AIDSFree Prevention Update

September 2015

This is the September 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.

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In Focus

Motivations for Reducing Other HIV Risk-Reduction Practices if Taking Pre-Exposure Prophylaxis: Findings from a Qualitative Study among Women in Kenya and South Africa

Corneli, A., Namey, E., Ahmed, K., et al. *AIDS Patient Care and STDs* (September 2015), 29(9): 503-509, doi: 10.1089/apc.2015.0038.

This study assessed how and why women's self-reported use of HIV risk-reduction practices in certain contexts might change if they had access to and used pre-exposure prophylaxis (PrEP). From February to May 2013, the authors conducted qualitative, semi-structured interviews with 60 participants at HIV testing and counseling centers in Kenya and South Africa. Women discussed why they and other women in their communities would be likely to have sex with a new partner, or stop using condoms, if they were using PrEP. Their findings indicated three related beliefs. First, women said that PrEP provides protection; they perceived PrEP as an effective HIV prevention method that would replace the need for condoms. Second, they felt that using PrEP would avoid conflicts over using condoms, which their partners disliked. Third, participants perceived that having sex without a condom, or with a new partner, was essential to receiving material goods and financial assistance. The authors concluded that women who take PrEP should receive guidance and HIV risk reduction counseling so that they can make informed decisions about their sexual health.

View Abstract

Oral Pre-Exposure Prophylaxis—Questions and Answers

Joint United Nations Programme on HIV/AIDS (July 2015).

This reference guide released by the Joint United Nations Programme on HIV/AIDS (UNAIDS) highlights the benefits of expanding pre-exposure prophylaxis (PrEP) to all people who are at substantial risk of acquiring HIV and who do not have access to, or cannot consistently use, other prevention methods, such as condoms and lubricants. Studies have shown that PrEP is effective in preventing HIV among diverse groups, including men who have sex with men, transgender people, heterosexual men and women, and people who inject drugs; and that it reduces HIV transmission by up to 90 percent compared with placebo when taken correctly. The World Health Organization anticipates issuing recommendations and implementation guidelines in 2015 to offer PrEP to all key populations. The U.S. Food and Drug Administration has approved the combination of tenofovir and emtricitabine as PrEP medication, and the U.S. Centers for Disease Control and Prevention has developed PrEP guidelines for adults at higher risk of HIV exposure. UNAIDS advocates scaling up PrEP as an additional HIV prevention intervention. UNAID's Fast-Track strategy, designed to end the HIV epidemic by 2030, includes PrEP as part of combination HIV prevention for populations at higher risk of HIV. This reference guide provides detailed information on eligibility for PrEP, PrEP use, potential risk compensation, side effects and resistance, PrEP delivery, and the cost and cost-effectiveness of PrEP.

View Guide

8th International AIDS Society Conference

8th IAS Conference on HIV Pathogenesis, Treatment & Prevention, Vancouver, Canada (July 19–22, 2015).

The International AIDS Society Conference on HIV Pathogenesis, Treatment and Prevention (IAS 2015) featured the latest HIV science, including basic, clinical, and prevention research. The conference brought together HIV professionals from around the world with a focus on implementation—moving scientific advances into practice in prevention, treatment, and care worldwide. Presentations covered new findings on treatment as prevention and oral pre-exposure prophylaxis, and the application of these technologies for public and individual protection within the context of the epidemic in 2015. The conference website includes highlights, presentations, and abstracts from the conference.

View Conference Materials

Behavioral Prevention

Promoting Female Condom Use among Female University Students in KwaZulu-Natal, South Africa: Results of a Randomized Behavioral Trial

Mantell, J.E., Smit, J.A., Exner, T.E., et al. *AIDS and Behavior* (July 2015), 19(7): 1129–1140.

