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HIV this month, published by UNAIDS, is a selective scan of new HIV-related information found in scientific journals. The Editors of HIV this month interpret original abstracts and provide editorial comment, so that information may be easily understood by people responding to the HIV epidemic in many diverse settings. The selection of material, its abridgement and other editorial changes, and also the original editorial comment are the responsibility of the Editors and do not represent any official statement of UNAIDS. It should be noted that (except for open access journals, e.g. PLoS) the authors and/or publishers retain copyright in the original published material to which HIV this month refers.
1. Reduce sexual transmission

Substance use and risky sexual behaviors among young men working at a rural roadside market in Malawi.


Using an ecological model, we describe substance use and sexual risk behaviors of young male laborers at a roadside market in Malawi. Data included observations and interviews with 18 key market leaders and 15 laborers (ages 18-25 years). Alcohol, marijuana, and commercial sex workers (CSWs) were widely available. We identified three patterns of substance use: 6 young men currently used, 6 formerly used, and 3 never used. Substance use was linked to risky sex, including sex with CSWs. The market supported risky behaviors through availability of resources; supportive norms, including beliefs that substance use enhanced strength; and lack of restraints. Community-level poverty, cultural support for alcohol, interpersonal family/peer influences, early substance use, and school dropout also contributed to risky behaviors. Parental guidance was protective but not often reported. Local programs addressing substance use and risky sex simultaneously and better national substance use policies and mental health services are needed.

Abstract access

Editor’s notes: There has been a global focus on how substance use and associated risk behaviours contribute to HIV acquisition. Over the last decade there has been emerging evidence to suggest that substance use is increasing in the sub-Saharan African region, which is leading people to engage in risky sexual behaviour associated with HIV transmission. Despite this, there is a continued absence of research which focuses on the causes and practices of substance use, the associated impact and the opportunities to ameliorate the associated harms. This has led to a considerable knowledge gap. This paper provides a case study which offers insights into the factors which promote and sustain the relatively heavy use of marijuana and alcohol in a rural Malawian roadside market among young male labourers.

Adopting Scribener’s ecological model framework, the authors start from the premise that there are multiple level factors (societal, neighbourhood, interpersonal and individual) which shape the behaviour of men working in these markets. Using an ethnographic approach, they provide a rich description of how these multiple levels of risk factors operate and interact to facilitate men’s substance use.

The study found that the availability and use of alcohol and marijuana within the market by young men was widespread and that this was known about and broadly tolerated by key actors and groups involved in the market. The environment of the market is characterised by an ease of opportunity to consume these substances. The environment exhibited cultural norms which appeared to promote the acceptability of this behaviour and the absence of protective mechanisms to minimise the harms. There were two novel findings in the study. The first was how the perceived benefits of alcohol and marijuana use was integrated into expectations that it would help people to gain work and then do their jobs better. The second was that participants often justified their own behaviour by illustrating that it was endorsed by Ngoni culture, predominately in the area where the market was located. As such drinking alcohol was a means to perform young masculinity. This thoughtful research provides valuable evidence to support the need for programmes to include a focus on structural changes, such as availability and regulation of substance use but also in engaging with the presumed cultural norms.
These should be considered alongside a more individual orientated approach in order to design a programme that is likely to be successful in reducing the harm of these behaviours.

**Tenofovir gel for the prevention of herpes simplex virus type 2 infection.**


Background: Globally, herpes simplex virus type 2 (HSV-2) infection is the most common cause of genital ulcer disease. **Effective prevention strategies for HSV-2 infection are needed to achieve the goals of the World Health Organization global strategy for the prevention and control of sexually transmitted infections.**

Methods: We assessed the effectiveness of pericoital tenofovir gel, an antiviral microbicide, in preventing HSV-2 acquisition in a subgroup of 422 HSV-2-negative women enrolled in the Centre for the AIDS Programme of Research in South Africa (CAPRISA) 004 study, a double-blind, randomized, placebo-controlled trial. Incident HSV-2 cases were identified by evidence of seroconversion on an HSV-2 IgG enzyme-linked immunosorbent assay between study enrollment and exit. A confirmatory analysis was performed by Western blot testing.

Results: The HSV-2 incidence rate was 10.2 cases per 100 person-years (95% confidence interval [CI], 6.8 to 14.7) among 202 women assigned to tenofovir gel, as compared with 21.0 cases per 100 person-years (95% CI, 16.0 to 27.2) among 222 women assigned to placebo gel (incidence rate ratio, 0.49; 95% CI, 0.30 to 0.77; P=0.003). The HSV-2 incidence rate among the 25 women with vaginal tenofovir concentrations of 10 000 ng per milliliter or more was 5.7 cases per 100 person-years, as compared with 15.5 cases per 100 person-years among the 103 women with no detectable vaginal tenofovir (incidence rate ratio, 0.37; 95% CI, 0.04 to 1.51; P=0.14). As confirmed by Western blot testing, there were 16 HSV-2 seroconversions among women assigned to tenofovir gel as compared with 36 among those assigned to the placebo gel (incidence rate ratio, 0.45; 95% CI, 0.23 to 0.82; P=0.005).

Conclusions: In this study in South Africa, pericoital application of tenofovir gel reduced HSV-2 acquisition in women.

Abstract access

**Editor’s notes:** Oral tenofovir is widely used to prevent and treat HIV infection, but application of a topical tenofovir vaginal-gel formulation has not been found to be protective against HIV, likely because of low rates of adherence. In contrast, analyses of tenofovir gel protection against HSV-2, herpes simplex virus, has showed some promise. This paper presents additional data and analyses from the CAPRISA004 study which found the modest effect of protection against HIV, but significant protection against HSV-2 (51% effectiveness). A sub-analysis confirmed that those people with higher vaginal tenofovir concentrations were almost three times less likely to acquire the herpes virus than those people with no detectable drug concentration. In the absence of an effective vaccine or cure for HSV-2 infection, pericoital tenofovir gel has the potential to increase the options for HSV-2 prevention, and have an indirect effect on HIV infection.

Objective: To test the hypothesis that increasing community antiretroviral therapy (ART) coverage would be associated with lower HIV incidence in female sex workers (FSWs) in Mombasa District, Kenya.

Design: Prospective cohort study.

Methods: From 1998 to 2012, HIV-negative FSWs were asked to return monthly for an interview regarding risk behavior and testing for sexually transmitted infections including HIV. We evaluated the association between community ART coverage and FSW's risk of becoming HIV infected using Cox proportional hazards models adjusted for potential confounding factors.

