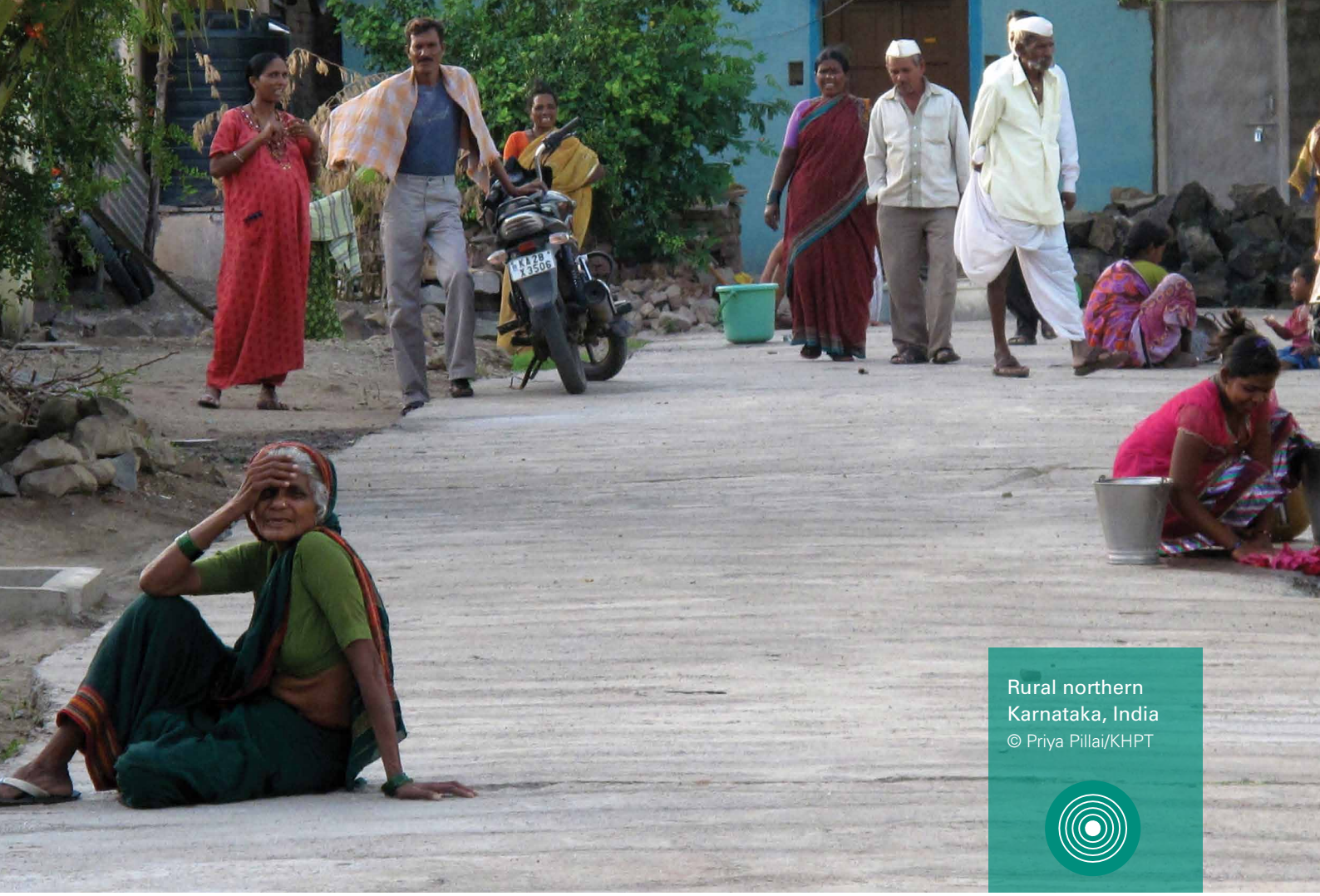
STRIVE
Tackling the structural drivers of HIV

TECHNICAL BRIEF
>> MAY 2019

Addressing the structural drivers of HIV: A STRIVE synthesis



Rural northern Karnataka, India
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Acknowledgements

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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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http://strive.lshtm.ac.uk/

Funder

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University of the Witwatersrand WITS RHI

MITU Mwanza Intervention Trials Unit

Soul City Institute for Social Justice

London School of Hygiene & Tropical Medicine

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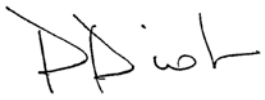
Foreword

While we have made great strides in the HIV response in many countries, the end of AIDS is by no means in sight. Remarkable gains in improving access to treatment have not been matched by an equivalent expansion of primary HIV prevention. Progress has also been uneven and many of society's most vulnerable groups are being left behind due to prejudice, poverty, stigma, and discrimination. We know that biomedical solutions are important but that alone they are insufficient to end the HIV epidemic. Indeed, it is widely recognised that addressing the root causes of HIV and vulnerability requires upstream action on the structural drivers of HIV. Yet people living with HIV, practitioners, and policymakers alike have long struggled with the same question: What can we do in practice to address these structural drivers?

To answer this important question, the STRIVE Research Programme Consortium, with partners in India, Africa, the USA and the UK (London School of Hygiene & Tropical Medicine) began working together in 2011, investigating the structural drivers of the HIV epidemic. This brief draws together the shared learning on what structural drivers are and how they can be addressed. The Consortium partners have worked together over the past eight years to unpick the `structural factors' and find interventions that work to address them. Members of the consortium have often been asked to explain and define the use of the term `structural drivers'; the legal, economic and social factors which shape HIV risk for individuals and wider populations. The STRIVE consortium team describe how structural forces increase the vulnerability of people to HIV infection and challenges that those living with HIV may face with sustaining engagement with HIV care. Importantly, the authors set out evidence of interventions that work to address the structural factors that continue to play such an important part in the continuing HIV epidemic.

This brief could not come at a more important time. Partial successes in the HIV response are giving way to complacency. With indications of stagnating funding and weakening political will, now is the critical moment to reinvigorate our efforts. The evidence shows that progress is possible. By working together to implement the solutions described throughout these pages, we can better address the structural drivers of the HIV epidemic and ensure that people across the world can access the HIV prevention and care services they need.



Peter Piot

Director, London School of Hygiene & Tropical Medicine

Executive summary

The past two decades have seen significant progress in tackling HIV. Behavioural interventions have curbed rates of transmission. The scale up of HIV treatment has not only reduced levels of morbidity and mortality, but also created new opportunities for HIV prevention. Treatment as prevention (TasP) and pre-exposure HIV prophylaxis (PrEP) have already played a part in reducing HIV incidence. However, mathematical modelling suggests that, with the current rate of anti-retroviral therapy (ART) initiation, 49 million more new HIV infections will occur by 2035, and that even at best, with 90 to 95% coverage, treatment will avert only 60% of new infections.

This brief draws on eight years' experience of STRIVE, to describe the ways in which structural drivers – including stigma, poverty, gender inequality and violence, alcohol availability – increase vulnerability to HIV and its spread. STRIVE's research shows that there is a complex relationship connecting HIV with different 'upstream' drivers of vulnerability. The pathways between them provide opportunities and challenges: opportunities from the potentially sustained impact of structural change, and challenges in prioritising and funding services and interventions. Indeed, evidence shows that interventions that seek to tackle these underlying vulnerabilities can achieve impact over programmatic timeframes, changing patterns of vulnerability, increasing access to and demand for biomedical interventions, and improving adherence.

Such structural drivers of HIV shape patterns of HIV vulnerability and limit the impact of HIV programmes. There is also evidence that, with the many successes of existing HIV programmes, those left behind, and not benefiting from current programming, are increasingly likely to be experiencing multiple structural barriers to HIV risk reduction and service access. These populations include, for example, vulnerable adolescents in east and southern Africa, low caste sex workers in Southern India, and women experiencing violence.

Interventions implemented by STRIVE sought to explicitly tackle the underlying vulnerabilities of these groups – seeking not only to tackle their immediate needs, but also to generate rigorous evidence on what combinations and forms of intervention can have most impact. The findings of STRIVE funded trials had mixed results, each of the six rigorous evaluation studies provided strong evidence on the realities and complexities of mounting effective HIV responses. The patterns of vulnerability are nuanced: violence and HIV are linked less by forced sex than by shared risk factors and psychological trauma, for instance, while transactional sex is not only motivated by poverty, but by economic aspirations and desire for love.

STRIVE research showed many impacts: well-designed interventions can impact on community levels of intimate partner violence over programmatic outcomes. Major shifts in education policy or the provision of cash incentives do improve the retention of vulnerable girls in school in India and South Africa. HIV and other, related forms of stigma can be addressed systematically.

Discussions about priorities in HIV often present behaviour, biomedical and structural interventions as being distinct policy choices. But the choice should not be between each, in isolation. At one extreme, evidence shows that a biomedical technology such as TasP or PrEP is not sufficient without behavioural and structural support for consistent ART use. At the other extreme, tackling a structural factor, such as gender inequality, must be integrated with other preventive activities if it is to achieve HIV impact. Often, the optimal HIV response is likely to require a combination of structural, behavioural and biomedical interventions.

Why do we need structural interventions?

The past two decades have seen significant progress in tackling HIV. Behavioural interventions have curbed rates of transmission in many settings. The large-scale provision of condoms and the roll out of male medical circumcision have had a significant impact.[1] Similarly, programmes designed for people selling sex, having multiple partners and/or injecting drugs[2] have reduced HIV incidence and increased marginalised populations' access to services. The scale up of HIV treatment has not only reduced levels of morbidity and mortality, but also created new opportunities for HIV prevention. Treatment as prevention (TasP) and pre-exposure prophylaxis (PrEP) have already contributed to reducing HIV incidence, with an estimated 48% reduction in AIDS-related deaths between 2005 and 2016.[3]

Modelling by Medlock et al. estimate that, with the current rate of anti-retroviral therapy (ART) initiation, 49 million more new HIV infections will occur by 2035.[4] UNAIDS modelling suggests also that even at best, with 90 to 95% coverage, treatment can avert only 60% of new infections.

The pathway to ending AIDS is not simple:

- **Entrenched gender inequalities** continue to limit women's choices about when and with whom they have sex, and result in expectations of masculinity that are at odds with HIV prevention aims.
- **Violence against women and girls** increases their HIV risk and disease progression.
- **Poverty, economic inequality and underdevelopment** undermine the capacity of populations to access and act on HIV prevention messages, and fuel the exchange of sex for money, status and other benefits.
- **Stigmatisation of HIV and some aspects of sexual behaviour** (including sex work and men having sex with men) hamper the delivery of HIV prevention services.
- **Widespread alcohol availability** often fuels unsafe sex, as it inhibits people's decision-making about having sex and use of protection.

