

Biomedical and structural prevention: STRIVE in the era of 'cascades'

TECHNICAL BRIEF
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Authors: Sinéad Delany-Moretlwe, James Hargreaves, Anne Stangl, Mitzy Gafos

What is the issue?

Despite advances, an unmet need remains for HIV prevention, both through primary prevention for HIV negative individuals and secondary prevention through treatment for HIV positive individuals. This need is urgent in key populations such as sex workers, men who have sex with men, prisoners, people who use drugs, transgender people and adolescent girls and young women in sub-Saharan Africa.

A number of direct biomedical mechanisms have proven efficacy in preventing transmission at the biological level:

- condoms: 90 to 95%¹
- voluntary medical male circumcision: 60 to 75%²
- pre-exposure prophylaxis (PrEP): 95 to 99%
- dapivirine vaginal ring: 30 to 35%
- antiretroviral treatment (ART) as secondary prevention: 96%³

The advances in antiretroviral (ARV)-based primary and secondary prevention offer real promise for reducing HIV incidence at a population-level, if sufficient coverage is achieved. However, the impact at population level of treatment as prevention (TaSP), for example, has been constrained by the realities of people's lives. In the past, interventions to overcome barriers to the uptake of prevention methods focused on behaviour change. Increasingly, though, the field has come to acknowledge that individual choices are shaped at the structural level. Thus, prevention strategies must address the structural factors that inhibit or enhance the uptake of direct mechanisms of HIV prevention to achieve a population-level impact.

What we've learned

The STRIVE consortium set out to address two key sets of questions:

1. How do structural factors influence the success of biomedical prevention tools?
2. Can programmes address structural factors in order to optimise the impact of biomedical HIV prevention?

From STRIVE research – conceptual thinking, synthesis and analysis of existing evidence and

new findings from original studies – it is clear that biomedical interventions will not achieve ambitious targets to end AIDS without addressing structural factors that shape HIV risk and undermine uptake and effective use of prevention options.

Action on the structural level has been limited because of a range of common perceptions:

- that structural factors – such as stigma – are difficult to measure and monitor
- that the pathways between HIV vulnerability and structural factors – such as intimate partner violence (IPV) – are not clear
- that structural interventions are too complex, lengthy and expensive to be feasible
- that there are no mechanisms through which to share the costs of those structural interventions that have impact beyond HIV and even beyond health

In response to these views, STRIVE has:

- developed and tested a series of measurement briefs to enable standardised measures and survey questions on stigma, alcohol use, transactional sex and IPV
- established or clarified the pathways between HIV transmission and distal factors such as IPV or problematic alcohol use
- evaluated specific structural interventions and conducted systematic reviews to identify measures and programmes that are effective in addressing the structural drivers of HIV
- developed and supported the application of a co-financing mechanism to assess multi-sectoral cost-effectiveness in order to cross-fund effective interventions that achieve benefits across a number of sectors including HIV

Structural factors can, it emerges, be addressed within programmatic timeframes and budgets by evidence-based interventions.

In recent years, we have tended to think about HIV risk, and about interventions to prevent new infections, in three categories:

1. biomedical
2. behavioural
3. structural

This way of thinking has been helpful but has limitations.

- At one extreme, we may put all our faith in a biomedical technology such as TasP or PrEP, without recognising that behavioural and structural interventions are essential to support ART use.
- At the other extreme, we may be over-optimistic about the HIV-specific impacts of improving a structural factor such as gender equality if it is not integrated with other preventive steps.

In fact, as those involved in programming know from experience, effective prevention needs to use knowledge about all three simultaneously, integrating biomedical, behavioural and structural responses to HIV. We must integrate strategies to address structural factors within overall HIV prevention and evaluate the impact at scale. A new framework called the 'prevention cascade' helps us to do this.

What is a prevention cascade?

The term 'cascade' is familiar in the HIV field from its use in analysing, modelling and addressing the fall out at different points in the treatment of populations living with HIV – known as the 'treatment cascade'. The prevention cascade framework is similarly useful – although in different ways – in identifying and addressing prevention gaps.⁴