Results: One thousand four hundred four FSWs contributed 4335 woman-years of follow-up, with 145 acquiring HIV infection (incidence 3.35/100 woman-years). The ART rollout began in 2003. By 2012, an estimated 52% of HIV-positive individuals were receiving treatment. Community ART coverage was inversely associated with HIV incidence (adjusted hazard ratio 0.77; 95% confidence interval 0.61-0.98; P = 0.03), suggesting that each 10% increase in coverage was associated with a 23% reduction in FSWs’ risk of HIV acquisition. Community ART coverage had no impact on herpes simplex virus type-2 incidence (adjusted hazard ratio 0.97; 95% confidence interval 0.79-1.20; P = 0.8).

Conclusion: Increasing general population ART coverage was associated with lower HIV incidence in FSWs. The association with HIV incidence, but not herpes simplex virus type-2 incidence, suggests that the effect of community ART coverage may be specific to HIV. Interventions such as preexposure prophylaxis and antiretroviral-containing microbicides have produced disappointing results in HIV prevention trials with FSWs. These results suggest that FSWs’ risk of acquiring HIV infection might be reduced through the indirect approach of increasing ART coverage in the community.

Abstract access

Editor’s notes: The individual-level benefit of antiretroviral therapy (ART) on reducing HIV transmission between serodiscordant partners is established, but less is known about a possible population-level effect of ART on key populations such as female sex workers. In this study of 1404 initially HIV-negative female sex workers in Mombasa, Kenya, increased community ART coverage was strongly associated with reduced HIV incidence. HIV incidence was 23% lower for every 10% increase in ART coverage, after adjusting for HIV prevalence and participants’ behavioural characteristics. However, the authors note that HIV incidence was already declining prior to the introduction of ART (from 11.4 cases/100 woman-years in 1998 to 7.6/100 woman-years in 2002), due to other factors including changes in risk behaviour and HIV-prevention efforts in the community. Despite this, the present study suggests that in the setting of ongoing high-quality HIV prevention services, the risk of HIV acquisition among female sex workers is likely to be reduced by increasing ART coverage in the community. Moves to increase coverage of ART in the community will potentially have a substantial HIV prevention benefit on this key population.

Background: In Kasensero fishing community, home of the first recorded case of HIV in Uganda, HIV transmission is still very high with an incidence of 4.3 and 3.1 per 100 person-years in women and men, respectively, and an HIV prevalence of 44%, reaching up to 74% among female sex workers. We explored drivers for the high HIV transmission at Kasensero from the perspective of fishermen and other community members to inform future policy and preventive interventions.

Methods: 20 in-depth interviews including both HIV positive and HIV negative respondents, and 12 focus-group discussions involving a total of 92 respondents from the Kasensero fishing community were conducted during April-September 2014. Content analysis was performed to identify recurrent themes.

Results: The socio-economic risk factors for high HIV transmission in Kasensero fishing community cited were multiple and cross-cutting and categorized into the following themes: power of money, risk denial, environmental triggers and a predisposing lifestyle and alcoholism and drug abuse. Others were: peer pressure, poor housing and the search for financial support for both the men and women which made them vulnerable to HIV exposure and or risk behavior.

Conclusions: There is a need for context specific combination prevention interventions in Kasensero that includes the fisher folk and other influential community leaders. Such groups could be empowered with the knowledge and social mobilization skills to fight the negative and risky behaviors, perceptions, beliefs, misconceptions and submission attitudes to fate that exposes the community to high HIV transmission. There is also need for government/partners to ensure effective policy implementation, life jackets for all fishermen, improve the poor housing at the community so as to reduce overcrowding and other housing related predispositions to high HIV rates at the community. Work place AIDS-competence teams have been successfully used to address high HIV transmission in similar settings.

Abstract

Editor’s notes: In recent years policy makers and programme implementers have been urged to ‘know your epidemic’. This paper provides a striking illustration of the complexity of responding to the knowledge of a place with high prevalence and incidence. The authors describe the many factors which contribute to high HIV transmission rates. They illustrate why, for example, providing condoms and instruction on safer sex may have limited impact on a man who expresses concerns about drowning while fishing tomorrow. Drowning is a more immediate risk than dying because of AIDS-associated illnesses in the future. The information in this paper is not new. We have known about the different risk factors in fishing sites in Uganda for some time. There is also a considerable body of work on the relative perception of risk. However, what the authors do offer is a clear and well-grounded overview of the many different reasons why people in the study setting are at risk of HIV. They illustrate the vital importance of understanding the context of HIV-transmission; the value of looking beneath the prevalence and incidence figures.
2. Prevent HIV among drug users

HIV care continuum among men who have sex with men and people who inject drugs in India: barriers to successful engagement.


Background: We characterize the HIV care continuum for men who have sex with men (MSM) and people who inject drugs (PWID) across India.

Methods: We recruited 12 022 MSM and 14 481 PWID across 26 Indian cities using respondent-driven sampling (9/2012-12/2013). Participants were ≥18 years and either 1) self-identified as male and reported sex with a man in the prior year (MSM); or 2) reported injection drug use in the prior 2 years (PWID). Correlates of awareness of HIV positive status were characterized using multi-level logistic regression.

Results: 1146 MSM were HIV-infected of whom a median 30% were aware of their HIV positive status, 22% were retained pre-ART, 16% initiated ART, 16% were currently on ART, and 10% had suppressed VL. There was site variability (awareness range: 0-90%; suppressed VL range: 0-58%). 2906 PWID were HIV-infected of whom a median 41% were aware, 36% linked to care, 31% were retained pre-ART, 20% initiated ART, 18% were currently on ART, and 15% had suppressed VL. Similar site variability was observed (awareness range: 2-93%; suppressed VL range: 0-47%). Factors significantly associated with awareness were region, older age, being married (MSM) or female (PWID), other service utilization (PWID), more lifetime sexual partners (MSM) and needle sharing (PWID). Ongoing injection drug use (PWID) and alcohol (MSM) were associated with lower awareness.

Conclusions: In this large sample, the major barrier to HIV care engagement was awareness of HIV positive status. Efforts should focus on linking HIV testing to other essential services.

Abstract access

Editor’s notes: The UNAIDS target of 90-90-90 (90% of HIV positive individuals knowing their status, 90% of people being on ART and 90% of people on ART being virally suppressed) applies to all people living with HIV, including people in key populations who can be hard to reach in some settings. In India, declines in HIV prevalence have been seen among women attending antenatal clinics, but not in the key populations of gay men and other men who have sex with men and people who inject drugs. In this large, community-based, study of gay men and other men who have sex with men and people who inject drugs across India, the majority of people living with HIV (70% of gay men and other men who have sex with men and 59% of people who inject drugs) were unaware of their HIV status. Of people who were aware of their status, the proportions receiving sustained ART were relatively low (68% of gay men and other men who have sex with men and 52% of people who inject drugs). Notably, among people on ART, levels of viral suppression were high and comparable to that in high-income settings. The study highlights awareness of HIV status as the primary barrier to HIV care in these populations, and the importance of integrating HIV testing across healthcare services for vulnerable populations, using same-day rapid tests to maximise linkage-to-care. However, to have a real impact on outcomes across the HIV care continuum, additional strategies will be necessary. These are needed together with large-scale public policy changes to modify the broader social environment – such as decriminalisation of same-sex behaviour.
3. 15 million accessing treatment

Strengthening HIV test access and treatment uptake study (Project STATUS): a randomized trial of HIV testing and counseling interventions.


