher among women who use and inject drugs. Their findings suggest that these women experienced relatively greater mortality than their age-matched peers in the broader community compared with men who use drugs. Social exclusion, stigma, and discrimination can increase HIV risk and undermine HIV prevention and treatment programs for this group. These women and girls are reluctant to disclose their drug use and do not access health services, including drug treatment, for fear of discrimination. Moreover, they may be excluded from family support structures, and those with limited financial or employment options may be more likely to engage in sex work, increasing sexual HIV risk and attracting additional stigma. The authors concluded that special efforts (such as stratified sampling) may be needed to recruit women and girls into studies of drug use and HIV prevalence and risk among people who inject drugs, to ensure adequate recruitment of women and improve the reliability of sex-specific prevalence statistics.
WHO Consolidated Strategic Information Guidelines for HIV in the Health Sector

World Health Organization (May 2015).

On May 11, 2015, the World Health Organization released new guidelines that recommend simplified annual indicators to measure the reach of HIV services, and the impact achieved at both the national and global levels. The guidelines were developed in partnership with the Global Fund, the Joint United Nations Programme on HIV/AIDS, the United Nations Children’s Fund, and the U.S. President’s Emergency Plan for AIDS Relief. The guidelines recommend the use of 10 global indicators to collect information along the cascade of HIV care and treatment as a principal way to track national epidemics and responses. These indicators are:

1) Number of people living with HIV
2) Domestic funding
3) Coverage of prevention services
4) Number of individuals diagnosed
5) HIV care coverage
6) Treatment coverage
7) Retention in treatment
8) Percentage of people in treatment with viral suppression
9) Number of HIV deaths
10) Number of new infections.

The guide is primarily intended for national health sector staff engaged in the collection, analysis, and use of HIV-related strategic information, including those who set up monitoring and evaluation systems and those who use data to improve programs. It is also intended for stakeholders concerned with developing and analyzing strategic information, including nongovernmental organizations, private-sector care providers, civil society, and academic groups involved in teaching and research.

View Guidelines

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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