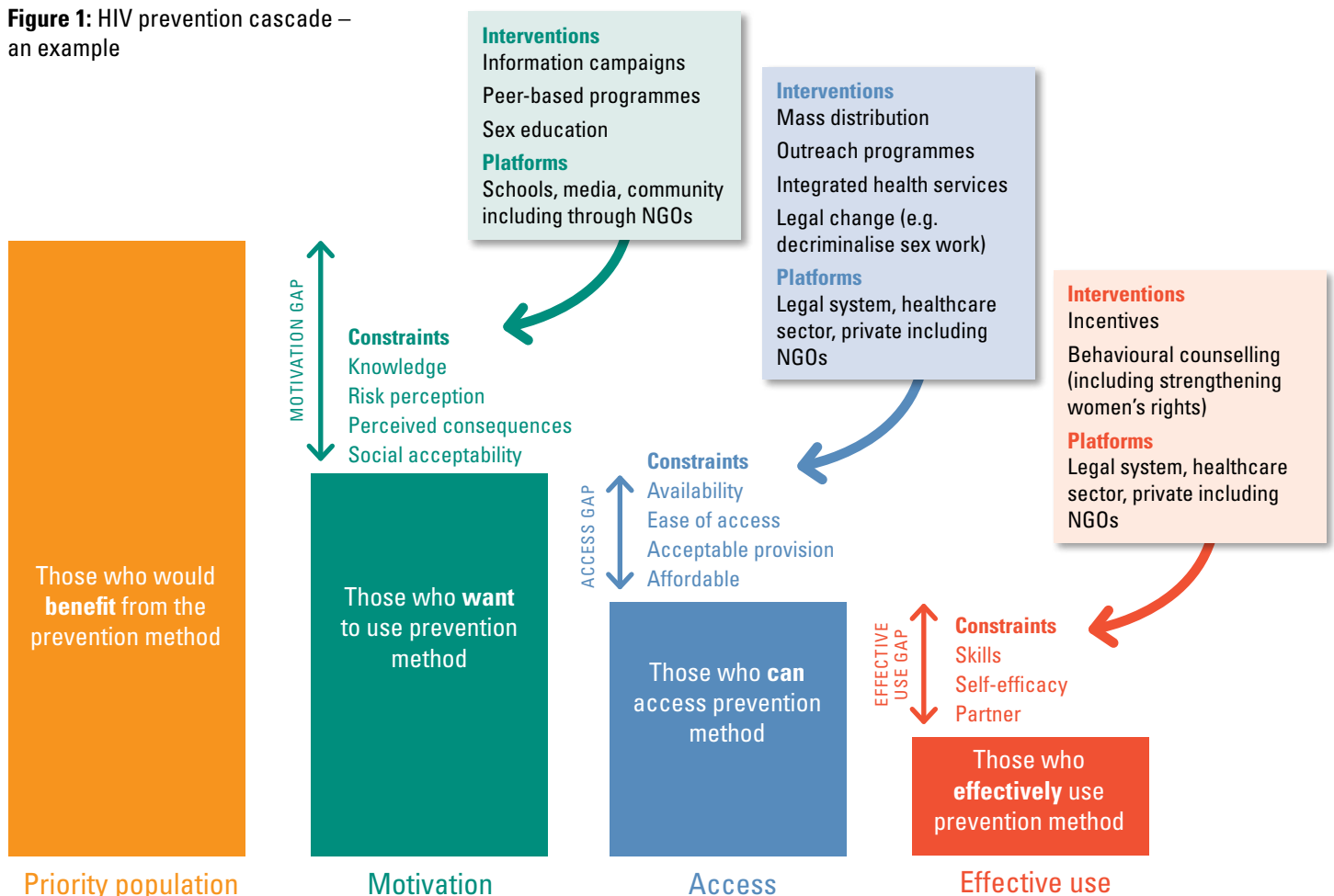
For any priority population that would benefit from use of the prevention method, the core steps of the cascade are:

- motivation to use the prevention method
- access to it
- effective use of it

Consider the example of adolescent girls and young women in sub-Saharan Africa (Figure 1). In principle, a young woman can choose from and combine a number of direct mechanisms of prevention to protect herself against HIV. She could use condoms consistently, or take PrEP every day, or decide not to be sexually active. Different options might suit her at different times in her life – but her choices are likely to be constrained by a range of factors.

- **Motivation:** a young women's motivation may be constrained by not knowing about PrEP, not understanding or being aware of her own risk of HIV, or by social norms that inhibit women's sexual activity and agency. To increase the number of young women motivated to use PrEP, we need to design new programmes or add new and effective elements into existing programmes, for instance in sexual and reproductive health. These elements might include peer-led or clinic-based information and awareness programmes, or interventions to shift social norms around PrEP use. Schools,

Figure 1: HIV prevention cascade – an example



media, integrated health services and community could deliver these interventions, and policies will be needed to support high coverage, intensity and quality of the interventions.