This study compared the efficacy of two approaches for promoting the use of female condoms. Female students at a South African university were randomized to either a single group session featuring information on female condoms (control, n = 149), or a two-session enhanced intervention (EI, n = 147) that included information on female condoms, rehearsal of their use, and skill-building on partner negotiation. Follow-up assessments were conducted at 2.5 and 5 months after completion of the intervention. At both follow-up periods, participants in both groups reported significant reductions relative to baseline in instances of vaginal intercourse without condoms (either male or female). In the control group, the number of female condoms used increased 135.6 times between baseline and the 2.5-month follow-up; and 58 times at the 5-month follow-up. In the EI group, use of female condoms increased 16.8 times at 2.5 months and 12.7 times at 5 months. The authors concluded that both interventions led to significant reductions in unprotected sex and significant increases in the use of female condoms during sexual encounters at five months post-intervention. They recommended a brief one-session intervention on using female condoms, delivered over a 60–90 minute period, especially in resource-constrained settings.

View Abstract

Estimating the Cost of Early Infant Male Circumcision in Zimbabwe: Results from a Randomized Noninferiority Trial of AccuCirc Device Versus Mogen Clamp

Mangenah, C., Mavhu, W., Hatzold, K., et al. *Journal of Acquired Immune Deficiency Syndromes* (August 2015), 69(5): 560–566, doi: 10.1097/QAI.0000000000000699.

The authors conducted a relative costs analysis comparing the AccuCirc device with the Mogen clamp for early infant male circumcision (EIMC). Between January and June 2013, they randomly assigned 150 male infants aged 6–60 days to either AccuCirc or Mogen clamp groups in a 2:1 ratio (100 AccuCirc; 50 Mogen clamp) in a polyclinic in Harare, Zimbabwe. The infants were followed for two weeks after circumcision. The authors analyzed data on direct costs for consumable and non-consumable supplies (including the circumcision tools, staff and associated training, and environmental costs) and indirect costs, including capital and support personnel costs. They found unit costs of US$49.53 and $55.93, respectively, for AccuCirc and the Mogen clamp. Supply costs were higher for Mogen clamp ($30.18, compared to $13.48 for AccuCirc). Key contributors to the unit cost of AccuCirc were consumable supplies, price of the device, and personnel costs. For the Mogen clamp, key cost contributors were consumable supplies and personnel costs. The authors concluded that their study results could inform managers about which devices to use when scaling up EIMC and could help to determine overall resources needed for scaling up the EIMC program in Zimbabwe.

View Abstract

Repeat Use of Post-Exposure Prophylaxis for HIV among Nairobi-Based Female Sex Workers Following Sexual Exposure

Izulla, P., McKinnon, L.R., Munyao, J., et al. *AIDS and Behavior* (May 2015), E-publication ahead of print, doi: 10.1007/s10461-015-1091-1.

This study analyzed characteristics associated with female sex workers (FSWs) who seek repeat doses of post-exposure prophylaxis (PEP), and described barriers to PEP access and use. Study participants included 5,814 HIV-negative, active FSWs enrolled in targeted HIV prevention through the Kenya AIDS Control Project between 2009 and 2013. The authors reported that one-fifth of all participants (n = 1,119) requested PEP at least once, and 3.7 percent requested it more than once. Repeat PEP users were more likely to be younger, had almost 20 percent more casual partners on the day prior to PEP enrollment; and were more than twice as likely to report always using condoms with casual partners. Repeat PEP users were half as likely to have a regular partner compared to the remainder of the study population, but were twice as likely to use condoms with their regular partner. Participants mentioned a number of barriers to PEP access, including perceived or experienced side effects of antiretroviral medications; perceived stigma from other FSWs (the assumption that PEP users are likely to be HIV positive); and fear of stigmatization by providers, especially following repeated PEP use. The authors concluded that increasing awareness and use of PEP, strengthening adherence, and minimizing barriers to access could contribute significantly to increasing PEP uptake among FSWs.

View Abstract

Single-Tablet Emtricitabine-Rilpivirine-Tenofovir as HIV Post-Exposure Prophylaxis in Men Who Have Sex with Men

Foster, R., McAllister, J., Read, T.R., et al. *Clinical Infectious Diseases* (June 2015), pii: civ511 (E-publication ahead of print).