Politicians, policy-makers, funders, HIV activists and community members all recognise the importance of such social, economic and cultural drivers of HIV vulnerability, but interventions to address these 'upstream' drivers still tend to be excluded or de-prioritised in resource allocation and investment decision-making. The reasons for this are multiple. At a scientific level, we have limited rigorous evidence on how empowering women, challenging stigma, or reducing heavy alcohol use directly reduce HIV incidence. But this does not mean that there is no evidence. Indeed, a growing body of rigorous evidence demonstrates why and how structural interventions can and should be integrated into HIV programming.

Schoolgirls in northern Karnakata, India
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This brief draws on eight years' experience of STRIVE, to describe the ways in which structural drivers increase vulnerability to HIV and its spread. It gives an overview of key issues to consider when responding to the structural drivers of HIV, using a range of examples from STRIVE to illustrate key concepts. Although we do not have all of the answers, the evidence points to the central importance of including responses to the structural drivers of HIV at the heart of the HIV response, not only to end AIDS and meet the 95-95-95 targets, but also to help achieve many other Sustainable Development Goals (SDGs) by 2030.

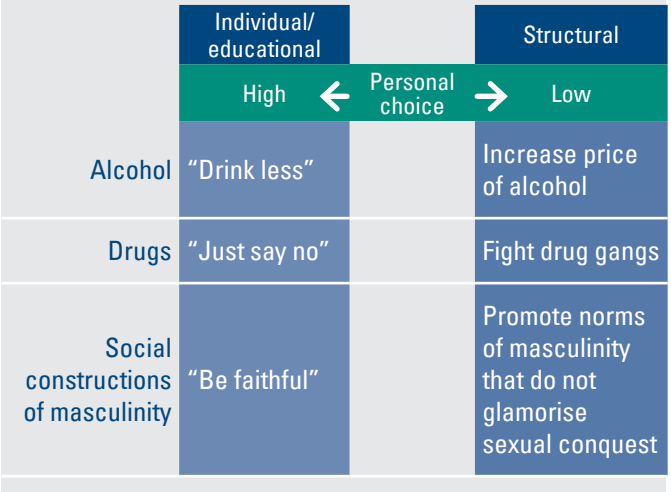
Concepts and definitions

The term 'structural drivers' is used in HIV to describe a range of factors, acting at macro and community levels, that fundamentally shape and influence patterns of HIV risk behaviour, and facilitate or impede an individual or group's ability to access services and/or adhere to treatment.

At the simplest level, the concept of a 'structural intervention' is used to describe a focus on shaping the contexts in which patterns of individual risk behaviour take place, rather than solely focusing on shaping individual behaviour, as shown in Figure 1. This may mean, for example:

- intervening to influence the price or level of availability of alcohol (that in turn will reduce levels of alcohol consumption), rather than educating people about the risks of alcohol use, and efforts that require individual motivation to achieve change
- fighting drug cartels that provide drugs, rather than focusing exclusively on delivering education messages on the need to say no to drugs
- challenging social constructions of masculinity that may encourage concurrent sexual partnerships, rather than focusing solely on behavioural messaging to promote sexual fidelity

Figure 1. Behavioural vs structural interventions



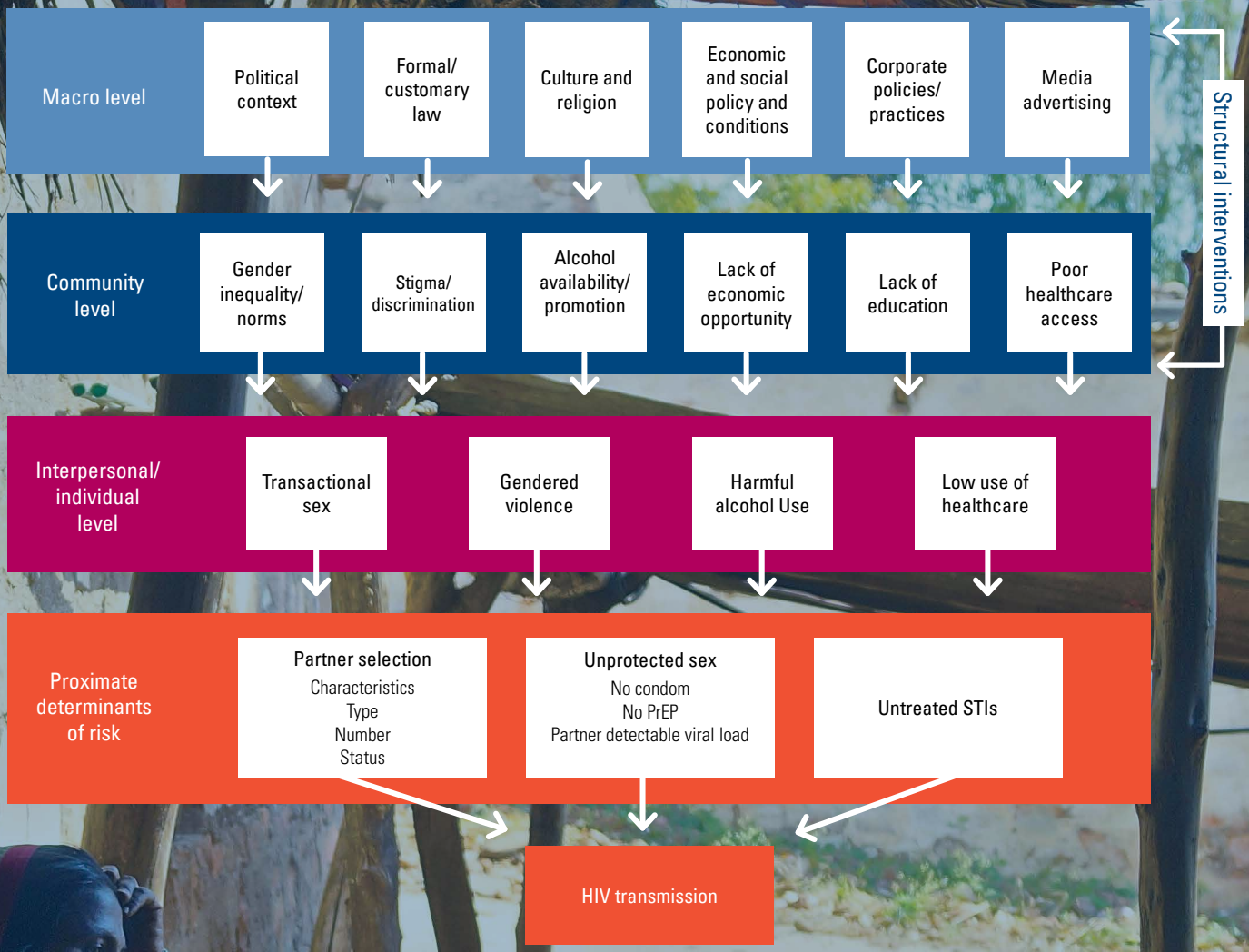
More broadly, the conceptualisation of structural drivers considers the interplay between macro-level factors – such as laws, policies, economic conditions and cultural norms – that shape and influence patterns of behaviour and individual capacities (Figure 2). These macro-level factors are in turn influenced by a range of community-level factors – such as gender inequality and harmful social norms, stigma and discrimination, violence against women and girls, alcohol availability and promotion, limited economic opportunities, lack of education and poor healthcare. Each of these may act as mediators to influence the more proximal determinants of HIV risk – such as patterns of sexual behaviour, likelihood of having a concurrent sexually transmitted infection or ability to access health services. These ultimately all influence the risk of HIV transmission.

Structural interventions aim to alter the social, economic and political contexts that influence the drivers or mediators of HIV. Many structural interventions are intended to alter or mitigate drivers of HIV at the community level, such as tackling socio-economic inequalities, shifting harmful gender norms, preventing gender-based violence, limiting alcohol availability and promotion or confronting HIV-related stigma. By targeting factors that increase people's susceptibility to HIV at a structural level, such interventions have the potential to shift population level distributions of HIV risk behaviour and enable people at risk to benefit from the availability of prevention opportunities, and so have the potential to achieve substantial impacts.[5]

THE INVERSE EQUITY HYPOTHESIS

Evidence shows that with the success of prevention, tackling structural drivers is increasingly important. For example, early early in the epidemic, HIV prevalence was higher in higher socio-economic groups but STRIVE research confirms that, over time, the patterns of vulnerability have changed, with HIV incidence now tending to be higher in lower socio-economic groups. The inverse equity hypothesis, developed by STRIVE researchers, proposes that new interventions will initially reach those of higher socio-economic status and only later reach the poor.[6] A similar pattern is seen in the association between measures of educational attainment and HIV prevalence among young people in seven countries in east and southern Africa.[5]

Figure 2: Conceptual framework mapping relationships between macro and community level structural factors, interpersonal and individual risk factors, proximal determinants of risk and HIV transmission



Village in northern Karnakata, India
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HIV and violence against women and girls

One in three women worldwide will experience physical or sexual violence in her lifetime, with intimate partner violence (IPV) the most common form of violence against women (VAW) globally. Levels of violence vary across countries and within countries (Figures 3 and 4). Population data show that there are hotspots with high prevalence. Prevalence also varies by context; women who sell sex, for instance, are especially at risk, with between 45% and 75% of sex workers globally experiencing violence, according to a systematic review of studies.[7] Growing evidence from sub-Saharan African countries where HIV is widespread, show that many forms of intimate partner violence – physical, sexual and psychological – increase susceptibility to HIV and disease progression among women and girls.[8] Violence and trauma can lead to lower CD4 counts, higher viral loads and lower adherence to prevention and treatment.[9]

Many see violence against women and girls, including IPV, as an intractable problem that will take generations to change. What recent evidence shows, however, is that violence is preventable.[10] Indeed, well-designed programmes can not only have large impacts on levels of violence, but also improve HIV outcomes and benefit other areas of health and wellbeing.[11]

Violence not only compromises women's physical, psychological, sexual and reproductive health,[12] it also undermines their educational attainment, employment and economic productivity.[13] Eliminating violence against women and girls – including harmful practices such as early and forced marriage – would thus empower women across many aspects of their lives as well as reducing HIV risk.

How are IPV and HIV risk associated?