- **Access:** Some young women who are motivated to use PrEP may not be able to access it because PrEP is not available, or not easily accessible, or not affordable, or because there is stigma present in the places where PrEP can be accessed. To close the access gap, we could intervene to ensure that health services where PrEP is accessed are convenient, free and youth-friendly. We could deliver these interventions across the range of places where PrEP might be accessed. To support these interventions, policies would need to establish budgets to provide (for example) ARVs, support, health-worker training and social welfare.
- **Effective use:** some young women in this population may be motivated to take PrEP and have access to PrEP but still not be able to take PrEP consistently and effectively over time. Daily adherence may be difficult for a young woman because, for example her parents or a partner may not approve, or her living situation may be insecure, or her partner may be violent and/or abusing alcohol or stigma around HIV medication may discourage her. Programmes could include long-term counselling services, economic or gender-based empowerment, and social protection. The best platforms to reach the priority population are the health, development and welfare sectors – both government and NGO – with policies needed to ensure such interventions are in place.

In this way, the prevention cascade offers a framework for identifying gaps in HIV prevention and for planning interventions to close those gaps. We can then draw on our interdisciplinary understandings of HIV risk – in our example, to focus on support for young women’s capacity to adhere to PrEP.

We can use the prevention cascade to design interventions for other priority populations including for example, sex workers, prisoners, transgender people and men who have sex with men. Of course, additional issues come into play in terms of marginalised populations, for example the need for legislation to decriminalise sex work and same-sex relationships in many countries where these groups are at high risk of HIV.

We can also focus on one or more other direct mechanisms of prevention, for example, male or female condoms and voluntary medical male circumcision. We can then identify the most effective interventions and platforms, in order to achieve prevention at scale for those facing high risk of HIV infection. In this way the HIV prevention cascade can support efforts to reach ambitious global targets for reduction of new infections.

1 Key message: Biomedical interventions will not achieve the ambitious targets to end AIDS without addressing structural factors that shape HIV risk and undermine uptake and effective use

Existing evidence

In earlier years, HIV prevention was dominated by the need to change behaviour. While there have been documented successes in this, in many cases structural factors have been shown to act as a barrier. For example:

- Entrenched gender inequalities limit women’s choices and create expectations of masculinity that are at odds with HIV prevention aims.
- Poverty, economic inequality and underdevelopment undermine the capacity of populations to access and act on HIV prevention messages, as well as, for example, fuelling transactional and commercial sex.
- Social stigmatisation of HIV and certain types of sexual behaviour (including sex work and men having sex with men) means these behaviours have remained hidden and not addressed in behavioural HIV prevention.
- Widespread alcohol availability has fuelled unsafe sex as it inhibits people’s decision-making about having sex and use of protection.⁵

New opportunities for HIV prevention, especially through TasP and PrEP, offer great hope for prevention, but the same structural factors that have acted as a barrier to behavioural prevention may also constrain the translation of these powerful biomedical tools into population-level impact on the epidemic.

STRIVE findings

We conducted two main pieces of work to explore the ways in which structural factors undermine uptake and effective use of ARVs as treatment, with knock on effects for secondary prevention.

3. STRIVE analysed data to investigate the **inverse equity hypothesis**, in order to understand the shifts over time in the association between poverty/wealth and HIV vulnerability.
4. STRIVE conducted a **systematic scoping review of the literature** to map existing understandings of structural factors as barriers to biomedical treatment and prevention, along with promising interventions to overcome them.

Inverse equity hypothesis

Early in the epidemic, HIV prevalence was higher in higher socio-economic groups. However, over time this changed, with some evidence of HIV increasing in lower socio-economic groups and decreasing in higher socio-economic groups. This was explained by the inverse equity hypothesis, which proposed that “new interventions will initially reach those of higher socio-economic status and only later affect the poor.”⁶

STRIVE analysed the association between educational attainment and HIV prevalence across seven countries in east and southern Africa, focusing particularly on young people, amongst whom the prevalence trends might be reflective more of incidence trends rather than other things such as mortality and migration.⁷ The effects were not consistent across all countries but, comparing data over time, we observed a shift from higher to lower socio-economic status being associated with HIV infection in some countries, such as Tanzania. Also, this shift varied between females and males in some countries such as Ethiopia.

The prevention cascade aims to identify factors that can impede maximum coverage of these efficacious tools and ensure coverage is as equitable as possible. Thus, the inverse hypothesis – that lower socio-economic groups will access new prevention options later than higher socio-economic groups – is an important consideration when using the prevention cascade to plan prevention programmes.

Systematic review

STRIVE conducted a systematic scoping review of the literature to map existing understandings of structural factors as barriers to biomedical treatment and prevention.