Objective: To determine which of 3 HIV testing and counseling (HTC) models in outpatient departments (OPDs) increases HIV testing and entry of newly identified HIV-infected patients into care.

Design: Randomized trial of HIV testing and counseling interventions.

Methods: Thirty-six OPDs in South Africa, Tanzania and Uganda were randomly assigned to 3 different HTC models: A) health care providers referred eligible patients (aged 18-49, not tested in the past year, not known HIV positive) to on-site voluntary counseling and testing (VCT) for HTC offered and provided by VCT counselors after clinical consultation; B) health care providers offered and provided HTC to eligible patients during clinical consultation; and C) nurse or lay counselors offered and provided HTC to eligible patients before clinical consultation. Data were collected October 2011-September 2012. We describe testing eligibility and acceptance, HIV prevalence, and referral and entry into care. Chi-square analyses were conducted to examine differences by model.

Results: Of 79 910 patients, 45% were age-eligible and 16 099 (45%) age-eligibles were tested. Ten percent tested HIV positive. Significant differences were found in percent tested by model. The proportion of age eligible patients tested by Project STATUS was highest for Model C (54.1%, 95% confidence interval [CI]=42.4-65.9), followed by Model A (41.7%, 95% CI=30.7-52.8) and Model B (33.9%, 95% CI=25.7-42.1). Of the 1,596 newly identified HIV-positives, 94% were referred to care (96.1% in Model A, 94.7% in Model B, and 94.9% in Model C), and 58% entered on-site care (74.4% in Model A, 54.8% in Model B, and 55.6% in Model C) with no significant differences in referrals or care entry by model.

Conclusions: Model C resulted in the highest proportion of all age eligible patients receiving a test. Although 94% of STATUS patients with a positive test result were referred to care, only 58% entered care. We found no differences in patients entering care by HTC model. Routine HTC in OPDs is acceptable to patients and effective for identifying HIV-infected persons, but additional efforts are needed to increase entry to care.

Abstract access

Editor’s notes: While there has been much attention given in recent years to community models of HIV testing, WHO and UNAIDS guidelines continue to recommend the importance of efforts to improve access to HIV testing in health facilities. This interesting study conducted under “real world” conditions, examined different models of out-patient department based testing. It found that the model which focussed on people while they waited for their clinical consultation, achieved the highest proportion taking up testing among people who were eligible. Beyond this step, the authors report that proportions referred and entered into care did not differ significantly and the proportion who did so was low (<60%). This was despite the fact the fact that the study population consisted entirely of people already utilising services at the health care facility. The majority of participants were women. No further information on the clinical status or CD4 counts of people identified as HIV positive is
provided, although that would be interesting follow-up information in future. This study highlights not only that facility based HIV testing and counselling should not be forgotten as an important means to increase access to testing, but also that linkage to care is a problem even among individuals already utilising general health services.

Implementation and operational research: pulling the network together: quasiexperimental trial of a patient-defined support network intervention for promoting engagement in HIV care and medication adherence on Mfangano Island, Kenya.


Background: Despite progress in the global scale-up of antiretroviral therapy, sustained engagement in HIV care remains challenging. Social capital is an important factor for sustained engagement, but interventions designed to harness this powerful social force are uncommon.

Methods: We conducted a quasiexperimental study evaluating the impact of the Microclinic Social Network intervention on engagement in HIV care and medication adherence on Mfangano Island, Kenya. The intervention was introduced into 1 of 4 similar communities served by this clinic; comparisons were made between communities using an intention-to-treat analysis. Microclinics, composed of patient-defined support networks, participated in 10 biweekly discussion sessions covering topics ranging from HIV biology to group support and group HIV status disclosure. Nevirapine concentrations in hair were measured before and after study.

Results: One hundred thirteen (74%) intervention community participants joined a microclinic group, 86% of whom participated in group HIV status disclosure. Over 22-month follow-up, intervention community participants experienced one-half the rate of ≥ 90-day clinic absence as those in control communities (adjusted hazard ratio: 0.48; 95% confidence interval: 0.25 to 0.92). Nevirapine hair levels declined in both study arms; in adjusted linear regression analysis, the decline was 6.7 ng/mg less severe in the intervention arm than control arm (95% confidence interval: -2.7 to 16.1).

Conclusions: The microclinic intervention is a promising and feasible community-based strategy to improve long-term engagement in HIV care and possibly medication adherence. Reducing treatment interruptions using a social network approach has important implications for individual patient virologic suppression, morbidity, and mortality and for broader community empowerment and engagement in healthcare.

Abstract access

Editor’s notes: To maximise the impact of ART, people living with HIV should be diagnosed early, enrolled and retained in pre-ART care, initiated on ART and retained in ART care. Long-term adherence to achieve and maintain viral load suppression is the last step in the continuum of HIV care. Engagement along the complete treatment cascade will determine the long-term success of the global response to HIV.

This article reports on the results of a quasi-experimental study that assessed whether a combined stigma reduction and social network empowerment programme resulted in improved HIV treatment outcomes. The programme consisted of an adaptation of a social network-based activity known as ‘microclinics’. ‘Microclinics’ are informal social networks empowered to support chronic disease
management and prevention. ‘Microclinic’ groups consisted of five to ten close family, friends or other members of the patient’s social support system, irrespective of the member’s HIV status. ‘Microclinics’ were assigned a Community Health Worker coordinator and facilitator and were guided through a series of ten discussion sessions over a period of five months. During these sessions they received health education messages to promote knowledge of HIV prevention and treatment, and group support was promoted through discussion of confidentiality, HIV status disclosure, and encouragement of group support for adherence and clinic attendance. The programme was introduced into one of four similar communities served by the main study clinic, and comparisons were made between communities. The outcomes were engagement in HIV care and medication adherence.

Three-quarters of participants in the programme community joined a ‘microclinic’. Participants in the programme community spent a larger proportion of time adherent to clinic schedules. On average, during a year of follow-up, compared to people in the control group, people in the ‘microclinics’ group returned to care three weeks sooner after a missed visit. Work by Ware et al. describes a pathway from missing a clinic visit to disengaging from care. The pathway includes as intermediate steps, developing a reluctance to return, and subsequent feelings of decreased connectedness to care. The authors of this study hypothesise that ‘microclinic’ participation prevented the development of ‘reluctance to return’ after a missed visit.