Many have assumed that the association between HIV and IPV is through sexual violence, or forced sex, which may cause genital trauma and a resulting immune response. However, limited evidence exists for this. Women can be infected through rape if a

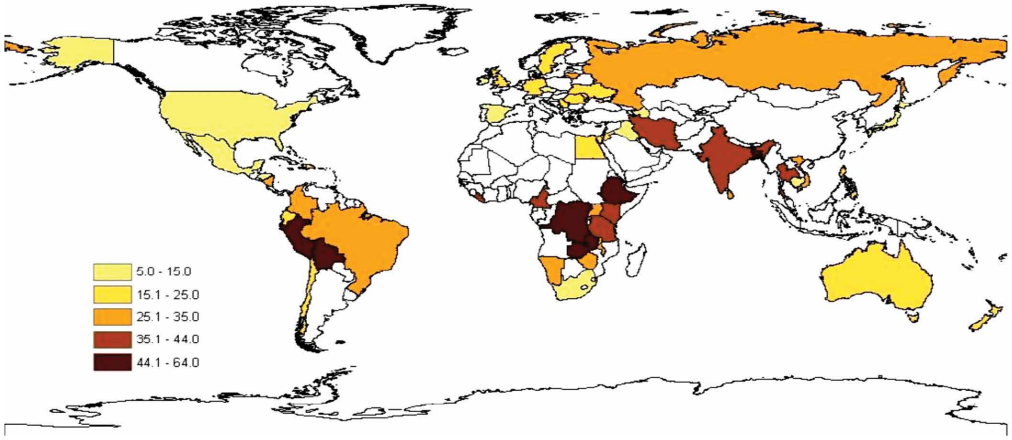


Figure 3: Hotspots for reported violence: the average prevalence of lifetime IPV among ever partnered or married women by country

Source: Preventing HIV by preventing violence: the global prevalence of intimate partner violence against women and its links with HIV infection. Devries K et al (2010). Global Burden of Disease Paper presented at the Vienna AIDS Conference.

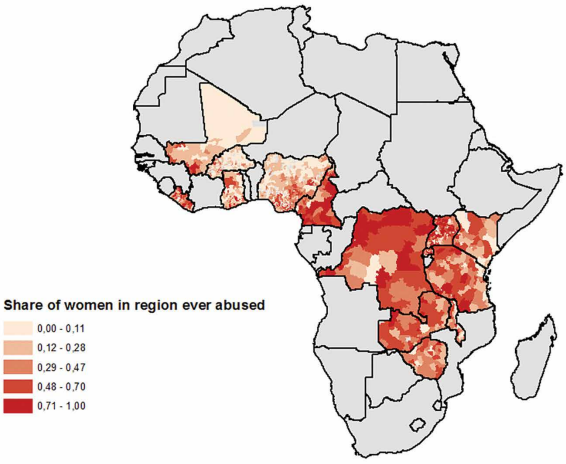


Figure 4: Share of women in sub-Saharan Africa ever abused

Source: Based on data from Cools S and Kotsadam A (2017). Resources and intimate partner violence in sub-Saharan Africa. *World Development*, 95, 211-230.

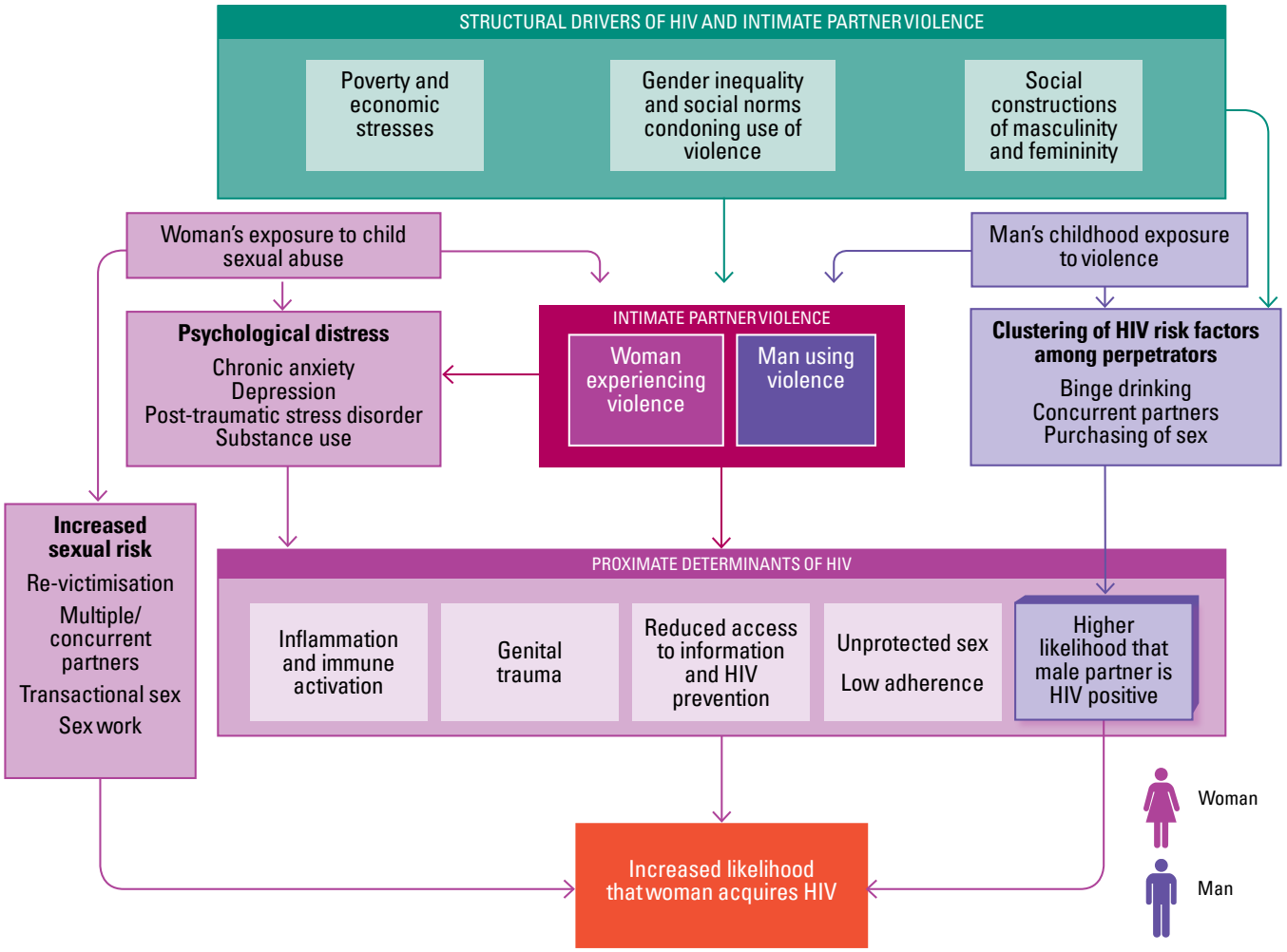
rapist has HIV, but with rare exceptions, studies do not find associations between rates of rape in a population and HIV prevalence rates. Population increases in HIV incidence are likely to occur when rates of rape are very high.[14] At the individual level, more important perhaps than genital trauma, could be the effect of the mental trauma and stress caused by violence. New evidence suggests that physical and emotional abuse can affect women's general immune response.[15] If violence is associated with immune activation in the genital tract, which in turn is known to be associated with increased risk of HIV acquisition, then this may be an important yet relatively unexplored factor that is driving risk.

At the population level also, HIV and IPV share common risk factors. Poverty, economic stress, gender inequality, social norms and rigid constructions of masculinity and femininity – condoning men's use of violence within relationships, sexual infidelity and heavy alcohol – have all been shown to be associated independently with HIV and with IPV. These shared, upstream risk factors may, in part, explain associations between IPV and HIV. By intervening on these upstream drivers, benefits to both HIV and violence could potentially be achieved.

In addition to these direct pathways, violence in childhood, especially sexual abuse, may constitute an important indirect pathway. Although not inevitable, men who have witnessed violence as children are more likely themselves to perpetrate violence. Men and women who have been sexually abused as children are more likely to engage in a range of higher risk behaviours, including having multiple partners, engaging in transactional sex and substance use.[16]

An important factor underpinning the links between IPV and HIV is that men who are violent share a clustering of risk behaviours that put them at increased risk of HIV and sexually transmitted infections. These include having multiple sexual partners, abusing alcohol and other substances, engaging in anal sex and visiting sex workers.[17] This clustering of risk behaviours, driven by childhood experiences and social norms, means that men and boys who abuse women and girls are themselves more likely to have contracted HIV.[18] This, in turn, puts their partners at risk of HIV acquisition.

Figure 5: Potential pathways between IPV and women's risk of HIV acquisition



These complex pathways are important to understand. An unevidenced response would, for example, focus predominantly on forced sex. The centrality of gender inequality and gender norms condoning male dominance and female subordination provides opportunities for combined intervention activities that seek to tackle both violence against women and HIV. Instead, the evidence highlights the potential value of intervening on shared risk factors – such as heavy alcohol use – and the potential importance of getting better evidence on whether chronic stress may exacerbate HIV susceptibility among women.

In addition, violence, and the fear of violence, may have a substantial impact on HIV behaviours. Fear of violence may discourage women from getting tested for HIV or disclosing their status to their partner. This may in turn increase the length of time it takes for them to access care. Evidence confirms that women living in violent partnerships have lower levels of ART adherence and viral suppression.[8]

It is possible to reduce levels of VAW and improve HIV outcomes

Several proven intervention models, including community-based programmes, have been evaluated with rigorous cluster randomised trials.

In 2006, a cluster randomised controlled trial (the Intervention with Microfinance for AIDS & Gender Equity – IMAGE) in rural South Africa combined a group-based microfinance intervention with a ten-session participatory gender and HIV training curriculum for loan participants. The evaluation showed that, over a two-year period, levels of physical and/or sexual partner violence experienced by participants in the past year were reduced by 55%.[19] http://strive.lshtm.ac.uk/resources/image-intervention-micro-finance-aids-and-gender-equity

More recently, the Safe Homes And Respect for Everyone Project, implemented from 2005 to 2009 in Rakai, Uganda, mobilised communities to tackle IPV as part of integrated violence and HIV prevention programming, The intervention included community mobilisation activities and health service interventions. Screening and responses to violence were included in HIV testing and counselling services. A cluster-randomised trial found that the intervention led to significant reductions both in women's experience of IPV and in HIV incidence.[20]

STRIVE partners and the research consortium have also generated considerable evidence on the impact of interventions addressing VAW and HIV risk.

SASA!