We identified and included 20 systematic reviews in our review.⁸ The systematic scoping review focuses on four structural factors:

1. poverty
2. gender inequality and violence
3. stigma
4. alcohol use

The review found evidence that each of these structural factors influences some or all elements of the treatment cascade. In certain cases, the evidence is mixed (although this may relate to varying definitions of structural factors). Most of the evidence focuses on individual-level impacts, with limited evidence on population-level impacts. Where population-level evidence does exist, outcomes are poorer. The evidence predominantly comes from observational and qualitative studies, with minimal evidence from randomised controlled trials. For all of these reasons, there are many important gaps in the evidence available to date.

However, there has been less focus on the barriers to elements of the prevention cascade, although there is some evidence from the prevention of mother-to-child transmission (PMTCT) and placebo control trials of PrEP. The limited evidence we do have suggests that these structural factors are highly likely to also impact negatively on the prevention cascade – on motivation, access and effective use of direct prevention mechanisms.

Gender inequality and violence

These factors limit choice, exacerbate vulnerability and inhibit uptake of treatment and prevention

A body of evidence indicates that violence may influence the treatment cascade. It is important to remember that HIV testing is the entry point to ARV-based biomedical prevention and therefore barriers to HIV testing equally impact on prevention and treatment. Although evidence is limited for the prevention cascade, results from trials and emerging demonstration projects suggest that these factors are likely to also influence PrEP initiation and adherence.

Figure 2: Violence and fear of violence limit the success of HIV treatment

HIV testing and linkage to care	ART initiation	Adherence and retention in care
<ul style="list-style-type: none"> ■ Gender inequality undermines women’s decision making autonomy about HIV testing. <i>Musheke, 2013</i> ■ Fear of intimate partner violence (IPV) prevented some women from accessing testing, but other studies showed no difference in uptake or access by IPV status. One study suggested that IPV motivates HIV testing. <i>Kouyoumdjian 2013</i> ■ Fear of violence prevented disclosure. <i>Kouyoumdjian 2013</i> 	<ul style="list-style-type: none"> ■ IPV was associated with inability to access care and treatment, although one outlier did not show an association. <i>Kouyoumdjian, 2013</i> ■ IPV was associated with lower ‘current ART use’ among women in a meta-analysis. <i>Hatcher, 2015</i> ■ Women were reluctant to, or did not include at all, their male partners in PMTCT services due to fear of violence. <i>Morfaw, 2013</i> 	<ul style="list-style-type: none"> ■ IPV reduced odds of women adhering to ART by half. <i>Hatcher, 2015</i> ■ Partner abuse associated with poor medication adherence leading to poor treatment outcomes (VL, CD4+). <i>Pantalone, 2014</i> ■ IPV associated with treatment discontinuation in two studies <i>Kouyoumdjian, 2013</i> ■ Some evidence for IPV increased loss to follow up. <i>Hatcher, 2015</i>

Socio-economic status

This affects people's capacity to access and adhere to treatment

Socioeconomic status is challenging to define, so reviews have tended to highlight proxy measures such as transport costs, food shortages and housing instability as issues that affect HIV testing or ART initiation or continued use of ART and retention in care. One review suggests that ART adherence can be improved with the provision of food, implying that if we intervene on these factors, we can also improve HIV treatment outcomes. Again, we have limited data in terms of the prevention cascade, although evidence would suggest that socio-economic status will equally influence testing, linkage to care and initiation of and adherence to prevention options such as PrEP.

Figure 3: Low socio-economic status limits the success of HIV treatment

HIV testing and linkage to care	ART initiation	Adherence and retention in care
<ul style="list-style-type: none"> Transport costs, distance to health facility, food shortage, patient-related time constraints were the main reported economic barriers to linkage to care. <i>Obermeyer, 2007; Govindasamy, 2012</i> Unstable housing associated with poor health service utilisation. <i>Leaver 2007</i> 	<ul style="list-style-type: none"> Initiation influenced by travel time/ distance, lack of consistency and co-ordination across services, and the limited involvement of the community in the programme planning process. <i>Hlarlathie, 2014, Posse, 2008</i> 	<ul style="list-style-type: none"> Housing instability was a significant predictor of non-adherence to ART. <i>Leaver, 2007</i> Transport costs and distance impeded continuity in HIV care. <i>Govindasamy, 2012</i> Food insecurity is an important barrier to ART adherence and provision of food can improve adherence. <i>de Pee 2014, Singer, 2015</i>

Figure 4: Stigma limits the success of HIV treatment

HIV testing and linkage to care	ART initiation	Adherence and retention in care
<ul style="list-style-type: none"> Access and uptake of testing and linkage to care. <i>Obermeyer, 2007; Mahajan, 2008; Ferguson, 2012; Musheke, 2013; Levy, 2014; Posse 2008</i> 	<ul style="list-style-type: none"> Hodgson, I. et al. (2014) A Systematic Review of Individual and Contextual Factors Affecting ART Initiation, Adherence, and Retention for HIV-Infected Pregnant and Postpartum Women. <i>PLOS One</i> 	<ul style="list-style-type: none"> Adherence and retention in care. <i>Mahajan, 2008; Katz, 2013; Colombini, 2014</i> Impact on clinical outcomes from PMTCT. <i>Mahajan, 2008; Hlarlathie, 2014</i>

Alcohol use

Alcohol use impacts on HIV service utilisation, and we have strong evidence of its clinical impact on adherence and treatment outcomes, and on some of the complications associated with ART. The impact of alcohol use on service utilisation and adherence are likely to equally impact on the prevention cascade.