The authors conclude that there is empiric support for ‘microclinics’ as an effective model for chronic disease management. But, given the quasi-experimental design, other factors may have contributed to improved outcomes. Data from longer term follow up would be useful to determine the durability of the programme effect, since study participants were only followed up for 22 months.

Implementation and operational research: effects of antenatal care and HIV treatment integration on elements of the PMTCT cascade: results from the SHAIP cluster-randomized controlled trial in Kenya.


Background: Integrating antenatal care (ANC) and HIV care may improve uptake and retention in services along the prevention of mother-to-child transmission (PMTCT) cascade. This study aimed to determine whether integration of HIV services into ANC settings improves PMTCT service utilization outcomes.

Methods: ANC clinics in rural Kenya were randomized to integrated (6 clinics, 569 women) or nonintegrated (6 clinics, 603 women) services. Intervention clinics provided all HIV services, including highly active antiretroviral therapy (HAART), whereas control clinics provided PMTCT services but referred women to HIV care clinics within the same facility. PMTCT utilization outcomes among HIV-infected women (maternal HIV care enrollment, HAART initiation, and 3-month infant HIV testing uptake) were compared using generalized estimating equations and Cox regression.

Results: HIV care enrollment was higher in intervention compared with control clinics [69% versus 36%; odds ratio = 3.94, 95% confidence interval (CI): 1.14 to 13.63]. Median time to enrollment was significantly shorter among intervention arm women (0 versus 8 days, hazard ratio = 2.20, 95% CI: 1.62 to 3.01). Eligible women in the intervention arm were more likely to initiate HAART (40% versus 17%; odds ratio = 3.22, 95% CI: 1.81 to 5.72). Infant testing was more common
in the intervention arm (25% versus 18%), however, not statistically different. No significant differences were detected in postnatal service uptake or maternal retention.

**Conclusions:** Service integration increased maternal HIV care enrollment and HAART uptake. However, PMTCT utilization outcomes were still suboptimal, and postnatal service utilization remained poor in both study arms. Further improvements in the PMTCT cascade will require additional research and interventions.

**Abstract access**

**Editor's notes:** WHO recommends a combination approach to prevention of mother-to-child transmission that includes primary prevention of HIV among women of childbearing age, prevention of unintended pregnancies among women living with HIV, prevention of HIV transmission from a woman living with HIV to her infant and the provision of appropriate treatment, care and support to mothers living with HIV, their children and families.

Prevention of mother-to-child transmission programmes in sub-Saharan Africa experience high rates of maternal and infant loss to follow-up at each step of the cascade. The largest losses occur with failure of linkage to and retention in HIV care services.

This article reports on a cluster randomized trial that assessed whether integration of HIV services into antenatal care (ANC) settings improved the uptake of prevention of mother-to-child transmission services (maternal HIV care enrolment, ART initiation, and three-month infant HIV testing) and retention in care along the prevention of mother-to-child transmission cascade.

The integration of HIV services into ANC settings improved HIV care enrolment, time to enrolment, and ART initiation among eligible women compared with control clinics. Retention in care was lower in the programme clinics.

However, even at the programme sites only 70% (and not 100%) of HIV-positive women enrolled in HIV care, indicating that women’s hesitations about initiating HIV care continue to be a barrier for a substantial proportion of women. The authors found that internalized HIV-associated stigma was a significant issue, and hypothesise that women from integrated clinics were even more at risk for unwanted disclosure and of stigmatization.

Early infant diagnosis was inadequate in both arms of the study. The inadequate systems to identify HIV exposed infants in postnatal clinics, and the continuing stigma associated with HIV were cited as the main challenges. Integrated point of care electronic maternal and child health registers that provide timely access to data on women and infants falling out of the cascade could help to address this.

The authors conclude that integration of clinical services is necessary but not sufficient to address all barriers to utilization of prevention of mother-to-child transmission services.

**Determinants of durability of first-line antiretroviral therapy regimen and time from first-line failure to second-line antiretroviral therapy initiation.**


Background: We described reasons for switching to second-line antiretroviral treatment (ART) and time to switch in HIV-infected children failing first-line ART in West Africa.
Methods: We included all children aged 15 years or less, starting ART (at least three drugs) in the paediatric IeDEA clinical centres in five West-African countries. We estimated the incidence of switch (at least one drug class change) within 24 months of ART and associated factors were identified in a multinomial logistic regression. Among children with clinical-immunological failure, we estimated the 24-month probability of switching to a second-line and associated factors, using competing risks. Children who switched to second-line ART following the withdrawal of nelfinavir in 2007 were excluded.

Results: Overall, 2820 children initiated ART at a median age of 5 years; 144 (5%) were on nelfinavir. At 24-month post-ART initiation, 188 (7%) had switched to second-line. The most frequent reasons were drug stock outs (20%), toxicity (18%), treatment failure (16%) and poor adherence (8%). Over the 24-month follow-up period, 322 (12%) children failed first-line ART after a median time of 7 months. Of these children, 21 (7%) switched to second-line after a median time of 21 weeks in failure. This was associated with older age [subdistribution hazard ratio (sHR) 1.21, 95% confidence interval (95% CI) 1.10-1.33] and longer time on ART (sHR 1.16, 95% CI 1.07-1.25).

Conclusion: Switches for clinical failure were rare and switches after an immunological failure were insufficient. These gaps reveal that it is crucial to advocate for both sustainable access to first-line and alternative regimens to provide adequate roll-out of paediatric ART programmes.

Abstract access

Editor’s notes: Data on the durability of first-line ART in children in low-income settings are limited. However, there is mounting evidence that children in facilities without routine viral load testing are less likely to be identified as failing on first-line therapy. This observational study by the IeDEA Paediatric West African working group illustrates that the rate of switch to second-line therapy in children on first-line treatment, monitored using clinical (with or without immunological) criteria, was low. Additionally, the majority of switches that did occur were due to ART availability issues, poor adherence and drug toxicity, rather than in response to clinically-defined treatment failure. Some 12% of children failed first-line ART after a median of seven months, of whom only 0.8% switched to second-line ART. These findings highlight the missed opportunities and underscore the difficulties in identifying treatment failure in children within a context in which virologic monitoring is not yet available.

On the front line of HIV virological monitoring: barriers and facilitators from a provider perspective in resource-limited settings.