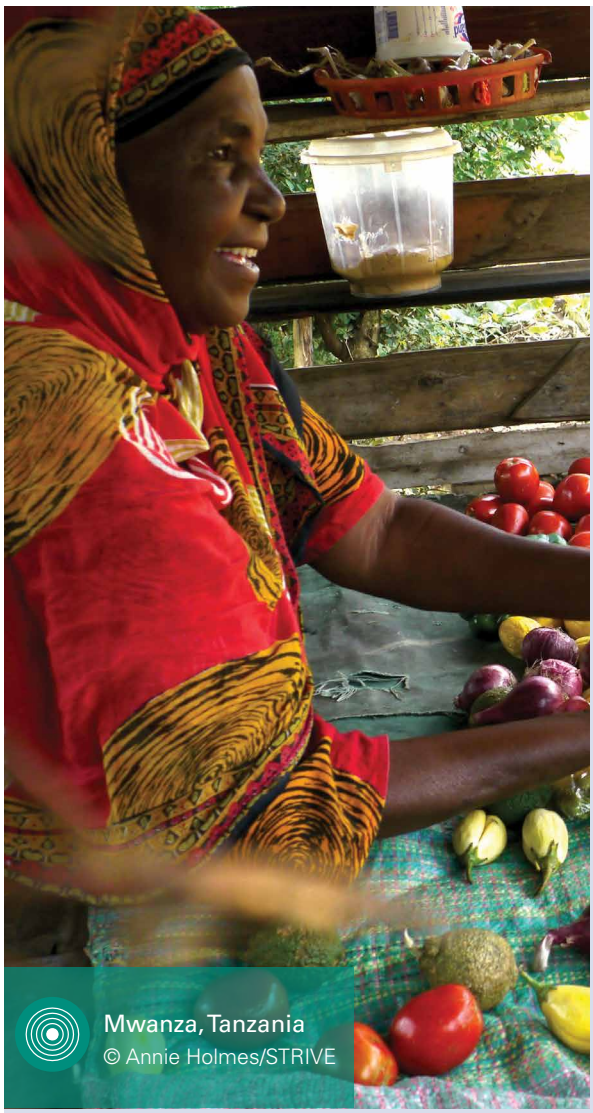
This programme, developed in Kampala by Raising Voices and evaluated by STRIVE researchers from the London School of Hygiene & Tropical Medicine, uses a systematic process for community mobilisation to prevent violence against women and HIV, and to address gender inequality as a structural driver of HIV.

The SASA! study, a cluster randomised controlled trial, assessed the programme's impact on community levels of past year physical partner violence against women, HIV-related behaviours, attitudes towards gender roles and norms, and community responses to violence against women. The study found that, over two and a half years, the intervention led to significant community level impacts, with:

- significant reductions in the proportion of women in the community supporting wife beating
- a 58% reduction in past year occurrence of physical violence among women with a history of violence at a community level
- a significant reduction in the percentage of men in the community reporting that they had concurrent sexual partners
- an increase in the percentage of women in the community reporting that they are able to refuse sex

For more information: http://strive.lshtm.ac.uk/projects/sasa-act-now-against-violence

Taking SASA! messages to the community, Kampala, Uganda
© Annie Holmes/STRIVE



Mwanza, Tanzania
© Annie Holmes/STRIVE

MAISHA

Implemented in Mwanza, Tanzania, as part of STRIVE, the MAISHA study explored whether an adapted IMAGE intervention, may similarly impact on levels of IPV in Tanzania. As in the original IMAGE trial, women attending micro-finance groups were offered a ten-session participatory training programme, with the curriculum seeking to increase awareness about gender inequality, prevent partner violence, improve communication and promote healthy relationships.

When compared to women who were part of the micro-finance groups alone, the Maisha trial showed that the delivery of a combined micro-finance and empowerment intervention reduced women's experience of physical violence from their partners in the past year by a third. While the impact on sexual violence was limited, attitudes towards violence and norms around male authority shifted among women who received the intervention. This included a reduction in the number of women who expressed attitudes accepting of IPV. In-depth interviews with a small sub-set of the women who received the intervention suggest that intervention participants had improved self-confidence, in part due to their acquired skills in communication and conflict resolution.

For more information: http://strive.lshtm.ac.uk/projects/maisha-microfinance-and-gender-training-reduce-violence-against-women

Evidence brief: Preventing intimate partner violence among women in Mwanza, Tanzania: Findings from the MAISHA cluster-randomised controlled trial

SAMVEDANA PLUS

Despite the successes of interventions such as MAISHA and SASA! in reducing partner violence, Samvedana Plus demonstrated the complexities of trying to reduce violence against women with multiple vulnerabilities. Previous interventions in India successfully reduced violence against female sex workers by 'non-intimate' partners such as clients and police, but addressing violence by their non-paying intimate partners (husband, boyfriend) has been challenging.[21] As violence is strongly associated with HIV-infection[22] and risks such as reduced condom use,[23] STRIVE partner Karnataka Health Promotion Trust (KHPT) developed Samvedana Plus. This multi-level structural intervention aimed to reduce risk and vulnerability among female sex workers by reducing partner violence and promoting consistent condom use within intimate relationships in rural South India.

Complex social norms around intimate relationships proved challenging. Protecting their relationships was of utmost importance to the sex workers in this trial, and so they were unlikely to assert themselves against violence and insist on condoms. However, the trial did find lower acceptance of IPV, and higher levels of self-protection strategies and solidarity among sex workers around the issue of IPV in the intervention group.

For more information: http://strive.lshtm.ac.uk/projects/samvedana-plus-reducing-violence-and-increasing-condom-use-intimate-partnerships-female-sex

Evidence brief: Samvedana Plus: Reducing violence and increasing condom use in the intimate partnerships of female sex workers in Bagalkote District, North Karnataka, South India

Bagalkote District, northern Karnataka, India © NP Jayan/KHPT

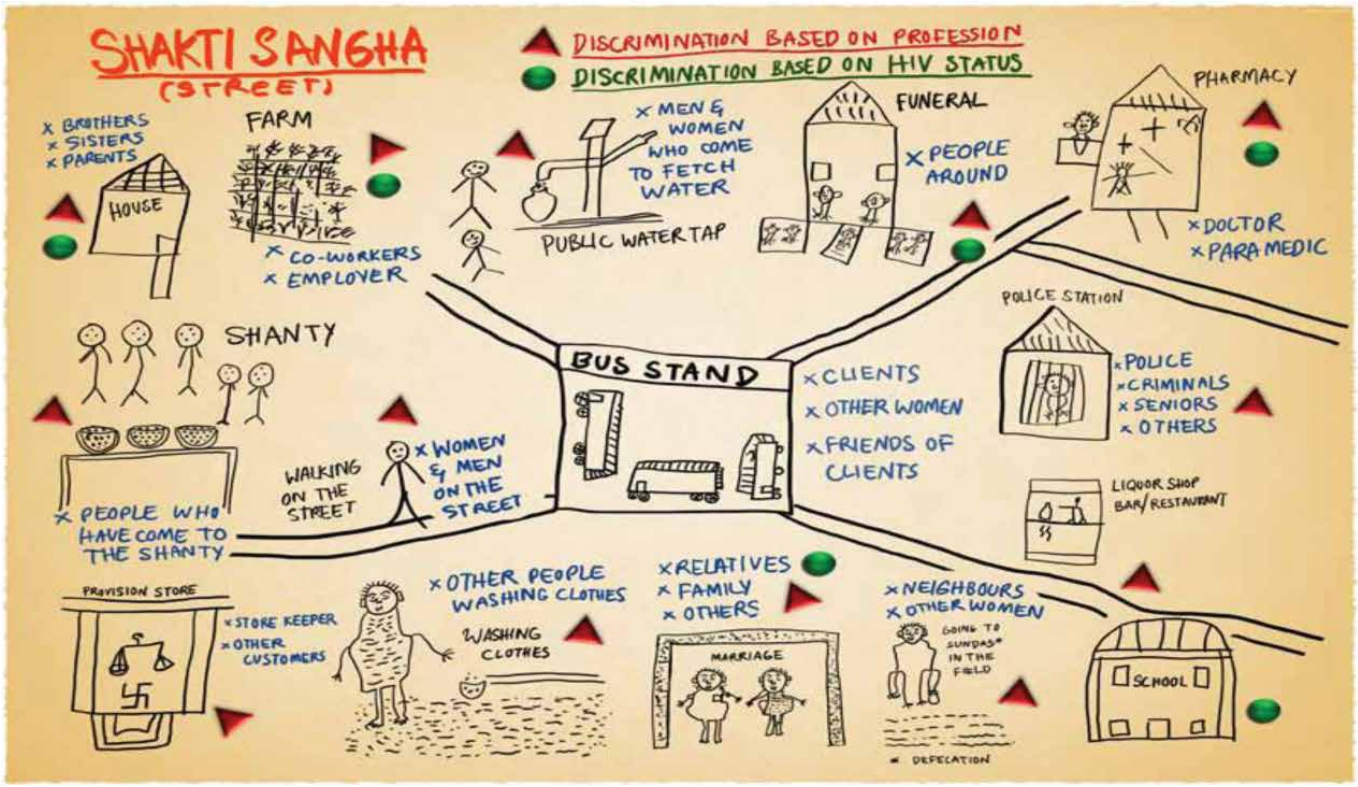
HIV-related stigma

Stigma is a critical structural driver of HIV, as well as an important factor influencing health and development broadly. Firstly, the experience of stigma is an infringement on the human right to live a life free from discrimination, as enshrined in the Universal Declaration of Human Rights.[24] Secondly, stigma influences population health outcomes by worsening or impeding a number of processes that exacerbate poor health, including: social relationships, the availability of resources, stress, and psychological and behavioural responses. And lastly, recent research has documented the negative impact of internalised and experienced stigma on various health outcomes across a range of diseases.[25]

Almost two decades of research have demonstrated that HIV-related stigma and discrimination hamper efforts to prevent new HIV infections and engage people living with HIV in care and treatment.[26] As a result, there is now a general consensus that interventions to reduce HIV-related stigma and discrimination are crucial to the success of existing and emerging biomedical prevention technologies. As such, the importance of stigma-reduction has been noted by influential bilateral and multi-lateral organisations.[27]

The stigmatisation process is enabled by underlying social, political and economic powers that seek to devalue some groups to create superiority in others by turning 'difference' into inequity, leading to social exclusion of individuals or groups. The recognition of these structural influencers is critical for our thinking around structural interventions to reduce stigma and discrimination related to HIV and other stigmatised health conditions.

