

UNICEF Learning Collaborative

Summary of Selected Research Articles

October - December 2017

Topic I: Adolescents and HIV

Adolescents living with HIV have unique needs, and retention in care can be especially challenging for this population. Adolescent “teen clubs” can provide a source of social support that helps improve retention and adherence. HIV prevention among adolescents also remains challenging because there are multiple factors that can place adolescents at risk. Risk perception, especially among adolescent girls and young women (AGYW), remains low despite high levels of general knowledge about HIV. Further efforts are needed to support adolescents, especially AGYW, to understand and appreciate their own risk and to identify the most appropriate prevention strategies to protect themselves from acquiring HIV.

[Mackenzie, Rachel, et al., ‘Greater retention in care among adolescents on antiretroviral treatment accessing “Teen Club” an adolescent-centered differentiated care model compared with standard of care: a nested case–control study at a tertiary referral hospital in Malawi’, *Journal of the International AIDS Society*, vol. 20, 27 November 2017.](#)

- Nested case-control study reviewed the impact of a “teen club” on treatment retention of adolescents aged 10-19 years of age at the Zomba Center hospital in Malawi.
- The study involved 617 adolescents living with HIV, 135 cases and 405 controls. Cases represented patients not retained in care when data were extracted (2004–2015).
- Participation in the teen club is associated with a 3.7-times lower odds of attrition from care than non-exposure to the teen club package (group adherence counselling, individual counselling, educational and recreational activities with sessions held on Saturdays) Older adolescents (15-19 year olds) had higher rates of attrition than younger adolescents.
- Key aspects about the teen club that led to its positive impact on retention still need to be determined.

[Price, Joan T., et al., ‘Predictors of HIV, HIV Risk Perception, and HIV Worry among Adolescent Girls and Young Women in Lilongwe, Malawi’, *Journal of Acquired Immune Deficiency Syndromes*, 4 October 2017.](#)

- Cross-sectional analysis of baseline data from an ongoing study on sexually active AGYW 15-24 years of age at four health facilities in Lilongwe, Malawi.
- Baseline data from 1,000 AGYW collected at health centres to assess four different service delivery models.



- Having a greater number of risk factors was associated with higher HIV prevalence and higher risk perception and worry. But half of AGYW with eight or more risk factors did not view themselves to be at high risk.
- Results were adjusted for age.
- The following three individual characteristics were associated with HIV infection: (1) three or more sexual partners in the past year; (2) heavy alcohol use; and (3) pregnancy history.
- The following were six predictors of HIV risk perception among AGYW who reported being uninfected: (1) no running water; (2) two or fewer household assets; (3) pregnancy history; (4) partner travel; (5) partner concurrency; and (6) transactional sex.
- The following were three predictors of HIV worry among AGYW who reported being uninfected: (1) partner travel; (2) partner concurrency; and (3) older partner.
- Partnership factors were more strongly correlated with risk perception and worry than individual behaviour.
- The study found that perceived risk of HIV infection was low among AGYW, even among those at the highest risk.

[Butts, SA, et al., 'Let Us Fight and Support One Another: Adolescent Girls and Young Women on Contributors and Solutions to HIV Risk in Zambia', *International Journal of Women's Health*, vol. 9, 28 September 2017, pp. 727-737.](#)

- Qualitative study conducted from February to August 2016, designed to understand how AGYW in Zambia perceive HIV risk. Included focus groups of AGYW with 225 girls from 10 districts in Zambia to discuss perceived risk and potential strategies for HIV prevention.
- Participants expressed that gender inequality was the most salient contributor to HIV vulnerability among AGYW, while poverty and stigma were major barriers to accessing HIV prevention services as well as primary risk factors for HIV infection.
- The authors recommended multilevel interventions designed to address socio-cultural norms that compromise self-efficacy.
- Structural interventions such as financial assistance for school attendance, enforcement of domestic violence laws, increased presence of females in the workplace, and financial assistance and economic opportunities for those most at risk were also recommended.
- Participants suggested gender-based sensitization for both men and women along with formal education, especially in rural areas, to reduce gender inequality. They indicated that to reduce stigma, community sensitization must emphasize the benefits of ART and the importance of support systems to increase uptake of HIV testing and treatment.