Scale-up of viral load (VL) monitoring for HIV-infected patients on antiretroviral therapy (ART) is a priority in many resource-limited settings, and ART providers are critical to effective program implementation. We explored provider-perceived barriers and facilitators of VL monitoring. We interviewed all providers (n = 17) engaged in a public health evaluation of dried blood spots for VL monitoring at five ART clinics in Malawi. All ART clinics were housed within district hospitals. We grouped themes at patient, provider, facility, system, and policy levels. Providers emphasized their desire for improved ART monitoring strategies, and frustration in response to restrictive policies for determining which patients were eligible to receive VL monitoring. Although many providers pled for expansion of monitoring to include all persons on ART,
regardless of time on ART, the most salient provider-perceived barrier to VL monitoring implementation was the pressure of work associated with monitoring activities. The work burden was exacerbated by inefficient data management systems, highlighting a critical interaction between provider-, facility-, and system-level factors. Lack of integration between laboratory and clinical systems complicated the process for alerting providers when results were available, and these communication gaps were intensified by poor facility connectivity. Centralized second-line ART distribution was also noted as a barrier: providers reported that the time and expenses required for patients to collect second-line ART frequently obstructed referral. However, provider empowerment emerged as an unexpected facilitator of VL monitoring. For many providers, this was the first time they used an objective marker of ART response to guide clinical management. Providers’ knowledge of a patient’s virological status increased confidence in adherence counselling and clinical decision-making. Results from our study provide unique insight into provider perceptions of VL monitoring and indicate the importance of policies responsive to individual and environmental challenges of VL monitoring program implementation. Findings may inform scale-up by helping policy-makers identify strategies to improve feasibility and sustainability of VL monitoring.

Abstract access

Editor’s notes: Viral load monitoring for HIV-positive individuals is gaining prominence as a method for monitoring responses to antiretroviral therapy (ART) and for identifying treatment failure. It is considered more accurate (in terms of its sensitivity and specificity) than alternative methods (e.g., CD4 cell counts). ART providers are critical to the implementation of viral load scale-up as it tends to be resource heavy and providers are tasked with numerous responsibilities in order to achieve individual and public health benefits. Using data from in-person interviews with providers on the frontline of ART management in five ART clinics in Malawi, this study explored multi-level barriers to, and facilitators for incorporating viral load monitoring into daily clinical practice. Study results illustrated a complex set of interconnected provider-identified barriers and facilitators that occurred at multiple levels. In terms of facilitators, high patient demand for viral load testing reinforced provider-perceived benefits of viral load monitoring. In addition, placing an emphasis on provider empowerment during viral load scale-up activities was thought to increase providers’ willingness to adopt additional responsibilities. Barriers identified by providers included the additional burden associated with viral load monitoring such as the time required in completing adherence assessment forms. Related to this was a barrier identified at the facility level by providers around shortage of staff. This was in particular identified as an impediment to completing viral load monitoring activities. Furthermore, inconsistent staffing alongside reluctance of rotating staff to participate in viral load monitoring activities were cited as contributors to people’s failure to return to scheduled clinic visits. Barriers at the system level were around time and expenses required for people to collect second-line ART which then obstructed referrals to viral load monitoring. Further, providers expressed frustration over a policy in Malawi that dictates only certain time points from ART exposure in order to be eligible for viral load monitoring. Hence, they felt forced to ration a service that was considered useful for guiding clinical practice and counselling people.

In order to address some of these barriers, the authors suggest that issues around workload burden and shortage of trained staff at facilities be addressed by expanding provider-to-patient ratios at ART clinics, broadening the scope of practice and training a lower cadre of health workers to facilitate programme sustainability. Furthermore, to synchronise facility, system and policy level interfaces, shortcomings in data management systems needed to be overcome. To that end, improving coverage of mobile networks and internet connectivity to outlying clinics would help facilitate reliable clinic-
laboratory communication. Also, decentralised distribution of second-line ART drugs along with improved supply chain procedures should be considered to minimise stock-outs for individuals seeking viral load monitoring in more remote areas. Further, in order to address the issue around Malawi’s strict eligibility criteria, policy-makers need to make an effort to design provider trainings and patient education materials with clarity around the criteria in order to optimise access to limited viral load monitoring opportunities for people at highest risk of ART failure. Another option to improve access is ‘catch up’ testing where every individual on ART for more than two years receives a single test and then returns to biannual eligibility. Even though the results from this study are exploratory, they do provide useful insights into the perceived barriers and facilitators faced by providers around viral load monitoring. Overall, viral load monitoring can be used as a tool to help providers improve the quality of HIV care they deliver, if certain barriers are overcome.

Retained in HIV care but not on antiretroviral treatment: a qualitative patient-provider dyadic study.


Background: Patients retained in HIV care but not on antiretroviral therapy (ART) represent an important part of the HIV care cascade in the United States. Even in an era of more tolerable and efficacious ART, decision making in regards to ART offer and uptake remains complex and calls for exploration of both patient and provider perspectives. We sought to understand reasons for lack of ART usage in patients meeting the Health Resources Services Administration definition of retention as well as what motivated HIV primary care appointment attendance in the absence of ART.

Methods and findings: We conducted a qualitative study consisting of 70 in-depth interviews with ART-naive and ART-experienced patients off ART and their primary care providers in two urban safety-net HIV clinics in San Francisco and New York. Twenty patients and their providers were interviewed separately at baseline, and 15 dyads were interviewed again after at least 3 mo and another clinic visit in order to understand any ART use in the interim. We applied dyadic analysis to our data. Nearly all patients were willing to consider ART, and 40% of the sample went on ART, citing education on newer antiretroviral drugs, acceptance of HIV diagnosis, social support, and increased confidence in their ability to adhere as facilitators. However, the strength of the provider recommendation of ART played an important role. Many patients had internalized messages from providers that their health was too good to warrant ART. In addition, providers, while demonstrating patient-centered care through sensitivity to patients experiencing psychosocial instability, frequently muted the offer of ART, at times unintentionally. In the absence of ART, lab monitoring, provider relationships, access to social services, opiate pain medications, and acute symptoms motivated care. The main limitations of this study were that treatment as prevention was not explored in depth and that participants were recruited from academic HIV clinics in the US, making the findings most generalizable to this setting.

Conclusions: Provider communication with regard to ART is a key focus for further exploration and intervention in order to increase ART uptake for those retained in HIV care.

Abstract Full-text [free] access

Editor’s notes: This paper draws on qualitative data from two clinics in the United States of America. It examines the barriers to ART uptake in this new era of ART from the perspectives of people who are retained in clinic care and not currently on ART, and their primary care providers. It further explores factors that have promoted peoples’ regular primary care attendance even in the absence of
ART. One of the strengths of this paper is the dyadic approach to the data collection which enabled the authors to compare and contrast the narratives of both care users and providers. The findings of this paper are useful as we reflect on the 90-90-90, an ambitious treatment target recently adopted by UNAIDS to help end the AIDS epidemic.