This multi-center, open-label, nonrandomized trial assessed adherence and safety of a three-drug regimen (coformulated emtricitabine, rilpivirine, and tenofovir disoproxil fumarate, or FTC-RPV-TDF), taken as a single tablet over 28 days for post-exposure prophylaxis (PEP). The authors recruited 100 HIV-negative men who have sex with men in urban Australia between December 2012 and June 2014. All participants attended up to 7 follow-up visits over 12 weeks. PEP completion was 92 percent; reasons for noncompletion were loss to follow-up, study burden, and medication side effects. Among the 92 participants who completed the 28 days of follow-up, self-reported PEP adherence was 98.5 percent; 67 of these men reported no missed doses, and 86 reported taking all doses with food. No participant reported missing more than three doses. Among the 78 participants who returned their pill bottles at day 28, adherence by pill count was 98.6 percent. Participants reported that the most common adverse events were fatigue and nausea. The authors concluded that a single-tablet regimen of FTC-RPV-TDF was well tolerated as once-daily PEP, with high levels of adherence and completion. They recommended evaluating other single-tablet regimens as PEP.

View Abstract

Missed Opportunities along the Prevention of Mother-to-Child Transmission Services Cascade in South Africa: Uptake, Determinants, and Attributable Risk (the SAPMTCTE)

Woldesenbet, S., Jackson, D., Lombard, C., et al. *PLOS ONE* (July 2015), 10(7): e0132425, doi: 10.1371/journal.pone.0132425.

The authors of this study measured national uptake of antenatal and early postnatal services for prevention of mother-to-child transmission (PMTCT) in South Africa, seeking to (1) identify key PMTCT dropout points, rates, and determinants; and (2) estimate the number of pediatric HIV infections resulting from PMTCT dropout. The study was conducted between June and December 2010 among mother-infant pairs attending immunization services at randomly selected public primary and community health care facilities in nine South African provinces. Of 9,803 participating mothers, 2,977 were HIV positive. Of these, 80.4 percent received some form of maternal and infant antiretroviral treatment, and 34.9 percent dropped out from one or more steps in the PMTCT service cascade. Specific groups of mothers were more likely to miss one or more services along the cascade: adolescents (under age 20); women delivering at home; those presenting late (during the third trimester); women with lower income; those with lower education; and women who had not disclosed their HIV status to their partners. The authors concluded that one-third of infant HIV infections were attributable to missed opportunities in the PMTCT cascade, and that these could be prevented by optimizing uptake of existing key antenatal and early postnatal PMTCT services.

View Abstract

Improving the Quality of Voluntary Medical Male Circumcision through Use of the Continuous Quality Improvement Approach: A Pilot in 30 PEPFAR-Supported Sites in Uganda

Byabagambi, J., Marks, P., Megere, H., et al. *PLOS ONE* (July 2015), 10(7): e0133369, doi: 10.1371/journal.pone.0133369.

This report described gaps in the quality of services for voluntary medical male circumcision (VMMC) and offered lessons that could be used by other VMMC programs. In 2012, the authors examined data on 53 VMMC quality standards and client-level indicators from 30 sites in Uganda that received support from the

U.S. President's Emergency Plan for AIDS Relief (PEPFAR). The evaluation found significant weaknesses in monitoring and evaluation (no standard client data collection tools existed in the country) along with gaps in staffing, compliance with national guidelines, and management systems. PEPFAR responded by providing project-based technical support to improve the quality of Uganda's VMMC services. The project used a continuous quality improvement (CQI) approach and scored participating sites on their readiness to provide VMMC. At baseline (early 2013), fewer than 20 percent of the sites were rated "good" (adequate supplies, equipment, client counseling, and surgical procedures). By November 2013, 67 percent of sites were rated as good. Significant improvements also occurred in post-operative follow-up at 48 hours, assessment of sexually transmitted infections, securing of informed consent, and use of local anesthesia. The authors concluded that the CQI approach successfully addressed quality gaps in VMMC and recommended that VMMC programs consider quality improvement interventions from the inception of program design.

View Abstract

Seasonal PrEP for Partners of Migrant Miners in Southern Mozambique: A Highly Focused PrEP Intervention

Cremin, I., Morales, F., Jewell, B.L., et al. *Journal of the International AIDS Society* (July 2015), 18(3): 19946, dx.doi.org/10.7448/IAS.18.4.19946.