[Psaros, Christina, et al., 'HIV Prevention among Young Women in South Africa: Understanding Multiple Layers of Risk', *Archives of Sexual Behavior*, 13 November 2017, pp. 1-14.](#)

- Qualitative study in KwaZulu-Natal, South Africa (June 2011 to March 2012) that focused on understanding the factors that contribute to HIV risk among young women.
- Data were collected through in-depth interviews with 35 pregnant women 18-21 years of age and 18 healthcare providers, and focus groups with 19 community leaders.
- Results indicated that women had knowledge of HIV and nearly one third were living with or affected by HIV, but they lacked the resources and support to overcome the risks they encounter.
- Participants discussed well-established risk factors such as orphanhood, condom burnout, social isolation and impact of stigma. The study revealed additional risk factors: HIV prevention fatigue linked to attitudes of invincibility, lack of meaningful adult relationships, and partnership dynamics and gender inequities that make it difficult to negotiate condom use.
- Many traditional HIV prevention strategies are one-dimensional. It is important to consider the interplay of these risk factors and their impact on HIV prevention efforts among AGYW.

Topic II: Stigma and HIV

HIV-related stigma and discrimination continue to be significant obstacles faced by people living with HIV (PLHIV), who often face assault, discriminatory policies and challenges in accessing healthcare. Severe levels of stigma not only cause a strain on the mental health of PLHIV, but also hinder their access to care and treatment, and their adherence. Studies have consistently shown that PLHIV experience more stigma compared to people diagnosed with other diseases.

[Kalomo, Eveline N., 'Associations between HIV-Related Stigma, Self-Esteem, Social Support, and Depressive Symptoms in Namibia', *Journal of Aging and Mental Health*, 11 October 2017, pp. 1-7.](#)

- Cross-sectional study aimed at understanding the individual, family, community and structural determinants of health for PLHIV. Data were collected between June and September 2016.
- A correlation analysis conducted across a sample of 124 men and women living with HIV revealed that HIV-related stigma, self-esteem and social support were all significantly correlated with depression.
- HIV-related stigma was the largest risk factor, and self-esteem was the largest protective factor with respect to depressive symptoms. Study results showed that stigma has the potential to compromise treatment plans; can limit access to counselling, testing and prevention; and can lead to truncated or delayed diagnosis, prevention, treatment, care and support.
- To prevent, detect and treat depression among PLHIV, the authors recommend interventions that promote their mental health and well-being and efforts focused on building the capacity and stability of families, given the high levels of social support

that families can provide. Appropriate screening for depression and coping assessments are important components of comprehensive care for PLHIV.

[Treves-Kagan, Sarah, et al., 'Gender, HIV Testing and Stigma: The Association of HIV Testing Behaviours and Community-Level and Individual Level Stigma in Rural South Africa Differ for Men and Women', *AIDS and Behaviour*, vol. 21, 5 January 2017, pp. 2579-2588.](#)

- This population-based prospective cohort study (February to June 2012) analyses the relationship of anticipated stigma at individual and community levels in South Africa, using a multilevel regression analysis to estimate the potential effect of reducing community-level stigma on testing uptake.
- Data collected from the study showed that individually-held anticipated stigma was more closely associated with men's HIV testing uptake, while community levels of stigma were more associated with women's testing patterns.
- Men tested less frequently than women, with 43.3% of men and 78.9% of women reporting having been tested in the last 12 months. Men also reported more anticipated stigma, with five times higher anticipated stigma reported by men than women.
- For women, each percentage-point reduction in community-level stigma constituted a 3% increase in the likelihood of their getting tested.
- Men have been less engaged, and there needs to be more of a focus in normalizing clinical visits, which are viewed as a 'feminine' or 'weak' response to illness. Expanding entry points for testing is also recommended (i.e., socially acceptable pathways to clinic use: home based, mobile based, or testing in majority-male spaces).

Topic III: Male engagement

This research adds to existing evidence that male partner involvement has a positive impact on PMTCT outcomes. These studies recommend strategies to promote male engagement taking into account perspectives and socio-cultural norms about masculinity and offer of services at more convenient times and locations.