Beginning in 2009, STRIVE and ICRW began a process to articulate the stigmatisation process in the context of HIV and develop and standardise a set of measures to capture key domains that are amenable to intervention.[28] The measures developed were incorporated into the standard questionnaire of the Demographic and Health Survey in 2015 and the WHO's biobehavioural survey guidelines for populations at risk of HIV in 2018. They also formed the basis of measures included in the HPTN 071



Understanding the problem using community mapping with sex workers, northern Karnataka, India © KHPT

THE HEALTH STIGMA AND DISCRIMINATION FRAMEWORK

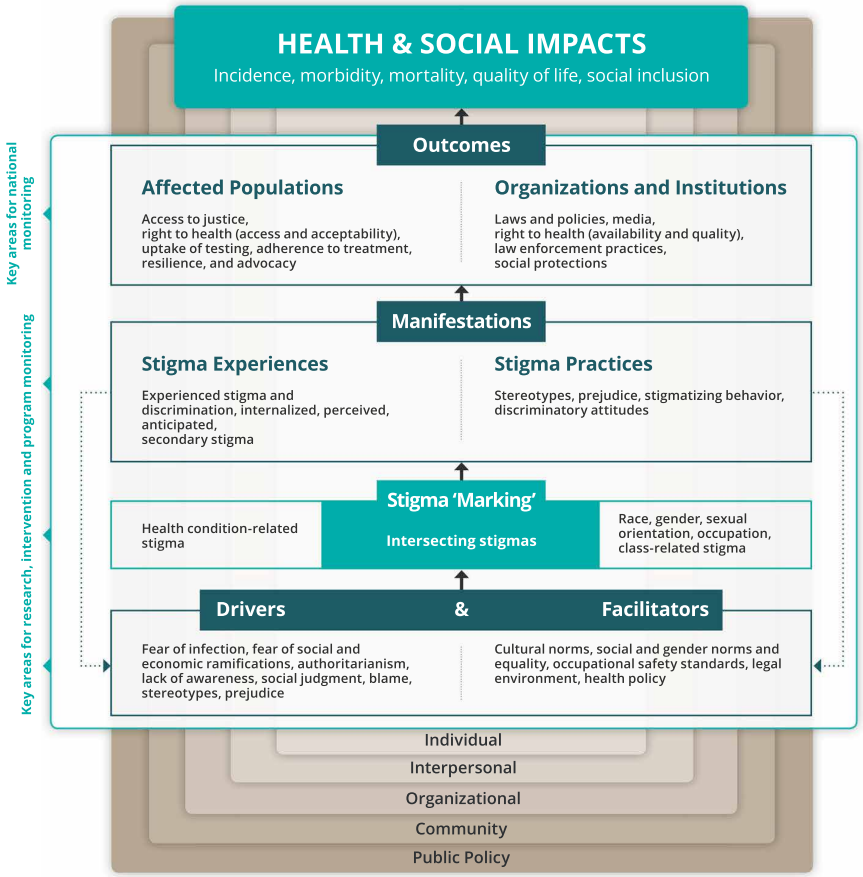


Figure 6: The Health Stigma and Discrimination Framework draws on the previous HIV-related stigma framework

Source: Stangl et al. 2019. Reproduced with permission.

(PopART) trial[29] and the EMPOWER trial, to assess the influence of stigma on universal testing and treatment and PrEP uptake and use, respectively.

The Global HIV Stigma and Discrimination Reduction Framework also informed a systematic review of HIV stigma reduction interventions that identified and compared successful interventions – including those aimed at achieving population-level impact – that are available and ready to be scaled up[30] as well as a systematic review of the influence of human rights programmes on HIV outcomes.[31] The need to address intersectional stigma emerged as key to reducing HIV stigma and discrimination and improving health outcomes. For example, in contexts where the epidemic is concentrated among people who inject drugs, it is important to address both HIV stigma and stigma specific to drug use and drug addiction. Another important finding was the importance of intervening at multiple levels, for example with institutions, communities and individuals, for greatest impact.

Lastly, the initial STRIVE framework informed a new framework that examines health-related stigma and discrimination more broadly in an effort to give conceptual organisation to diverse lines of research that are underway across disciplines (see Figure 6). A common framework will, it is hoped, enable the field of health stigma research to identify commonalities and differences in stigma processes across diseases and amplify our collective ability to respond effectively and at scale to this major driver of poor health outcomes globally.[32] Such research should inform needed programmatic and policy efforts to support the achievement of the SDGs.

Technical brief: HIV-related stigma and discrimination

Measurement brief: Measuring HIV stigma and discrimination

Adolescent girls and young women

In 2016, 2.1 million adolescents aged between 10 and 19 were living with HIV globally.[33] Of these 84% were in sub-Saharan Africa.[34] In this region, adolescent girls are twice as likely as boys to acquire HIV.[22] This difference between adolescent girls and boys is greatest in southern and east Africa where girls account for 78% of new infections in adolescents.[35] Outside sub-Saharan Africa, south Asia has the highest number of adolescents living with HIV (130,000), followed by east Asia and the Pacific (110,000).[26] In both continents, it is critical to consider what combination of interventions can best address the structural factors exacerbating the risk of HIV among young women.

Current evidence suggests that adolescent girls' high risk of HIV is driven by a combination of factors. Gender inequality, stigma and discrimination, alcohol availability, lack of economic opportunity, lack of secondary education and poor healthcare access are all structural drivers that may influence when girls start sex, the number of sexual partners they have, and whether or not they are able to access contraceptive and HIV prevention.

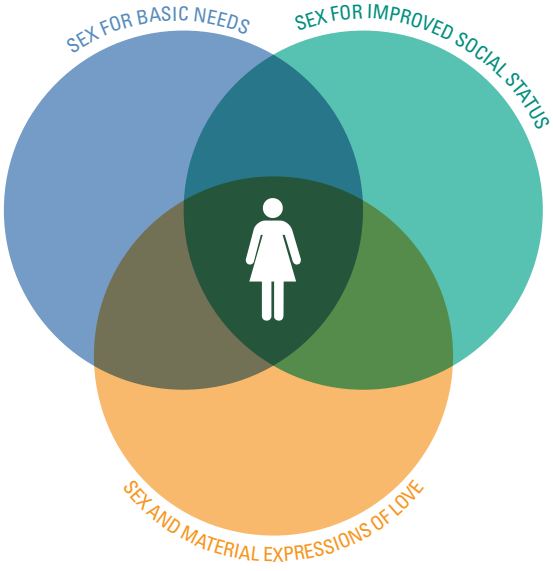
At the macro-level, we see the impact on HIV risk of political, legal, cultural, religious and economic factors, as well as the social influence of the media. While these factors serve as drivers for all age groups, the impact on young people is exacerbated by their youth and relatively low social and economic position within society. Young people's experiences during adolescence also lay the foundation for adulthood and define trajectories for future generations.[36]

Much of STRIVE's research has focused on addressing the vulnerability of adolescent girls and young women to HIV because this population is highly vulnerable to HIV and remains a crucial challenge for reducing HIV incidence in many contexts.

TRANSACTIONAL SEX

Transactional sexual relationships – non-commercial, non-marital sexual relationships motivated by the implicit assumption that sex is exchanged for material goods or other benefits – are an important driver of risk for adolescent girls in sub-Saharan Africa. At a structural level, gender inequality underpins the practice, sustained by the gender norm that men should provide financial and material support to their sexual partners. STRIVE research shows that there are three underlying and interrelated motivations[37] that explain women's participation in transactional sex relationships: to meet basic needs, gain social status or as an expression of love.[38] Despite evidence pointing to varied and overlapping motivations for engaging in transactional sex, programming may implicitly assume that poverty and lack of agency are the main drivers of transactional sex, when in practise the motivations may be more multiple or complex.[39]

Figure 7: Three factors motivating young women to practise transactional sex



Women's agency

Women's perceived position in transactional sex relationships can vary from powerless to powerful. Programmes must begin by critically assessing how women see themselves in these relationships.

Context

Transactional sex can take place in contexts ranging from those marked by uniform poverty to high levels of inequality. Programming should be responsive and relevant to the context.

Interventions work for adolescents

What do we know about the effectiveness of interventions to address structural drivers of HIV for adolescents? Much lip service is paid to creating enabling environments to tackle adolescent risk, but what does that mean in practice? A review,[40] conducted by STRIVE, compiled evidence from rigorous evaluations of interventions that sought to improve school attendance (11), reduce poverty (7), reduce gender-based violence (5) and shift negative social norms (4). Figure 8 illustrates interventions that effectively impacted on structural drivers (education, poverty, social norms, gender-based violence), sexual behaviour and clinical outcomes.

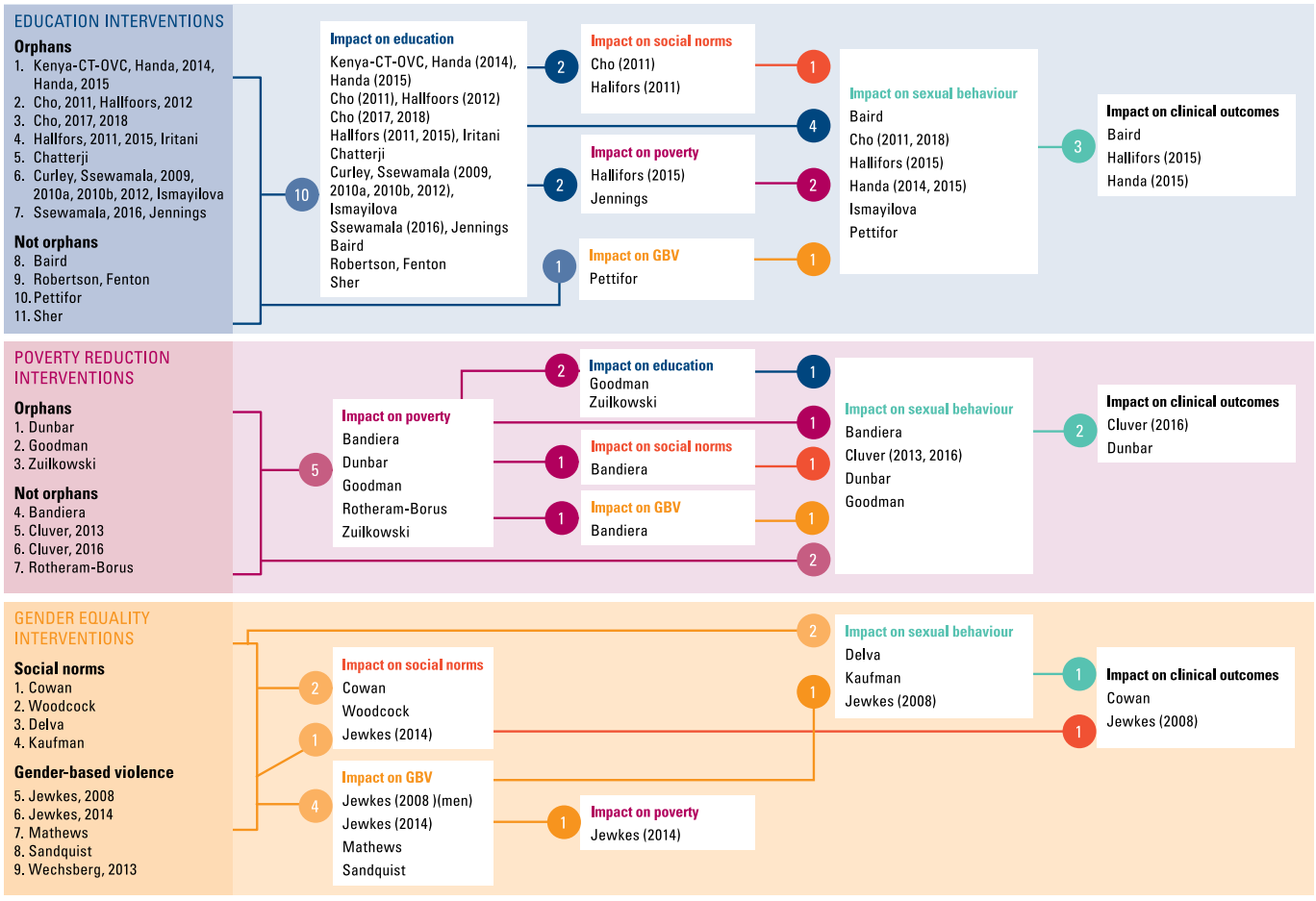
Education

The case for increasing educational enrolment is relatively strong. Current evidence suggests that each additional year of schooling reduces the risk of HIV,[41] an effect which in some studies is particularly pronounced for young women.[42] Similarly, higher sexual risk behaviours are associated with being out-of-school among young people in east and southern Africa.[43] In addition, improving school attendance and educational attainment can impact on future socio-economic status; socio-cognitive factors including knowledge, attitudes, self-esteem and self-efficacy; social networks including sexual partnering; personal aspirations; and exposure to HIV prevention education.[44] These factors influence sexual risk behaviours and the adoption of HIV prevention options.[45] There is recognition of the potential value of structural interventions that aim to improve school enrolment, school attendance (as a predictor of school drop-out), secondary school completion and educational attainment as a means to reduce the risk of HIV, particularly through school-based interventions.[46]