Stigma

This is a relatively well documented barrier to treatment

The reviews consistently find that stigma is a barrier to uptake of testing, linkage to care and retention in care. We have limited data on the impact of stigma on clinical outcomes for treatment but more evidence of its impact on PMTCT. In reports from PrEP trials regarding ART stigma influencing adherence, the indication is that stigma may function as a similar barrier to prevention. It is assumed that the mechanism by which stigma impacts on PrEP use is due to fear of disclosure of use of PrEP.

Alcohol use is not categorised as a structural driver of HIV *per se*, but key levers that fuel the problematic drinking associated with HIV risk – alcohol marketing, promotion and availability – can be impacted by structural interventions including changes to national policy.

Figure 5: Alcohol limits the success of HIV treatment

HIV testing and linkage to care	ART initiation	Adherence and retention in care
<ul style="list-style-type: none"> Evidence on the impact of alcohol use and HIV service utilisation was variable. <i>Azar, 2010</i> Alcohol use negatively affects all steps of the treatment cascade. <i>Vagenas, 2015</i> 	<ul style="list-style-type: none"> No evidence as yet. 	<ul style="list-style-type: none"> Strong and consistent evidence that alcohol use undermines adherence and treatment outcomes. <i>Hendershot, 2009; Azar, 2010; Gari, 2013; Nakimuli-Mpungu, 2012; Vagenas, 2015</i> Worse outcomes with non-communicable co-morbidities. <i>Grodensky, 2012</i>

Implications

- While there is substantial evidence about the impact of structural factors on the treatment cascade, we need to understand more about their impact on the prevention cascade.
- In using the prevention cascade to design programmes, we need to identify evidence-based interventions that address these structural factors. Prevention programmes will not be successful if we do not address the underlying factors that are shaping risk and affecting people's use of these new prevention technologies.
- Using the prevention cascade, we need to design and evaluate combination interventions to optimise the benefits of prevention programmes in populations at risk.
- In order for programmes to be efficient and scalable, we need to understand which factors are uniquely sensitive within the cascade and which can then, through intervention, optimise the cascade.

2 Key message: Structural factors can be addressed within programmatic time frames with evidence-based interventions

Existing evidence

With evidence of the pathways through which structural factors influence HIV treatment and prevention, STRIVE tackled the question of how to address structural factors within programmatic time frames and budgets. From a clinical HIV perspective, we know that ART has an effect against HIV: what we need are strong programmes that are effective in addressing the structural factors that clearly influence the HIV programme outcomes.

A growing body of evidence – we detail some below – shows the effectiveness of well designed structural interventions, including those addressing education and a range of areas related to human rights. STRIVE has drawn built on some significant examples:

- **A review of interventions** to prevent violence against women and girls highlighted that many interventions in low- and middle-income countries have shown promising effects. Some of these have been incorporated within programmes at a country level. Promising interventions all focus on community mobilisation, empowerment and group training.⁹
- **The IMAGE study** (Intervention with Microfinance for AIDS and Gender Equity) in South Africa showed a 55% reduction in IPV. Further evaluation identified that the combination of cash with empowerment led to the most benefits across a range of economic, empowerment, violence and HIV outcomes. Importantly it also affected upstream factors as well. Improving things like communication and condom use may be important. They may not on their own be enough

to influence HIV incidence, but together with ART they may contribute significantly.¹⁰

- **The World Health Organization (WHO) recommends** a series of evidence-based 'best-buy' policy interventions to reduce alcohol related harm. These operate at the policy level, with indications that they will reduce the effects of problem drinking.¹¹

STRIVE insights

Gender-based violence interventions

STRIVE partners contributed to the SASA! study in Uganda. A community mobilisation intervention, SASA! was designed to change the social norms that perpetuate violence against women and increase risk of HIV.¹² The team used a cluster randomised controlled trial to evaluate the impact of the intervention. SASA! significantly reduced physical violence among women with a history of violence, reduced men's reporting of concurrent sexual partners, improved attitudes towards the acceptability of violence and improved attitudes towards, and women's ability to, refuse sex. The study demonstrated that a social norms approach can impact on gender-based violence (GBV) and can be achieved at a cost of approximately \$1 per activist involvement in the intervention.