[Matseke, Motlagabo G, et al., 'Factors Associated with Male Partner Involvement in Programs for the Prevention of Mother-To-Child Transmission of HIV in Rural South Africa', *International Journal of Environmental Research and Public Health*, vol. 14 \(11\), 1 November 2017, pp. 1333.](#)

- Secondary cross-sectional data analysis to determine the prevalence and determinants of male partner involvement (MPI) in rural South Africa based on data from a clinical trial from April 2015 to January 2017.
- The sample included 463 male partners of HIV-infected pregnant women who answered a questionnaire on topics related to participation in antenatal care.
- MPI is associated with greater PMTCT success. Factors associated with greater MPI were: living together, HIV status, awareness of female partner's positive HIV status,

female partner's desire to have more children in the future, having talked to healthcare provider about trying to get pregnant in the future, condom use to prevent HIV and STIs, and partner's reasoning skills.

[McGrath, Christine J., et al., 'Non-Disclosure to Male Partners and Incomplete PMTCT Regimens Associated with Higher Risk of Mother-To-Child HIV Transmission: A National Survey in Kenya', *AIDS Care*, 11 November 2017, pp. 1-9.](#)

- Cross-sectional study that assessed the relationship between PMTCT effectiveness, non-disclosure and adherence in the general population and among HIV positive women in Nyanza Province, Kenya, from June to December 2013.
- Transmission risk (TR) was calculated and compared with two cohorts of infants at 6 weeks and 9 months. National mother-to-child transmission (MTCT) rates were 8.8% at 6 weeks and 8.9% at 9 months. Nyanza Province's TR was significantly lower, at 1.4% and 5.1%, respectively.
- Nyanza Province performed better compared to the national data on PMTCT completion, non-disclosure and transmission risk.
- Higher rates of disclosure were associated with lower transmission risk and higher rates of retention in PMTCT services.

[Sharma, Monisha, Ruanne V. Barnabas and Connie Celum, 'Community-Based Strategies to Strengthen Men's Engagement in the HIV Care Cascade', *PLOS Medicine*, vol. 14 \(4\), 11 April 2017.](#)

- Scoping review that references previous studies related to community engagement programmes that target men.
- Community-based interventions should be tailored to the needs of men to maximize uptake, for example, offering services outside of working hours and integrating HIV testing into chronic disease screening.
- The study discusses male-centred approaches to allow men to be more engaged with HIV-related care. These include: increasing mobile and home HIV Testing and Counselling options; increasing access to self-testing; integrating HTC into mobile multi-disease campaigns, diabetes or prostate cancer screening, or general health checks; prioritizing educational initiatives to reduce stigma; providing community-based ART delivery; establishing peer support groups for men, which take into account men's concerns about their masculinity, responsible fatherhood and skills training; and financial incentives to offset travel costs and missed work.

Topic III: HIV Drug Resistance

The elimination of HIV/AIDS as a public health problem calls for accelerated and multifaceted efforts to expand the reach and quality of treatment regimens and healthcare services. HIV drug resistance (HIVDR) is an obstacle that needs to be urgently addressed to ensure that these programs are effective – its prevalence has increased from 11% to 29% since the global rollout of ART in 2001. The prominence of non-nucleoside reverse-

transcriptase inhibitor pre-treatment drug-resistance has been increasing globally, and has reached or exceeded 10% in 6 of 11 countries surveyed by the World Health Organization (WHO). A further increase in the levels of HIVDR may compromise global progress towards the UNAIDS treatment target (i.e., by 2020, 90% of all people receiving ART having suppressed viral loads). Minimizing HIVDR is critical in the broader global response to antimicrobial resistance.

[Beyrer, Chris, and Anton Pozniak, 'HIV Drug Resistance – An Emerging Threat to Epidemic Control', *The New England Journal of Medicine*, vol. 377 \(17\), October 2017, pp. 1605-1607.](#)

- In this commentary, the authors highlight the importance of viral load monitoring of all HIV-infected individuals who have not yet received newer ART regimens with higher genetic barriers to resistance.
- Dolutegravir (DLG) is an integrase inhibitor with a high resistance barrier, high success rates and fewer side effects compared to other ART regimens. It is also 20% to 50% cheaper than WHO-recommended regimens.
- The authors assert that using DLG as first-line therapy could markedly reduce HIVDR.
- More data collection on the use of integrase-inhibitor-based regimens during pregnancy and in patients with tuberculosis-HIV co-infection is needed.
- More robust drugs with higher resistance barriers may help solve some of the problems associated with HIVDR, but the challenges of logistics, adherence and funding remain.