This study used a mathematical model to estimate the cost-effectiveness and prevention impact of providing time-limited pre-exposure prophylaxis (PrEP) to women whose partners work in South Africa and return home to Gaza, Mozambique over the Christmas period. Assuming that PrEP costs US$300 per person per year for all eligible HIV-negative women, the cost per infection averted was $15,647. Providing PrEP specifically to partners of miners, because of the comparatively higher incidence in this group, increased the cost per infection averted to $71,374. However, providing PrEP to miners' partners for only the last six weeks of the year would reduce the cost per infection averted dramatically, to $9,538. The model showed that reducing the cost per infection averted to below $3,000 would require good adherence by at least 85 percent of PrEP users; and PrEP would need to cost less than $115 per person per year. This model, the authors said, showed that seasonal provision—providing PrEP to miners' partners during the time of greatest exposure—averted the same number of infections in Gaza, while greatly reducing the quantity of PrEP being used and paid for. They suggested that this strategy would facilitate resource prioritization during intervention planning. It could also improve the efficiency of a PrEP intervention considerably in this setting, while providing important reproductive health benefits.

View Abstract

Implementation of Prevention of Mother-to-Child Transmission of HIV Programme through Private Hospitals of Delhi—Policy Implications

Gupta, A.K., Garg, C.R., Joshi, B.C, et al. *AIDS Care* (July 2015), E-publication ahead of print.

This study examined the implementation status of prevention of mother-to-child transmission (PMTCT) programs in private hospitals in India. Between March and September 2013, the authors interviewed directors of obstetrics and gynecology and pediatrics at 29 large corporate hospitals, 42 medium-sized hospitals, and 10 small nursing homes. Interviews covered HIV testing and counselling, PMTCT programs, the type of care provided to HIV-positive pregnant women, access by HIV-positive women to CD4-count services, and other relevant questions. The study found that private hospitals routinely performed HIV testing for all antenatal

clients, but did not obtain women's consent, and did not offer pre- or post-test counseling. Medical termination of pregnancy was undertaken in more than 90 percent of HIV-positive pregnant women. The hospitals did not follow any PMTCT protocol and did not provide delivery services to HIV-positive women. Only 8 percent of HIV-positive women were referred to public health facilities for antenatal care, delivery, and HIV care. CD4 cell-count facilities were available in 41 percent of the hospitals, but HIV-positive clients were not given CD4 testing. Antiretroviral therapy was not available in any participating hospital. The authors concluded that policymakers urgently need to make the private health sector more accountable for PMTCT programming and to assume a greater regulatory role to improve technical standards of care in the private hospitals.

View Abstract

Integration of PMTCT and Antenatal Services Improves Combination Antiretroviral Therapy cART Uptake for HIV-Positive Pregnant Women in Southern Zambia—A Prototype for Option B+?

Herlihy, J.M., Hamomba, L., Bonawitz, R., et al. *Journal of Acquired Immune Deficiency Syndromes* (July 2015), E-publication ahead of print.

This quasi-experimental intervention, conducted at six government antenatal clinics (ANC) in Southern Province, Zambia, assessed whether integrating prevention of mother-to-child transmission (PMTCT) and ANC services improves the uptake of combination antiretroviral therapy (cART) in HIV-positive pregnant women. The intervention consisted of (1) training 132 providers in HIV and ANC services; (2) establishing a lab-courier system to expedite CD4 results; and (3) following up mother-infant pairs via 82 community-based counselors. Retrospective baseline data on 510 mother-infant pairs were obtained from clinic registers during a seven-month period before the intervention. Post-intervention data were collected from 624 ART-naive, HIV-positive pregnant women and their infants presenting to ANC from December 2011 to June 2013. After the intervention, the proportion of HIV-positive pregnant women receiving CD4 counts increased from 50.6 to 77.2 percent, and the proportion of eligible pregnant women who began cART increased from 27.5 to 71.5 percent. Moreover, the proportion of eligible HIV-exposed infants with documented HIV testing at six weeks increased from 41.9 percent to 55.8 percent after the intervention. The authors concluded that integrated HIV and ANC care, coupled with community-based counseling, led to measurable improvement in uptake of CD4 counts, the proportion of eligible women initiated on cART, and the proportion of infants tested.