Poverty

Poverty can impact on HIV risk. When households are unable to meet the costs of food, education and healthcare, this in turn influences young peoples' school attendance, health and wellbeing and engagement in gender-inequitable relationships.[47] Youth poverty may similarly be an economic motivator of age-disparate and transactional sexual relationships.[48] A phylogenetic study in a hyperendemic area of South Africa highlighted the extent to which sexual partnering between young women and older men is driving new HIV infections among young women.[49] Specific attention has been paid to the negative impact of household poverty on sexual risk behaviour for orphaned youth and the potential of combined cash and support interventions to reduce risk.[50]

Figure 8: Review of interventions with multiple benefits for adolescents



There is increasing interest in interventions that aim to alleviate poverty among groups for whom it has been shown to increase the risk of HIV. The UNAIDS fast-track target aims to strengthen HIV-sensitive national social and child protection systems to reach 75% of people living with or at risk of HIV.[51] Social protection interventions to mitigate the impact of poverty include conditional and unconditional cash transfer programmes, income generation programmes such as vocational training and work generation and microfinance programmes as standalone schemes or integrated within health programmes.[52]

Girls, education and marriage in South India

The HIV field has focused significant and necessary attention on adolescent girls in east and southern Africa, but poverty, gender inequality and gendered social norms are important drivers of HIV risk on other continents too. For example, in rural India, a range of structural and norms-based factors shape levels of under-age marriage, early sexual debut and school dropout. Girls from scheduled castes and tribes, if not supported to stay in school, may be expected to marry early or migrate to engage in sex work in neighbouring cities. Poverty and limited livelihood options mean that girls are needed at home or in the labour market to support household income, and therefore withdraw from school. In accordance with current social norms in these communities, many girls marry under the legal age of 18 and withdraw from education to fulfil new roles as wives and mothers. In this context, 'good parenting' means ensuring a girl's sexual purity and marriageability as well as her family's reputation. This in turn leads to restricted mobility for girls post-menarche.

In India, STRIVE partners developed and evaluated two interventions to understand and address these factors, Parivartan for Girls and Samata.

PARIVARTAN FOR GIRLS

Parivartan is a sports-based programme with adolescent girls aged 12 to 16 in a slum community in Mumbai. The evaluation, by STRIVE partner the International Centre for Research on Women – Asia Regional Office (ICRW-Asia) with London School of Hygiene & Tropical Medicine, sought to assess whether the programme led to shifts in the norms that restrict the public mobility of post-menarche girls, constrain their education and future options and reinforce gender inequality. Social norms theory was used to shape this girl-centric programme and to analyse findings. As a demonstration project, Parivartan for Girls yielded valuable lessons for practice. The evaluation found that:

- sport provides a feasible platform for addressing gender norms, even in a slum community where girls have very few role models, aspirations for careers or sense of collective power
- sport alone is not sufficient; the programme must involve a carefully designed process of learning and reflection on social expectations and personal aspirations
- recruiting and training educated young women from within the community as mentors to implement the programme provided role models parents could relate to; and
- fostering collective agency can be effective in cultivating the individual agency of girls and young women to contest restrictive social norms.

For more information: http://strive.lshtm.ac.uk/projects/parivartan-girls

Evidence brief: Parivartan for Girls: Addressing restrictive gender norms

Mumbai, India © ICRW-Asia

SAMATA

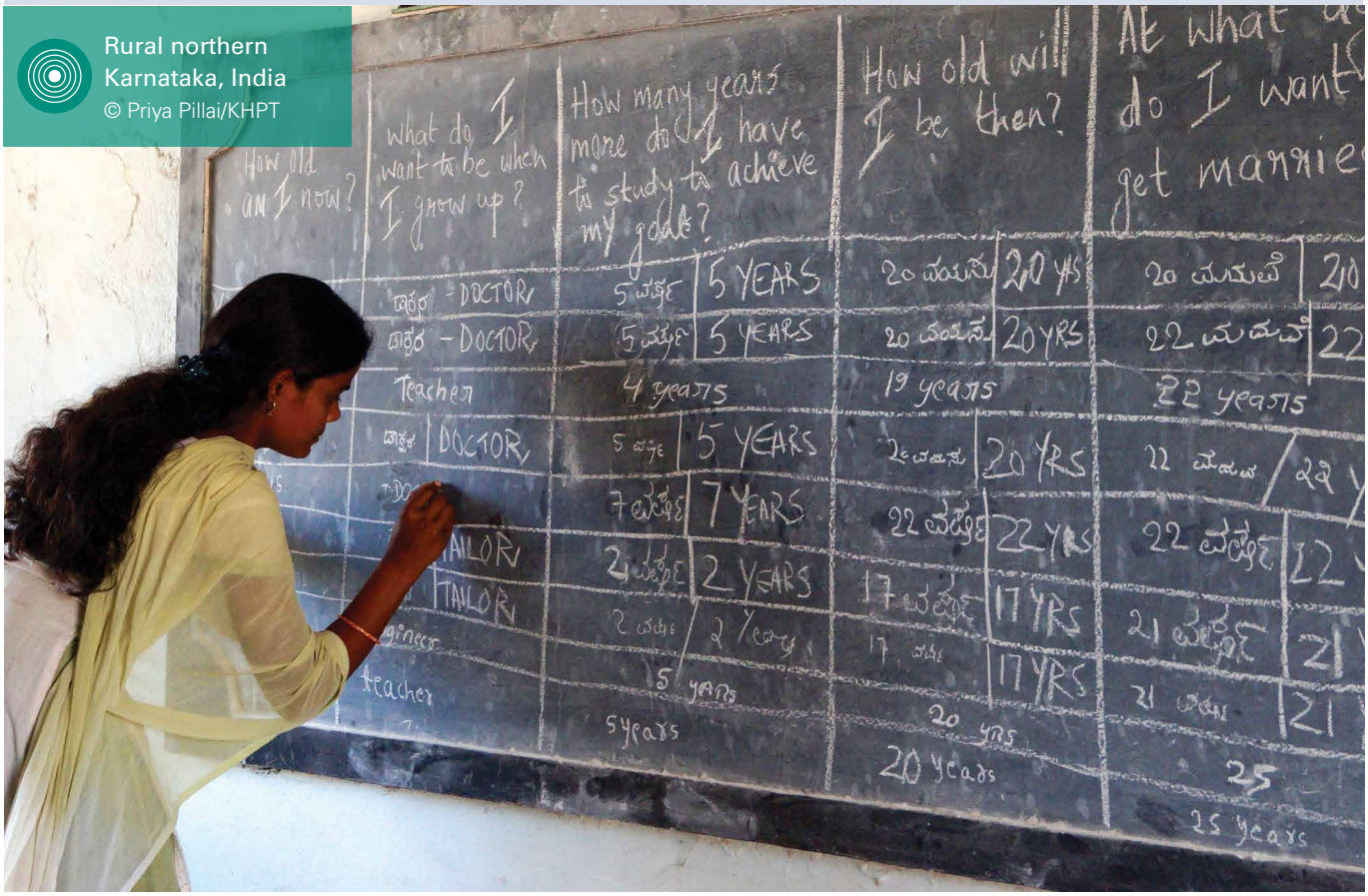
The Samata trial assessed the impact of a multi-level structural and norms-based intervention developed by KHPT to improve the quality of life of marginalised adolescent girls in rural south India, by supporting entry and retention in secondary school, thereby delaying marriage and entry into sex work. The intervention coincided with sweeping (and positive) secular changes in secondary school retention due to government-led initiatives across the study districts. Nevertheless, Samata enhanced girls' school enrolment and completion rates in one of the two districts and had positive impacts on the girls in the intervention villages including:

- greater self-esteem about school completion and more confidence for their future
- improved relationships with parents and fewer restrictions on their mobility
- better negotiation skills and a more questioning attitude
- a shift in role model to family members or neighbours for their educational achievement and encouragement

Among a wealth of conceptual and programmatic learning, qualitative research highlighted the need for more focused and targeted interventions to reach girls from marginalised communities.

For more information: http://strive.lshtm.ac.uk/projects/samata-keeping-girls-secondary-school

Samata evidence brief: Samata intervention to increase secondary school completion and reduce child marriage among adolescent girls from marginalised communities



Rural northern Karnataka, India
© Priya Pillai/KHPT

Biomedical interventions

HIV programming has tended to be vertically driven and disease specific. Since 2005, HIV prevention spending has been further concentrated on biomedical strategies such as the UNAIDS 95-95-95 strategy and medical male circumcision. These strategies have contributed to an impressive 48% drop in AIDS-related deaths between 2005 and 2016.[53] During the same time period, however, AIDS-related deaths among adolescents and young people increased by 50%.[54] Importantly, in hyperendemic regions, such as KwaZulu-Natal in South Africa, there has been no reduction in the incidence rate of HIV in young women in the past decade despite the biggest anti-retroviral therapy programme in the world.

The impact at the population level of treatment as prevention, for example, has been constrained by the realities of people's lives, with adherence challenges meaning that treatment may be less consistently protective than estimated. Structural factors can, however, be addressed within programmatic time frames with evidence-based interventions. In particular, strategies to address structural factors must be integrated within HIV biomedical programming.

Structural barriers limit the potential of biomedical prevention

Discussions about priorities in HIV often present behaviour, biomedical and structural interventions as being distinct policy choices. But the choice should not be between each, in isolation. At one extreme, evidence shows that a biomedical technology such as TasP or PrEP is not sufficient without behavioural and structural support for consistent ART use. At the other extreme, tackling a structural factor, such as gender inequality, must be integrated with other preventive activities if it is to achieve HIV impact. Often, the optimal HIV response is likely to require a combination of structural, behavioural and biomedical interventions.