[Siberry, George K., et al., 'Impact of Human Immunodeficiency Virus Drug Resistance on Treatment of Human Immunodeficiency Virus Infection in Children in Low- and Middle-Income Countries', *The Journal of Infectious Diseases*, vol. 216, October 2017, pp. 838-842.](#)

- This article considers the impact of HIV drug resistance on children in low- and middle-income countries (LMIC).
- Not achieving viral suppression during pregnancy and breastfeeding as well as exposure to infant antiretroviral (ARV) prophylaxis can lead to high rates of acquired drug resistance in children. In LMICs, children experience higher rates of virologic failure than adults and are at of higher risk of ART failure.
- Of 230 South African infants and children aged below 2 years who were newly diagnosed with HIV in 2011, 67% were exposed to ARVs directly or indirectly, and 33% had no reported history of exposure.
- In LMICs, baseline HIVDR testing of individual patients is generally unavailable, which makes it difficult to distinguish between pre-treatment drug resistance and acquired drug resistance in patients experiencing first-line ART failure.
- To minimize HIVDR, authors recommend routine dose adjustments (particularly in the first year), as drug disposition changes significantly during that period.
- Child-friendly drug formulations also need to be developed to make medicine more palatable and encourage adherence.

[Phillips, Andrew N., et al., 'Impact of HIV Drug Resistance on HIV/AIDS-associated Mortality, New Infections, and Antiretroviral Therapy Program Costs in Sub-Saharan Africa', *The Journal of Infectious Diseases*, vol. 215, May 2017, pp. 1362-1365.](#)

- The authors used an individual-based simulation model that took into account HIV transmission, progression and the effect of ART to estimate the impact of HIVDR on mortality, new infections and costs.
- Five-year projections were generated to reflect a range of settings in sub-Saharan Africa with respect to: (1) HIV prevalence, (2) HIV incidence, (3) ART uptake, and (4) transmitted HIVDR.
- Based on these projections, where current levels of pre-treatment HIVDR in sub-Saharan Africa are greater than 10%, there would be an 8% lower rate of viral suppression in those on ART, 16% increase in the number of HIV deaths per year, 9% increase in the number of new infections and an 8% increase in ART costs attributable to HIVDR (\$6.5 billion).
- The authors recommend that countries should prioritize the reduction of HIVDR even if their pre-treatment HIVDR levels are low, as the study's estimates indicate that even where pre-treatment HIVDR levels are less than 10%, resistant virus is responsible for a significant extra burden of new AIDS deaths and additional costs.
- It is important for countries to follow WHO recommendations on viral load monitoring to reduce the rate at which resistance emerges, accumulates and transmits.

Topic IV: Retention

Retaining women in HIV care in the postpartum period remains a challenge and explains higher rates of MTCT during breastfeeding. Research from Malawi shows that children born to mothers living with HIV who are not on ART have higher rates of loss to follow-up. Improving retention of mothers is closely linked to testing and treatment uptake among children. Therefore, it is critical to reduce loss to follow-up from care and address the underlying reasons women stop ART and do not return to health facilities after giving birth. A study in South Africa demonstrated that providing financial incentives to encourage mothers and their children to remain in care was feasible and acceptable. When asked, mothers preferred other strategies such as integrated services and counselling over financial incentives to motivate them to stay in care.

[Haas, Andrew D., et al., 'HIV Transmission and Retention in care among HIV-Exposed Children Enrolled in Malawi's Prevention of Mother-to-Child Transmission Programme', *Journal of the International AIDS Society*, vol: 20, September 2017, pp: 219-474.](#)

- First study to estimate MTCT risk at the end of breastfeeding in Malawi's Option B+ programme, with data collection occurring between September 2011 and June 2015.
- PMTCT outcomes (discharged HIV free, lost to follow-up, initiated ART, and death) for 11,285 children at risk of HIV infection were analysed based on data from 21 health facilities.

- 288 children (2.6%) were diagnosed with HIV. The cumulative incidence was 0.8% by age 8 weeks, 2.7% by age 12 months and 5.3% by age 30 months.
- Although MTCT rates were low (5.3%), postpartum transmission rates were higher than during pregnancy or delivery, because many women adhere poorly to ART postpartum, or discontinue ART before weaning their babies.
- Because of poor retention among mothers, only about half of HIV-infected children were diagnosed. Higher loss to follow-up was observed among children born to women who were not receiving ART.
- The authors recommend improving the identification of children lost to follow-up and expanding HIV testing in outpatient clinics to identify children missed in the PMTCT programmes and start them on treatment immediately.