Stigma interventions

STRIVE partners conducted a systematic review of interventions to reduce HIV-related stigma and discrimination.¹³ The review showed that considerable progress has been made over the last decade to address stigma, with the number, geographical spread and complexity of interventions expanding considerably. Studies that showed a reduction in HIV-related stigma were of high quality. Of the studies reviewed, 90% reported reductions in stigma and 75% used two or more strategies to address stigma. The current evidence is strongest for interventions with students, health workers and community members. Structural or counselling-based interventions are likely to have the greatest benefits.

Alcohol interventions

STRIVE research and policy engagement¹⁴ on alcohol, particularly in Tanzania and South Africa, have drawn on the WHO's 'best buy' recommendations.

- Regulate production, wholesaling and serving of alcoholic beverages that places reasonable limitations on the distribution of alcohol and the operation of alcohol outlets in accordance with cultural norms.
- Reduce the impact of marketing, particularly on young people and adolescents, is an important consideration in reducing harmful use of alcohol.
- Use pricing policies to reduce underage drinking, to halt progression towards drinking large volumes of alcohol and/or episodes of heavy drinking, and to influence consumers' preferences.

STRIVE evidence¹⁵ of the harmful impact of cheap alcohol ‘sachets’ in Mwanza contributed to the national ban on their production, sale and marketing.

STRIVE partners conducted a three-country study – India, South Africa and Tanzania – of the impact on young people of alcohol availability and marketing. Through the Southern African Alcohol Policy Alliance, evidence from the South African research has fed into debate on a proposed ban on alcohol advertising.¹⁶



2017 UPDATE: BAN ON ALCOHOL SACHETS

On 1 March 2017, the Tanzania government officially issued a ban on the import, manufacturing, sale and consumption of the alcohol sachets, known as viroba: small amounts (50ml or 100ml) of hard liquor packaged in plastic. The governments of Ivory Coast, Senegal, Malawi and Rwanda have also banned the sachets.

In defending the ban, the government cited environmental pollution and the need to protect youth from harmful alcohol use. Officials from the Ministry of Health’s Mental Health and Substance Abuse Unit confirmed that NIMR findings on the harmful impact of sachets on young people contributed to this legislation.

Review of interventions to support the prevention cascade

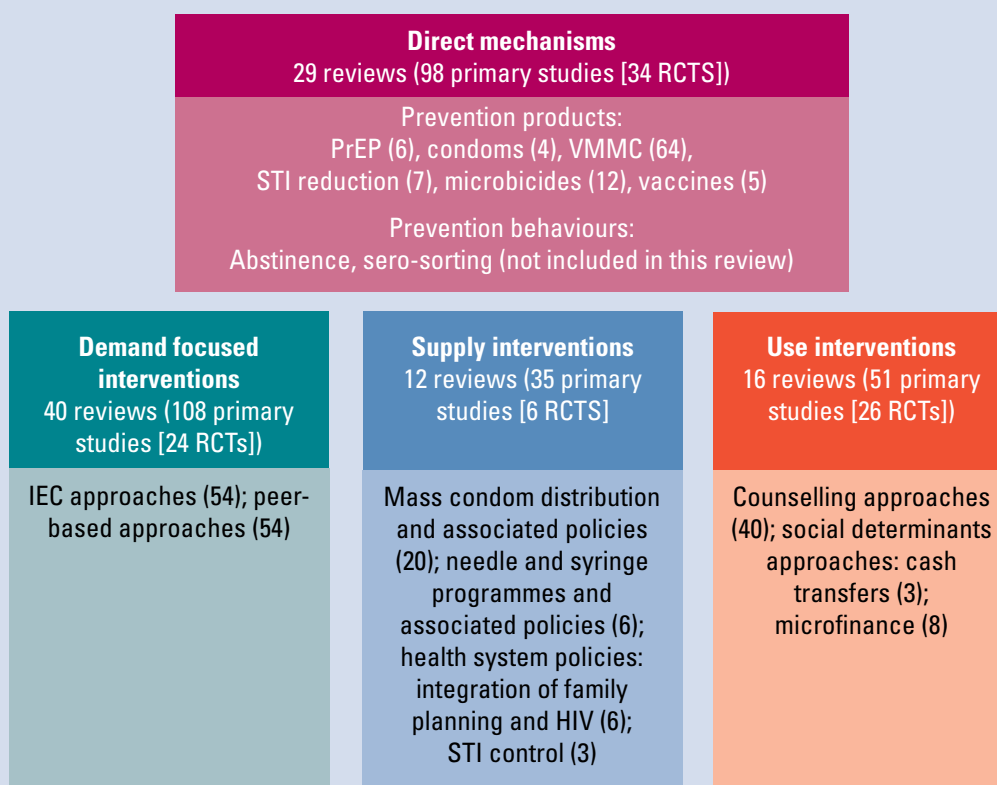
STRIVE’s systematic review of systematic reviews¹⁷ on the effectiveness of HIV prevention interventions identified studies that assessed the impact of prevention interventions on:

- HIV incidence or prevalence
- condom use
- uptake of HIV testing

We then mapped the reviews against the prevention cascade framework. (Note: the paper used a previous version of the cascade, with ‘motivation’ as ‘demand’, access as ‘supply, and effective use as ‘use’.) We identified 194 articles that addressed motivation, access and effective use of prevention methods. As shown in Figure 6, 98 studies evaluated a ‘direct mechanism’ of HIV prevention and showed strong evidence for the efficacy of PrEP and voluntary male medical circumcision. The ‘supply’ or access category tracked evidence of the effectiveness of interventions to increase the supply of prevention methods such as condoms and clean needles. We found less clear evidence on both ‘demand-side’ interventions (motivation) and interventions to promote effective ‘use’ of prevention tools (effective use).

While there is growing evidence on the effectiveness of interventions to impact on HIV prevention at an individual level, translating this evidence into population impact will require interventions that strengthen each step of the prevention cascade – namely motivation, access and effective use.

Figure 6: Evidence for the HIV prevention cascade



3 Key message: We must integrate strategies to address structural factors within overall prevention, and evaluate at scale.

STRIVE partners are involved in two HIV prevention interventions that aim to address the structural factors of HIV in the context of combination HIV prevention programmes.

1. **PopART:** Addressing stigma in universal test and treat intervention in South Africa and Zambia
2. **EMPOWER:** addressing gender based violence in a PrEP programme in South Africa and Tanzania

PopART

A large community-randomised trial in Zambia and South Africa, PopART is measuring the impact of a universal HIV test-and-treat intervention on population-level HIV incidence and other indicators including stigma.

STRIVE's work to discover how stigma might explicitly interact with treatment as prevention (TasP) – and particularly with the idea of a universal test and treat (UTT) approach to HIV prevention – was guided by three hypotheses.

1. The scale of UTT might change and, specifically, might reduce levels of HIV-related stigma, by its universality and by increasing interaction with people living with HIV, and the treatability of the disease might reduce stigma.
2. Pre-existing HIV-related stigma might undermine the effectiveness of UTT or other TasP strategies.
3. The rollout of UTT may change the form of HIV-related stigma.

Stigma arises out of interactions between different groups of people, 'us and them'. STRIVE has focused on collecting data from all four of the groups in Figure 7 in order to see how these perspectives interact and produce or challenge stigma. So, we collect data from:

- people living with HIV
- people living in the community
- health workers, who both challenge and uphold stigma, and are a particularly important barrier to the cascade where stigma does exist in health settings
- vulnerable or key populations, some of whom are stigmatised because of associations to HIV or sexual behaviours which are not socially sanctioned (such as sex work or men having sex with men)

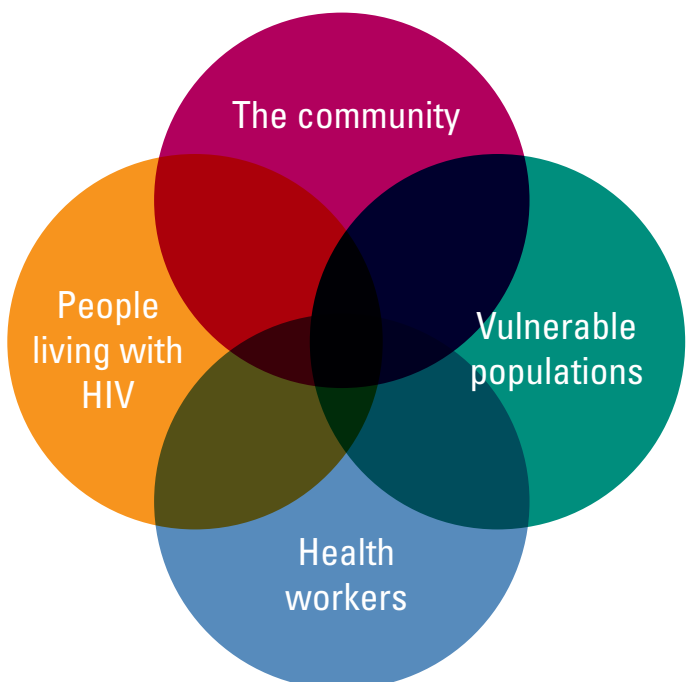
In these ways, we have used the Global Stigma and Discrimination Measurement Framework to measure stigma in parallel across groups in POPART.¹⁸