Recent studies including HPTN 052 and the Strategic Timing of AntirRetroviral Treatment (START) studies have highlighted the individual and public health benefits of early initiation of antiretroviral therapy (ART), regardless of CD4 count. The 90-90-90 target is that by 2020, 90% of all people living with HIV will know their status, 90% of people diagnosed with HIV infection will receive sustained antiretroviral therapy and 90% of people receiving antiretroviral therapy, will have viral suppression.

The findings of this article offer important challenges to sub-Saharan Africa and other resource-poor settings for meeting the 90-90-90 target. First, although the DART trial illustrated that first-line ART can be delivered safely without routine tests, in this study, many people remained engaged in care because of laboratory monitoring of their health status. Second, many of the people valued strong connections to their healthcare providers which were developed through patient-centred medical care. This contrasts with treatment contexts such as those in sub-Saharan Africa where people may be less likely to see the same provider continuously or even at consecutive visits. Third, access to additional social and acute care services also motivated some participants to maintain primary care visit attendance. In resource poor contexts, such services are rarely available. Understanding how to retain people on ART in resource-poor settings where economic, social and contextual factors differ, will be an important objective for both individual and public health approaches to managing the epidemic.

4. Avoid TB deaths

Four degrees of separation: social contacts and health providers influence the steps to final diagnosis of active tuberculosis patients in urban Uganda.


Background: Delay in tuberculosis (TB) diagnosis adversely affects patients' outcomes and prolongs transmission in the community. The influence of social contacts on steps taken by active pulmonary TB patients to seek a diagnosis has not been well examined.

Methods: A retrospective study design was use to enroll TB patients on treatment for 3 months or less and aged ≥18 years from 3 public clinics in Kampala, Uganda, from March to July 2014. Social network analysis was used to collect information about social contacts and health providers visited by patients to measure the number of steps and time between onset of symptoms and final diagnosis of TB.

Results: Of 294 TB patients, 58% were male and median age was 30 (IQR: 24-38) years. The median number of steps was 4 (IQR: 3, 7) corresponding to 70 (IQR: 28,140) days to diagnosis. New patients had more steps and time to diagnosis compared retreatment patients (5 vs. 3, P < 0.0001; 84 vs. 46 days P < 0.0001). Fifty-eight percent of patients first contacted persons in their social network. The first step to initiate seeking care accounted for 41 % of the patients’ time to diagnosis while visits to non-TB providers and TB providers (without a TB diagnosis) accounted for 34 % and 11 % respectively. New TB patients vs. retreatment (HR: 0.66, 95 % CI; 1.11, 1.99), those who first contacted a non-TB health provider vs. contacting social network (HR:
Conclusions: There were four degrees of separation between the onset of symptoms in a TB patient and a final diagnosis. Both social and provider networks of patients influenced the diagnostic pathways. Most delays occurred in the first step which represents decisions to seek help, and through interactions with non-TB health providers. TB control programs should strengthen education and active screening in the community and in health care settings to ensure timely diagnosis of TB.

Abstract Full-text [free] access

Editor’s notes: Delays in tuberculosis diagnosis are well documented in the literature and barriers to diagnosis exist in the community and the health system. This study, in an urban setting in Uganda, included a more in-depth exploration of the steps people take when symptomatic before receiving a TB diagnosis. The median time from onset of symptoms to diagnosis was over two months and the majority of people sought help from relatives and friends and non-TB providers (e.g. private clinics or pharmacies) before accessing public health facilities. There was evidence that having been treated for TB previously reduced the delay, suggesting that existing knowledge of TB in these cases may have influenced their health-seeking behaviour. It was also of interest that delays to diagnosis were greater in HIV-negative people, although it was not possible to establish whether that related to different access to care or to different patterns or severity of symptoms. This is of particular interest because it is thought that in communities with high HIV prevalence, most TB transmission may be attributable to HIV-negative people with active TB.

This study highlights the potential risk of TB transmission in the community during the pre-diagnostic phase. It seems clear that to interrupt TB transmission we need to develop programmes that go beyond public health facilities and this underlines the need for broad community engagement and education as well as more focused programmes to facilitate links between other health care providers and TB services. It is also important to remember that to interrupt transmission we must ensure that TB services and programmes are accessible to HIV-negative people as well as people living with HIV.

Cancer incidence following expansion of HIV treatment in Botswana


Background: The expansion of combination antiretroviral treatment (ART) in southern Africa has dramatically reduced mortality due to AIDS-related infections, but the impact of ART on cancer incidence in the region is unknown. We sought to describe trends in cancer incidence in Botswana during implementation of the first public ART program in Africa.

Methods: We included 8479 incident cases from the Botswana National Cancer Registry during a period of significant ART expansion in Botswana, 2003-2008, when ART coverage increased from 7.3% to 82.3%. We fit Poisson models of age-adjusted cancer incidence and counts in the total population, and in an inverse probability weighted population with known HIV status, over time and estimated ART coverage.

Findings: During this period 61.6% of cancers were diagnosed in HIV-infected individuals and 45.4% of all cancers in men and 36.4% of all cancers in women were attributable to HIV. Age-adjusted cancer incidence decreased in the HIV infected population by 8.3% per year (95% CI -14.1 to -2.1%). However, with a progressively larger and older HIV population the annual number of
cancers diagnosed remained constant (0.0% annually, 95% CI -4.3 to +4.6%). In the overall population, incidence of Kaposi's sarcoma decreased (4.6% annually, 95% CI -6.9 to -2.2), but incidence of non-Hodgkin lymphoma (+11.5% annually, 95% CI +6.3 to +17.0%) and HPV-associated cancers increased (+3.9% annually, 95% CI +1.4 to +6.5%). Age-adjusted cancer incidence among individuals without HIV increased 7.5% per year (95% CI +1.4 to +15.2%).

Interpretation: Expansion of ART in Botswana was associated with decreased age-specific cancer risk. However, an expanding and aging population contributed to continued high numbers of incident cancers in the HIV population. Increased capacity for early detection and treatment of HIV-associated cancer needs to be a new priority for programs in Africa.

Abstract


Background: The introduction of antiretroviral therapy (ART) in the United States and Europe has led to changes in the incidence of cancers among HIV-infected persons, including dramatic decreases in Kaposi sarcoma and non-Hodgkin lymphoma, and increases in Hodgkin lymphoma, liver, and anogenital malignancies. We sought to evaluate whether increasing availability of ART is associated with changing cancer incidence in Uganda.