STRIVE research to inform such integration has included:

- A framework to inform intervention design
- Work, with a network of others, on a framework for addressing stigma
- Piloting of a combined intervention in South Africa and Tanzania, to support adolescent girls and young women to adopt PrEP

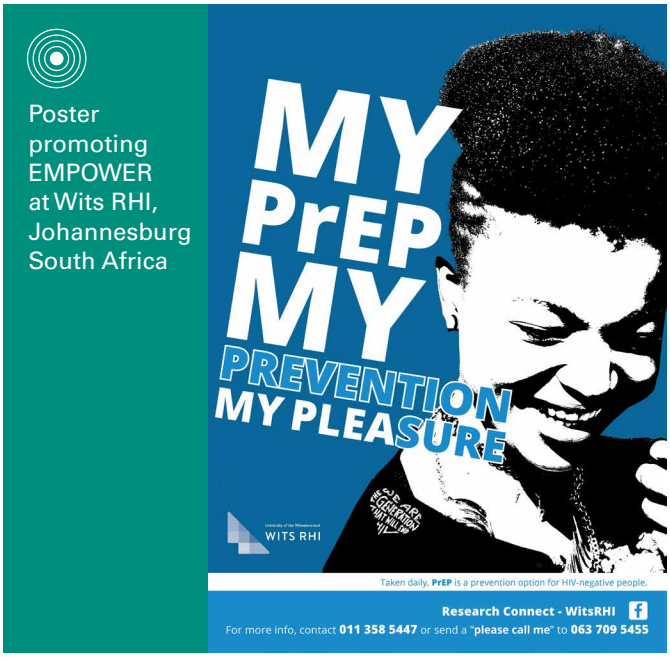
The prevention cascade

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 process of identifying, testing, providing and sustaining treatment for people living with HIV – the 'treatment cascade'. This cascade suggests that even with highly efficacious interventions such as anti-retroviral treatment, the overall benefit is the combination of success of each step. The prevention cascade framework is similarly useful as a means to identify elements that are critical to effective HIV prevention. For any priority population that would benefit from the use of a particular biological prevention method, the core steps of the cascade are:

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

To inform the conceptualisation of the cascade as illustrated in Figure 9, STRIVE reviewed existing evidence[55] on the ways in which structural factors may undermine uptake and effective use of anti-retroviral drugs as treatment, with knock-on effects for secondary prevention.

The prevention cascade, like the treatment cascade, is an important tool to conceptualise what combination of structural, behavioural and biomedical interventions are needed to prevent HIV. How do we try to operationalise this thinking in practice? The EMPOWER intervention was an attempt to do this.



Poster promoting EMPOWER at Wits RHI, Johannesburg South Africa

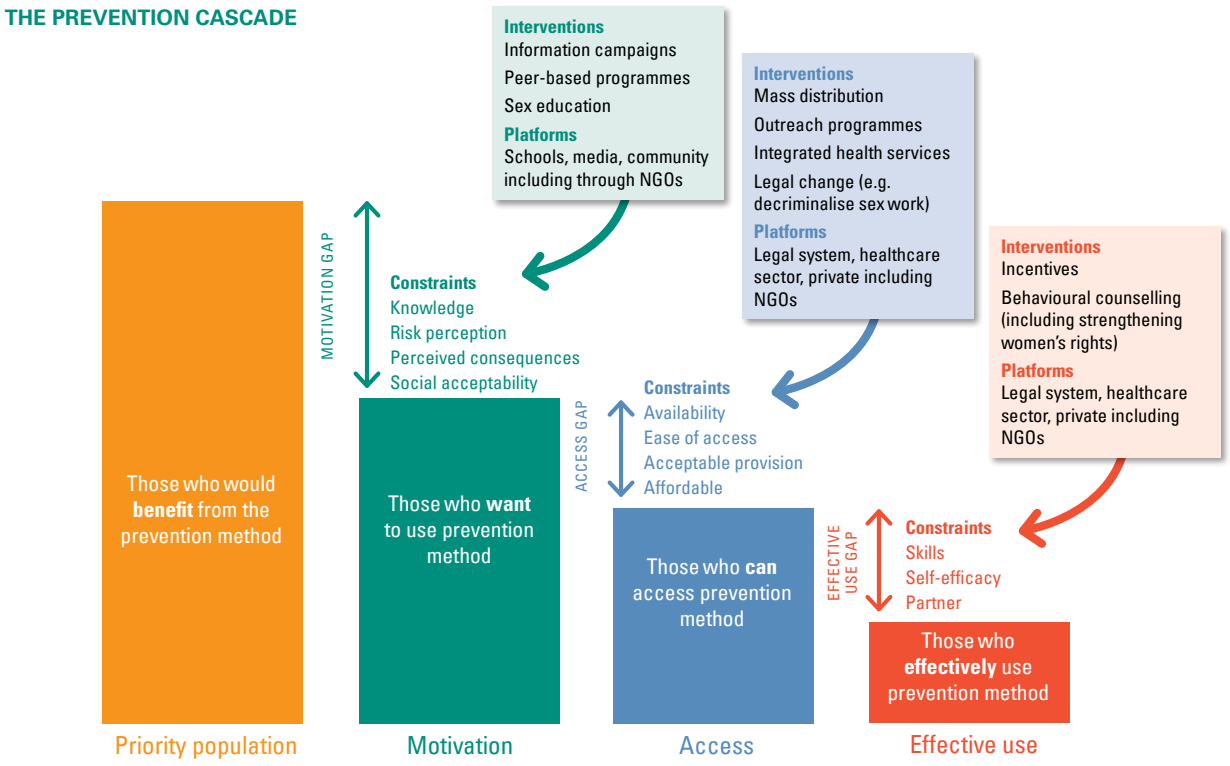


Figure 9: The example of adolescent girls and young women in sub-Saharan Africa

EMPOWER

Building on in-depth work to understand the challenges that young women face in east and southern Africa, STRIVE researchers from the University of Witwatersrand Reproductive Health and HIV Institute (Wits RHI), MITU and ICRW developed a scalable health-sector intervention. They incorporated several novel components within the context of adolescent and youth-friendly services, and tested its feasibility, acceptance and safety in Johannesburg, South Africa, and Mwanza, Tanzania. The intervention included:

- provision of daily oral PrEP to HIV-negative young women within the context of a comprehensive sexual and reproductive health package
- integrated screening and linkage-to-care for those who had experienced lifetime gender-based violence
- supportive interventions such as counselling
- monthly empowerment clubs for half the cohort

Findings showed that:

- lifetime experience of gender-based violence was already high among adolescent girls and young women in these two settings
- integrating gender-based violence screening into HIV counselling and testing services is feasible and acceptable to adolescent girls and young women
- it is possible to deliver PrEP to adolescent girls and young women as part of a scalable combination HIV prevention programme that couches adherence support in an 'empowerment' framework

Evidence for these novel approaches could inform national PrEP programmes in the region. While the onus for preventing violence ultimately rests with perpetrators, young women would nonetheless benefit from being equipped with skills and resources that enable them to address or even avoid unhealthy, controlling and violent relationships. Given the multiple points of overlap between the epidemics of HIV and violence in this region, it makes sense from a programmatic and public health point of view to offer violence interventions alongside PrEP delivery. But importantly, it also makes sense to young women themselves, who are acutely aware of their HIV risk and highly motivated to protect their health and their future using new forms of HIV prevention that they can control.

For more information: http://strive.lshtm.ac.uk/projects/empower

Evidence brief: The EMPOWER study: An evaluation of a combination HIV prevention intervention including oral PrEP for adolescent girls and young women in South Africa and Tanzania

Development synergies and co-financing

The Sustainable Development Goals (SDGs) challenge the world to make progress on 17 interconnected goals by 2030. Many of the structural drivers of HIV – including poverty and economic inequality, unlimited alcohol availability, stigma and discrimination, exposures to violence in childhood, gender inequality and violence against women – are targets included in the global goals agenda.

Interventions that impact on such factors have the potential to reduce HIV risk and/or facilitate access to HIV programming. These synergies – where by addressing one issue, a range of positive development outcomes are achieved – provide new opportunities for investments that can help deliver multiple developments and support progress on multiple SDGs. This type of 'system' thinking is an antidote to the vertical and disease-specific strategies that have largely defined the HIV field for many decades. It also shares common cause with the 2030 Agenda for Sustainable Development, which explicitly acknowledges the many interconnections between different dimensions of sustainable development.

The SDGs as a framework to tackle the structural drivers of HIV

Policies in several sectors other than health have the potential to reduce HIV risk and increase the uptake of HIV services. Similarly, HIV interventions can achieve multiple downstream socio-economic impacts. There is mounting evidence that a range of interventions can deliver multiple benefits. For example:

- **Conditional cash transfers** to keep girls in school and educational reforms that increase enrolment in secondary schooling have been found to have a significant and sizeable impact on HIV risk in Malawi, Botswana and Uganda.
- **Combined social and economic empowerment interventions for women**, can decrease higher risk sexual behaviours and increase HIV testing and service uptake.
- **Group sessions and community-based models to transform gender norms** have reduced men's perpetration of intimate partner violence and HIV-related risk behaviour.
- **Social protection programmes and in-kind support that address poor livelihoods, malnutrition and food insecurity** can also improve effective anti-retroviral therapy coverage and levels of viral suppression.

Given the institutional frameworks and siloed nature of government sectors and development funding, we cannot assume that non-HIV sectors and funders will consider the spill-over of their policies and programmes on HIV, or vice versa. However, it is important to apply this kind of thinking to promising models for structural intervention.

The challenge is to encourage co-financing of select 'best buys' that deliver multiple benefits across different sectors (and different SDG targets). Insights gained from STRIVE research can be usefully applied to this challenge, specifically from work on:

- Alcohol as a driver of HIV risk
- A co-financing mechanism

Alcohol

Harmful alcohol use is a good example of how interventions addressing harmful alcohol use can reduce HIV risk as well as achieving other health and development outcomes. Alcohol contributes to such a wide range of health harms, injury and violence against women while also imperilling household and national economic resilience.

In Tanzania, studies have shown a link between alcohol consumption and HIV infection in the general population and among women who engage in transactional sex. More broadly, research consistently shows that people who consume alcohol before sex are at increased risk of HIV and people who binge drink are at particularly high risk. People living with HIV who drink alcohol habitually are less likely to access medical care, have poorer treatment outcomes and may be more likely to pass on the virus to others. The harmful use of alcohol is widespread in sub-Saharan African countries where the HIV epidemic is severe. Alcohol misuse is thus part of a confluence of factors fuelling the transmission of infection and undermining uptake and adherence of prevention and treatment options. Addressing harmful alcohol use in high HIV-prevalence countries has the potential to help curtail the spread of HIV nationally.