[Clouse, Kate, et al., 'Acceptability and Feasibility of a Financial Incentive Intervention to Improve Retention in HIV Care Among Pregnant Women in Johannesburg, South Africa', *AIDS Care*, 25 October 2017, pp. 1-8.](#)

- Pilot study, from May 2015 to March 2016, that assessed the acceptability and feasibility of a financial incentive (a one-time supermarket voucher) for completing one postpartum visit under 10 weeks, to determine if this improved women's retention in HIV care after delivery.
- Study took place at a primary health clinic in Johannesburg, South Africa, and enrolled 100 pregnant women living with HIV to assess preferred types of incentives.
- Participants were administered a structured questionnaire and given a one-time voucher from the Pick-n-Pay supermarket for completing one postpartum visit to the clinic within 10 weeks of delivery.
- Participants ranked incentives in the following order: assistance with social services, infant formula and cash.
- 86% of women responded at enrolment that the voucher would motivate them to return to the clinic; and 76% received a voucher, thus confirming its feasibility.
- 14% of women who did not think the financial incentives would motivate them to return for treatment cited personal responsibility for their own health as their primary motivation. They indicated they would return to the clinic even without a voucher.
- While the results show that financial incentives are acceptable, participants preferred integrated services and counselling to improve retention.

Other Notable Articles in 2017

[Karim QA, Baxter C, and Birx D. "Prevention of HIV in Adolescent Girls and Young Women: Key to an AIDS-Free Generation," *Journal of the International AIDS Society*, vol: 75, May 2017, pp: S17-S26.](#)

The Global Plan helped to significantly reduce the number of infants infected with HIV and to improve their survival. Yet, gender disparities emerge in adolescence. AGYW are disproportionately affected by HIV, with higher rates of HIV incidence, AIDS-related deaths and HIV complications during pregnancy. To maintain the gains made during the Global

Plan period, the authors call for access to integrated sexual and reproductive health (SRH) and HIV prevention and treatment services for AGYW; increased male/parental involvement in mother and infant health; and a supportive social environment that includes completing secondary education. The authors assert that addressing the age and gender disparities that characterize the HIV epidemic in Eastern and Southern Africa is critical to epidemic control in that region.

The article notes several factors that contribute to the increased vulnerability of young women in acquiring HIV. These include: (1) the unique developmental changes during adolescence that favour increased risk-taking, instant gratification and greater peer influence in decision-making; (2) trends toward young girls partnering with men 5-10 years older who are living with HIV; (3) a gender-power imbalance which make it difficult to negotiate safe sex; (4) limited access to family planning, especially for unmarried women who are sexually active; (5) bidirectional relationships between gender-based violence and HIV infection; and (6) biological risk factors that make women more susceptible than men to HIV infection, which can be exacerbated by early sexual debut.

Promising prevention strategies for AGYW presented in the article focus on women-initiated HIV prevention technologies such as pre-exposure prophylaxis (PrEP) and topical microbicides, the use of contingency management to incentivize safer HIV risk behaviours, and the integration of HIV prevention and SRH services. All of these strategies are particularly important in settings where teenage pregnancy, early sexual debut and secondary school dropout rates are high.

[Reorganization and the Future of PEPFAR: Implication of State and USAID Reform. Georgetown Law, Washington, DC. December 2017.](#)

In March 2017, U.S. President Donald Trump issued an Executive Order to reorganize the Executive Branch of government. This included the recommendation to move the Office of the Global AIDS Coordinator (OGAC), which oversees the President's Emergency Plan for AIDS Relief (PEPFAR) from the State Department to the United States Agency of International Development. In response, a bipartisan group of global health experts and policymakers gathered to weigh the risks and opportunities posed by such a reform. The report concludes that the role of OGAC should be improved and reinforced rather than reorganized.

The reasons for this conclusion include the diplomatic and political engagement required to address the HIV epidemic; the interagency capacities required to curb an infectious disease that has behavioural, biomedical and structural dimensions; the need for country-level coordination where the role of ambassadors has been instrumental; PEPFAR's unique contribution to the global AIDS response vis-à-vis the development of metrics, data and systems, all of which have become critical to monitoring progress; the need to ensure continued synergies with the Global Fund and other international bodies; and the need to maintain budget authority over funds linked to the achievement of clear targets.