Methods: Incident cases of 10 malignancies were identified from Kampala Cancer Registry from 1999 to 2008. ART coverage rates for Uganda were abstracted from the Joint United Nations Program on HIV/AIDS reports. Negative binomial and Poisson regression modeled the association between ART coverage and age-adjusted cancer incidence.

Results: ART coverage in Uganda increased from 0% to 43% from 1999 to 2008. With each 10% increase in ART coverage, incidence of Kaposi sarcoma decreased by 5% [incidence rate ratio (IRR) = 0.95, 95% confidence interval: 0.91 to 0.99, P = 0.02] and stomach cancer decreased by 13% [IRR = 0.87 (95% CI: 0.80 to 0.95), P = 0.002]. Conversely, incidence of non-Hodgkin lymphoma increased by 6% [IRR = 1.06 (95% CI: 1 to 1.12), P = 0.05], liver cancer by 12% [IRR = 1.12 (95% CI: 1.04 to 1.21), P = 0.002], prostate cancer by 5% [IRR = 1.05 (95% CI: 1 to 1.10), P = 0.05], and breast cancer by 5% [IRR = 1.05 (95% CI: 1 to 1.11), P = 0.05]. ART coverage was not associated with incidence of invasive cervical cancer, lung, colon, and Hodgkin disease. These findings were similar when restricted to histologically confirmed cases.

Conclusions: Our findings suggest that AIDS-defining malignancies and other malignancies are likely to remain significant public health burdens in sub-Saharan Africa even as ART availability increases.

Abstract access

Editor’s notes: There is increasing concern about non-communicable diseases, including cancers, in sub-Saharan Africa. The increasing population of people on antiretroviral therapy (ART) may result in increased absolute numbers of people diagnosed with cancer, presenting a major challenge to often under-resourced cancer diagnosis and treatment services. Few African countries have functional cancer registries. This month, we highlight data reported from both Botswanan and Ugandan cancer registries.
The article by Dryden-Petersen et al. presents data from the Botswanan registry from 2003-2008, a time of rapid ART roll-out. Age-adjusted rates of cancer were estimated using population survey denominators which include HIV status. The analysis distinguishes cancers occurring in HIV-positive individuals from those attributable to HIV (includes Kaposi's sarcoma, non-Hodgkin's lymphoma and cervical cancer). Kaposi's sarcoma, cervix and breast cancer were the most commonly-reported cancers. Overall, against a background of increasing age-adjusted incidence of cancers, the age-adjusted incidence in the HIV-positive population decreased compared to an early peak prior to ART implementation. However, given this expanding population of survivors, the absolute numbers of reported cases remained constant. Different cancers had different trends. Cervical cancer, which affects younger women and which increased over the period studied, may be a particular focus as it is common and relatively easy to identify in the early stages.

The article by Mutyaba et al. presents data from the Ugandan cancer registry for Kyadondo county from 1999-2008, similarly a time of rapid ART roll-out. The analysis uses population denominators, and an ecologic analysis to estimate change in cancer incidence by ART coverage for 10 selected cancers, including Kaposi's sarcoma, invasive cervical cancer and non-Hodgkin’s lymphoma. Although significant differences in the incidence rate of about half of the cancers were observed over this period, the differences per increase of ART coverage (by 10%) were modest. These data are now somewhat out of date, but despite the limitations of use of routine data (incomplete and biased ascertainment of cancers, HIV status etc) it is clear that the burden of cancers in these two settings is unlikely to decrease and there are major implications for service provision including screening programmes.

The findings from the two studies are consistent in showing an important decrease in Kaposi’s sarcoma with ART, but an increase in non-Hodgkin’s lymphoma. However the trends for other cancers (cervical, breast, prostate, liver and lung) are in different directions, which may reflect different ascertainment abilities, ART programmatic differences or different methods of data analysis. Overall both studies highlight that cancer is not declining as ART programmes have been rolled out.

5. Close the resource gap

Assessment of the potential impact and cost-effectiveness of self-testing for HIV in low-income countries.


Background: Studies have demonstrated that self-testing for human immunodeficiency virus (HIV) is highly acceptable among individuals and could allow cost savings, compared with provider-delivered HIV testing and counseling (PHTC), although the longer-term population-level effects are uncertain. We evaluated the cost-effectiveness of introducing self-testing in 2015 over a 20-year time frame in a country such as Zimbabwe.

Methods: The HIV synthesis model was used. Two scenarios were considered. In the reference scenario, self-testing is not available, and the rate of first-time and repeat PHTC is assumed to increase from 2015 onward, in line with past trends. In the intervention scenario, self-testing is introduced at a unit cost of $3.
Results: We predict that the introduction of self-testing would lead to modest savings in healthcare costs of $75 million, while averting around 7000 disability-adjusted life-years over 20 years. Findings were robust to most variations in assumptions; however, higher cost of self-testing, lower linkage to care for people whose diagnosis is a consequence of a positive self-test result, and lower threshold for antiretroviral therapy eligibility criteria could lead to situations in which self-testing is not cost-effective.

Conclusions: This analysis suggests that introducing self-testing offers some health benefits and may well save costs.

Abstract Full-text [free] access

Editor’s notes: In low-income countries 50% of people living with HIV are unaware of their HIV-status. Some barriers to diagnosis are associated with provider-based models and could potentially be overcome by introducing self-testing strategies. The cost of self-testing is expected to be lower than that of provider-based testing. However, self-testing may have a lower sensitivity, may necessitate provider-based diagnosis confirmation and may lead to lower linkages to care, among other potential disadvantages. This study assesses the cost-effectiveness of introducing self-testing in Zimbabwe over a 20-year time frame.

Two scenarios are modelled using an individual-based stochastic model of HIV transmission and infection progression and treatment: 1) a reference case where self-testing is not introduced, with continuous reliance on provider-based testing and 2) following self-testing introduction. Cost and health outcomes were compared.

The study suggests that introduction of self-testing would lead to a 7% higher proportion tested for HIV compared to the reference scenario. Also, it would lead to a cost reduction of 2.6% (USD 75 million) and to 7000 DALYs averted in a 20-year period. However, the costs and effects depend on a range of factors and in some scenarios (such as in situations of inadequate links to the care and treatment cascade) self-testing could result in worse outcomes than in the reference case. Sensitivity analyses illustrate that key determinants of the magnitude of health gains include the cost of self-testing, the initial level of HIV diagnosis and ART coverage, and self-testing availability.

This study contains some exciting findings that could lead to the use of resources more effectively. However, associated research needs to be carried out to ensure that the introduction of self-testing yields the greatest benefit. More work needs to be done in determining the cost of distribution and management of self-testing, as well as exploring the community acceptance. Further, given the importance of linkages to care, research on self-testing should be embedded into the larger literature around health system strengthening.