View Abstract

Combination Prevention

Seek, Test and Disclose: Knowledge of HIV Testing and Serostatus among High-Risk Couples in a South African Township

Doherty, I.A., Myers, B., Zule, W.A., et al. *Sexually Transmitted Infections* (July 2015), pii: sextrans-2014-051882; doi: 10.1136/sextrans-2014-051882.

This study analyzed data on 290 high-risk couples from Khayelitsha, South Africa to investigate couple's knowledge about their partners' HIV testing and serostatus. All participants were tested for HIV at baseline and asked about their partner's past HIV testing and current status. Of the 108 women (38 percent) reporting that

their partner was not infected, 95 percent were correct; 58 percent of women did not know their partner's status. Among men, 29 percent believed their partner was HIV-negative, and most were correct (83 percent and 4 percent newly diagnosed). However, the majority of men (66 percent) did not know their partner's HIV status. Moreover, only in 17 percent of couples did both partners correctly report one another's HIV status. Men in this population did not seek HIV testing nearly as often as women, but when they received counseling and tested, or a positive diagnosis, both members of the couple were more likely to know their partner's status. Most women did not disclose their HIV serostatus to their partners; only 13 percent of women were in a partnership with mutually correct knowledge of partner serostatus. The authors concluded that to reduce onward transmission of HIV in South Africa, programs must improve HIV testing uptake among men and HIV disclosure among women in heterosexual partnerships.

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Structural Prevention

Partner Age-Disparity and HIV Incidence Risk for Older Women in Rural South Africa

Harling, G., Newell, M-L., Tanser, F., and Bärnighausen, T. *AIDS and Behavior* (July 2015), 19(7): 1317–1326.

The authors examined the association between partner age disparity and HIV acquisition among older women through a quantitative analysis of a population-based, open cohort of 1,734 women aged 30 years or older in a rural community in KwaZulu-Natal, South Africa between January 2003 and June 2012. Each woman was tested for HIV between two and nine times during the study period. When they compared women with same-age partners to women with partners five years older, the authors found that having an older partner reduced the risk of HIV acquisition by one-third. Having a partner who was 10 years older reduced the risk by half. The authors also noted that while overall, women's sociodemographic status did not significantly affect the association between age disparity and HIV acquisition risk, those with higher levels of education had the strongest decline in risk as the age disparity increased. More educated women also had the smallest average age disparity in their relationships and the lowest risk of HIV infection among those with partners of similar age. The authors concluded that the sexual behaviors of middle-aged individuals differ from those of younger groups, adding that campaigns that warn young women about older partners and HIV risk may not be appropriate for older women. They called for HIV prevention interventions specifically targeting older women.

View Abstract

Epidemiology

Within-Gender Changes in HIV Prevalence among Adults between 2005/6 and 2010/11 in Zimbabwe

Gonese, E., Mapako, T., Dzangare, J., et al. *PLOS ONE* (July 2015), 10(7): e0129611, doi: 10.1371/journal.pone.0129611.

Demographic and Health Surveys conducted in Zimbabwe showed a decline in HIV prevalence from 18.1 percent in 2005/2006 to 15.2 percent in 2010/2011. In this cross-sectional study, the authors focused on key factors influencing the change in prevalence by examining differences in geographic location along with demographic, behavioral, and biological characteristics. They found a greater decline in prevalence for men in urban than rural settings (17 versus 13 percent, respectively). However, among women, a greater and significant decrease occurred in rural areas (19 percent), with no significant change in urban areas (9 percent). Significant declines were observed in both men and women with more than secondary education. The authors also noted a high proportional decline in sexual risk behaviors and increased condom use among both men and women who were in union, and for men and women who experienced sexual debut at 16 years and older. Geographic locations influenced prevalence, which declined significantly among men in Harare and women in Mashonaland Central, but increased among men in Matebeleland North and women in Bulawayo. The authors stated that their findings indicate the need for further research to determine reasons behind these variations by gender and provincial location.

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