The baseline results¹⁹ among people living with HIV showed that:

- almost a quarter of respondents reported internalised stigma (22.5%) and stigma in the community (22.1%) – higher in Zambia than in South Africa
- 7.3% reported experiencing stigma in healthcare settings – higher in South Africa than in Zambia
- internalised stigma was not associated with sociodemographic characteristics
- internalised stigma was less common among those with a longer period of diagnosis
- people who experienced stigma in the community were more likely to be women, unmarried, those who had disclosed to other people and those with more lifetime sexual partners
- people who experienced stigma in the healthcare settings were more likely to be women, those reporting more lifetime sexual partners and those with more wealth
- people experienced stigma more commonly in areas where community members perceived higher levels of stigma, but this was not associated with the beliefs of community members of health workers

HIV stigma in the study communities remains unacceptably high and may act as a barrier to HIV prevention and treatment. The final results of the intervention will provide some of the first insights into the impact of stigma on a UTT programme and the impact of a UTT programme on stigma.

Figure 7: Data on stigma in four groups



EMPOWER

PrEP with antiretrovirals could significantly benefit those at risk of HIV infection when used as part of combination prevention. However, like ART, PrEP is unlikely to have a population-level impact if we do not simultaneously address the structural factors that shape HIV risk and HIV treatment outcomes.

IPV makes it difficult for adolescent girls and young women (AGYW) to incorporate prevention methods into their lives and achieve the consistent and high levels of use required for effective HIV prevention. Low adherence is precisely what researchers now believe lay behind the disappointing results of the FACTS 001 trial, which assessed tenofovir gel as HIV prevention for AGYW and included one of the youngest HIV prevention cohorts to date.¹⁰ While the requisite levels of gel use were not achieved in the trial, the intervention did, nevertheless, make headway towards identifying concrete ways to support adherence in young women at risk.¹¹ Empowerment clubs in particular proved acceptable and helpful to trial participants and – within the context of PrEP delivery – clearly hold potential to prevent both HIV and GBV.

Building on this experience, STRIVE partners designed EMPOWER to evaluate the feasibility, acceptability and safety of a comprehensive HIV prevention package for 400 adolescent girls and young women (16–24) in Tanzania (Mwanza) and South Africa (Johannesburg).

EMPOWER aimed to evaluate the feasibility, acceptability and safety of:

- integrating screening and linkage-to-care for GBV and stigma within HIV counselling and testing for AGYW
- supporting PrEP acceptance, effective use and retention in care through adherence clubs that included a four-session empowerment curriculum, compared to counselling and SMS support alone, in HIV-negative AGYW

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The study incorporated screening for GBV within HIV counselling and testing procedures, with a risk assessment for HIV and GBV. Women identified as being at risk of violence and/or HIV positive were linked to services. HIV-negative young women were offered the option of starting PrEP, although they could decline PrEP and remain in the study. Young women who accepted PrEP and declined PrEP were then randomly assigned within each group to attend ‘empowerment clubs’ or receive standard of care.

The empowerment clubs followed a structured curriculum with four modules addressing empowerment, disclosure, communication with partners, discussions about sexual and reproductive health and rights and how to communicate with partners. In addition, stakeholder engagement and community dialogues were critical to generating momentum for the study in the local communities.

The results of the study will be released at the 2018 AIDS conference. The results will provide insight into the feasibility and acceptability of incorporating GBV screening in combination prevention programmes, and the benefits of both empowerment and stigma reduction within HIV prevention programmes.

Summary

In summary, this large body of work has demonstrated that:

- **biomedical interventions** will not achieve the ambitious targets to end AIDS without addressing structural factors that shape HIV risk and undermine uptake and effective use of prevention options
- **structural factors** can be addressed within programmatic time frames with evidence-based interventions
- we can and must **integrate strategies** to address structural factors within HIV biomedical prevention, and evaluate this at scale

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More information: <http://strive.lshtm.ac.uk/>

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STRIVE research consortium

A DFID-funded research programme consortium, STRIVE is led by the London School of Hygiene & Tropical Medicine, with six key research partners in Tanzania, South Africa, India and the USA. STRIVE provides new insights and evidence into how different structural factors – including gender inequality and violence, poor livelihood options, stigma, and problematic alcohol use – influence HIV vulnerability and undermine the effectiveness of the HIV response.

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