6. Eliminate stigma and discrimination

The association of HIV-related stigma to HIV medication adherence: a systematic review and synthesis of the literature.

Sweeney SM, Vanable PA. AIDS Behav. 2015 Aug 25. [Epub ahead of print]

This paper provides a review of the quantitative literature on HIV-related stigma and medication adherence, including: (1) synthesis of the empirical evidence linking stigma to adherence, (2) examination of proposed causal mechanisms of the stigma and adherence relationship, and (3) methodological critique and guidance for future research. We reviewed 38
studies reporting either cross-sectional or prospective analyses of the association of HIV-related stigma to medication adherence since the introduction of antiretroviral therapies (ART). Although there is substantial empirical evidence linking stigma to adherence difficulties, few studies provided data on psychosocial mechanisms that may account for this relationship. Proposed mechanisms include: (a) enhanced vulnerability to mental health difficulties, (b) reduction in self-efficacy, and (c) concerns about inadvertent disclosure of HIV status. Future research should strive to assess the multiple domains of stigma, use standardized measures of adherence, and include prospective analyses to test mediating variables.

Abstract access

Editor's notes: People living with HIV often experience stigma and discrimination including social isolation and negative stereotyping. Recent evidence suggests that stigma may influence adherence to HIV medication among people living with HIV. This paper presents findings from a systematic review of the evidence on the impact of HIV-associated stigma on HIV medication adherence. The authors identified 38 studies which quantitatively assessed the association between stigma and medication adherence. All studies found evidence indicating that stigma contributed to adherence difficulties among people living with HIV. Included studies looked at diverse patient populations sampled from different countries and contexts. While stigma is heavily influenced by the socio-cultural context, the association between stigma and adherence across diverse contexts indicates that there may be commonalities in what causes stigma and how this relates to adherence.

The authors of this review suggest three possible causal mechanisms of HIV-associated stigma and medication adherence: (1) There may be links between stigma and depressive symptoms, and between depressive symptoms and adherence. Internalized stigma may enhance vulnerability to depressive symptoms, and this may influence adherence to HIV medication. (2) Stigma may cause reductions in self-efficacy – a person's judgment of his or her ability to organize and execute behaviours - which may influence medication adherence. (3) People may fear HIV status disclosure by being seen taking HIV medication. Fear of status disclosure, and associated stigma, may cause people to avoid taking HIV medication.

The studies included in this review indicate a clear link between HIV-associated stigma and HIV medication adherence. There may be commonalities in what causes stigma across multiple populations. Future research should assess the influence of multiple forms of stigma on adherence, and on testing causal mechanisms between stigma and adherence.

(Not) getting political: indigenous women and preventing mother-to-child transmission of HIV in West Papua.


This paper builds on critiques that call for a more nuanced and contextualised understanding of conditions that affect HIV prevention by looking at West Papuan women's experiences of prevention of mother-to-child transmission services. Drawing on qualitative, ethnographic research with indigenous women and health workers, the paper demonstrates that women experience poor-quality HIV education and counselling, and that indigenous practices and concerns are largely not addressed by HIV services. We attribute this to a combination of national anti-indigenous and anti-separatist political concerns with donor-led interventions that result in limited localisation and reduced effectiveness of HIV prevention measures. In West Papua, services are needed that enhance cooperation and shared commitment, and that acknowledge and work to overcome existing inequalities, ethnic tensions and discrimination in the health system.
Beyond Indonesia, donor-led HIV programmes and interventions need to balance avoidance of politically sensitive issues with complicity in perpetuating health inequalities. Translating global health interventions and donor priorities into locally compelling HIV prevention activities involves more than navigating local cultural and religious beliefs. Programme development and implementation strategies that entail confronting structural questions as well as social hierarchies, cleavages and silences are needed to render more effective services; strategies that are inherently political.

Abstract access

**Editor’s notes:** West Papua is witnessing one of the fastest growing HIV epidemics in the world, especially among its indigenous populations (prevalence is 2.9%). Translation of HIV prevention programmes to the local situation is complicated by unequal, discriminatory and racialised relationships between the Indonesian government and indigenous Papuans. This is made worse by the exclusion of indigenous Papuans from health services management and governance. Tensions between Papuan HIV NGO staff and Indonesian healthcare workers create obstacles to delivery of health promotion and HIV testing. International HIV agency funders and representatives ignore these tensions for political reasons.

Indigenous people are stigmatised as ‘hypersexual’ and ‘wild’ which causes poor service design and delivery of prevention of mother-to-child transmission. Because of racial stereotypes, Papuan women receive inadequate education and support in the healthcare system. Many women do not fully understand prevention of mother-to-child transmission, antiretroviral therapy, infant feeding choices, and delivery choices. Women are uncomfortable with healthcare workers and do not trust their advice, which is inadequate and does not consider peoples’ views. Women often drop out of HIV care after testing. Women were very isolated, with their partners often working far away. Women disclose their HIV status to very few people even with their families and usually do not know other positive mothers. International donor agencies need to engage with existing local political tensions that result in poor quality treatment of service users. HIV prevention programmes can exacerbate local inequalities if these are not recognised in HIV policy and service provision.


Using minority stress theory, the authors investigated risk behaviors of transgender women (trans women) in Lebanon. Using semistructured interviews, the authors explored six areas: relationships with family and friends; openness about gender and sexuality; experiences with stigma; sexual behavior; attitudes and behaviors regarding HIV testing; and perceived HIV-related norms among transgender peers. Participants voiced the importance of different forms of safety: social/emotional, physical, sexual, and financial. Strategies for obtaining safety were negotiated differently depending on social, behavioral, and structural factors in the environment. In this article, we provide study findings from the perspectives of trans women, their exposure to stigma, and the necessary navigation of environments characterized by transphobia.

Abstract access
Editor's notes: Transgender women have a high risk of HIV acquisition / transmission, due to experiences of stigma, discrimination and transphobia. However there is a dearth of studies on transgender women from North Africa or the Middle East.

Interviews with ten trans-women from Beirut were included in this qualitative study. The study findings highlight the extreme vulnerability of transgender women to stigma, discrimination, violence, mental ill-health, financial insecurity and HIV and STI risk. Social support and emotional security from family, friends, and the transgender community was frequently lacking. Mental ill-health (9/10) and suicide ideation / attempts was high (5/10). Stigma and discrimination by peers and teachers at school, and at the work-place were common. Many also reported verbal, physical and sexual abuse and violence in public spaces. Many participants were selling anal sex to reduce financial insecurity. Money was a key motivator for condom non-use.

Programmes with transgender women should be multi-component to reflect the complexity of their needs. They should include HIV prevention, advocacy of laws to prevent discrimination, employment opportunities to enable economic independence, and treatment and support for mental ill-health.