STRIVE partners conducted a multi-country study of alcohol and young people using GIS mapping to map the proximity of alcohol outlets to schools and colleges, and participatory photovoice to elicit young people's experiences and views. Reviewing

findings from India (ICRW-Asia), Tanzania (National Institute for Medical Research – NIMR) and South Africa (Soul City Institute for Social National Institute for Medical Research, researchers concluded that:

- Young people are influenced by their social environment, which includes their parents, peers and intimate partners.
- In Tanzania and South Africa, alcohol advertisements and outlets were located near schools and colleges. In India, alcohol advertising is banned but the industry has found other ways to promote alcohol, and many alcohol outlets were also located close to schools and colleges in Mumbai, ensuring easy access.
- Alcohol advertising is widespread and aggressively promoted in South Africa and Tanzania, with some messages explicitly targeting young people, and others playing on notions of masculinity. In India, alcohol advertising and promotion through sponsorship normalised alcohol as an aspirational lifestyle.

All these factors facilitate underage alcohol initiation and consumption. However, young people's voices are important in the debate around harmful use of alcohol, and young people can play a role in educating peers and challenging social norms that can be harmful for their generation.

For more information: http://strive.lshtm.ac.uk/projects/multi-country-study-alcohol-and-youth

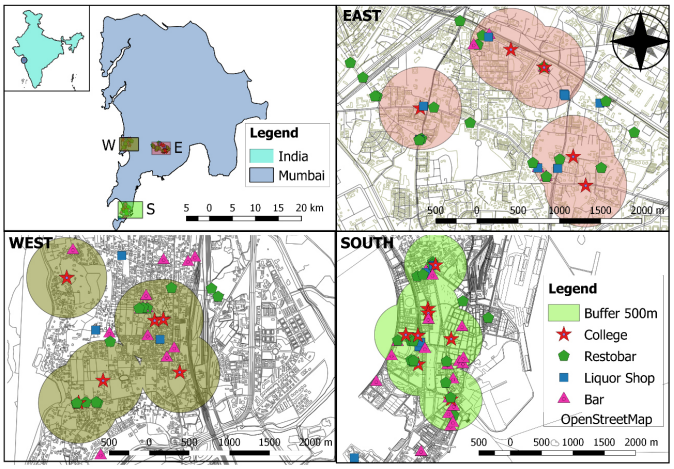
Evidence brief: Normalising alcohol consumption among youth in Mumbai, India

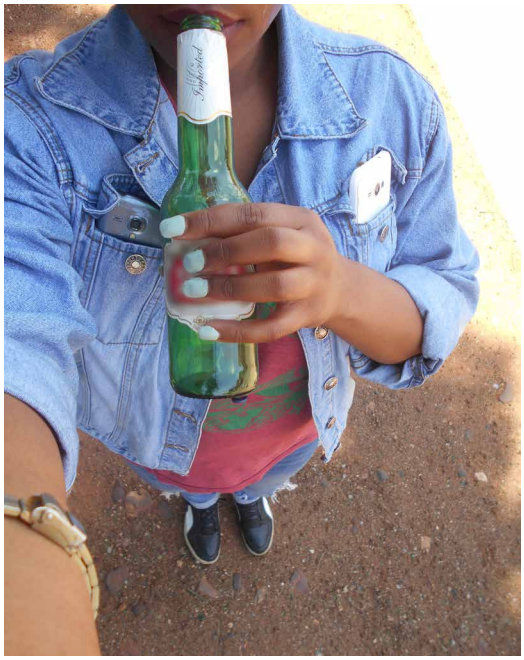
Evidence brief: Alcohol availability, marketing and sexual health risks to youth in South Africa

Evidence brief: Youth, alcohol use and HIV in Tanzania

MULTI-COUNTRY STUDY ON ALCOHOL

GIS mapping (Mumbai, Tanzania) shows the proximity of alcohol outlets to schools and colleges, and images from photovoice capture young people's experiences (South Africa, Tanzania).





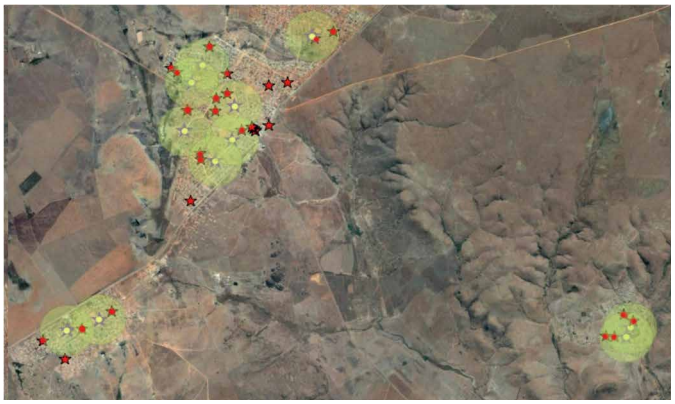
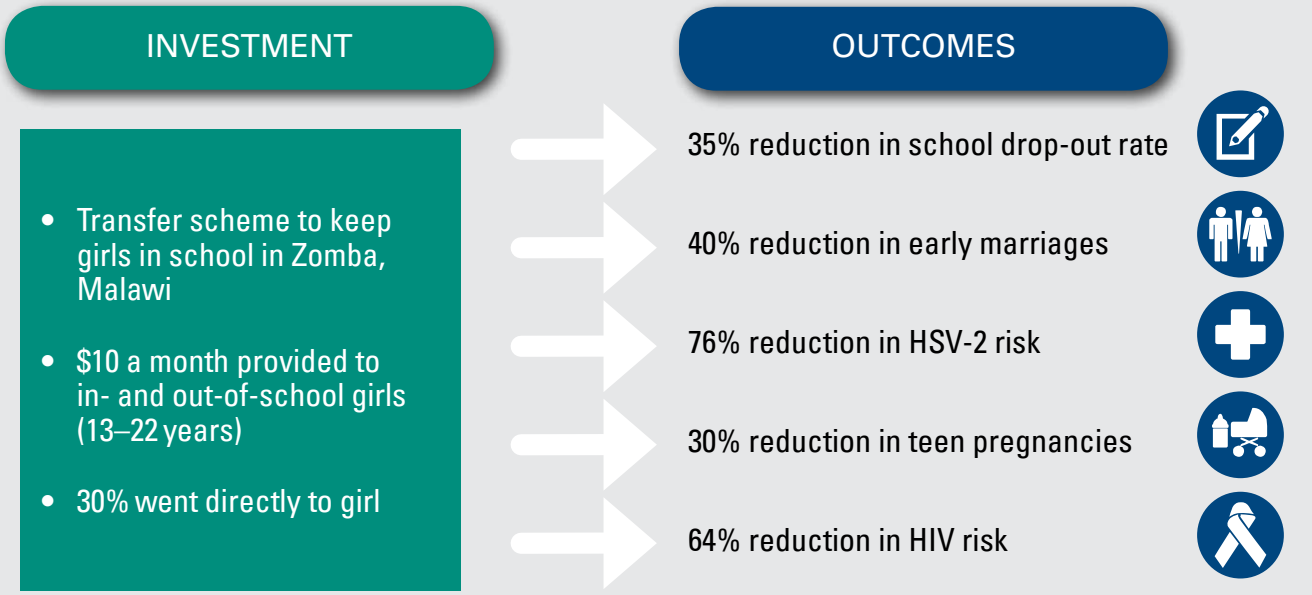


Figure 9: Multiple outcomes of the Zomba cash transfer to keep girls in school



Source: STRIVE, 2012 from Baird et al, 2012.

Co-financing

Interventions that address the social determinants of health often yield multiple benefits across sectors. Yet, if only one aspect of the benefit is valued in an economic analysis, the overall value of such structural interventions is likely to be under-estimated. Commonly applied economic analyses (including standard cost-effectiveness analyses) do not do justice to interventions with non-health costs or benefits. Standard economic evaluation methods tend to be confined to a single sector perspective, for example, HIV. The result of such an approach is that interventions that have the potential to deliver multiple impacts, such as increased secondary schooling or a cash transfer to keep girls in school, may appear unduly expensive and not good value-for-HIV-money if their education benefits were not factored into the financing decision.[56] The same is true for other public health interventions that deliver multi-sectoral impacts and for health system strengthening interventions that may result in multiple disease impacts.[57] This reflects a lack of adequate economic analysis methods to evaluate interventions that deliver multiple benefits – particularly if these benefits occur across sectors. In response to this challenge, STRIVE researchers developed an innovative, cross-sectoral co-financing approach, that can be used to increase efficiency in the allocation of government, donor and other budget-holders' resources, and the benefits of this way of thinking.

The method is best understood using an example. The Zomba cash transfer intervention, implemented and evaluated in Malawi, consisted of a monthly cash transfer of about USD 10 with the objective of keeping girls in school. About 30% of the cash was given directly to the girls, while the remaining amount went to their guardians. After only 18 months of implementation, the evaluation found a range of educational and health outcomes among the girls who were in school at baseline. The trial outcomes showed that the prevalence of HIV among girls receiving cash transfers was 64% lower than girls who were not receiving cash. Improvements in test scores, drop-out rates, teen pregnancy rates and depression were also documented.[58]

When considering the value for money of this intervention from an HIV perspective, it was unlikely to be seen as cost-effective, compared to alternative HIV prevention options. If each sector assessed the value of the intervention in its sectoral silo, the intervention would not be funded. From a fund-holder's perspective, neither the HIV, education nor health budget holder would want to pay the full intervention cost, based on the outcomes they would generate and their associated cost-effectiveness for their sector. However, if they considered pooling their resources through a co-financing mechanism to jointly achieve their outcomes, they would be able to cover the full cost of the intervention and even spend less for the same outcomes than they would have each spent in their own sectors (or sub-sectors), freeing up cost savings.

Despite the strong economic rationale for co-financing, cross-sectoral coordination and action

are not common. STRIVE conducted a qualitative study with decision-makers directly involved in planning and budgeting in Tanzania in order to elicit their perceptions on the institutional feasibility of adopting a co-financing framework in resource allocation.[60] Respondents identified several barriers, such as the limited discretionary budgets of each government department, the limited financial autonomy of government and non-government budget holders with earmarked funds, the likely resistance of individuals to their potential loss of budget control and a concern that co-financing would involve a loss of visibility and ability to justify one's institutional existence for the budget holder paying into another sector's budget.

Despite these barriers and risks, study respondents suggested that, given its efficiency gains, co-financing could be feasible and operationalised. They identified the following contextual enablers that would facilitate its adoption:

- evidence of mutual gains and cost savings
- strong political will and champions/advocates
- inter-sectoral governance mechanisms to facilitate and ensure accountability
- prioritising payers with population focus or strong results focus (potentially decentralised local government authorities and donors)
- strong monitoring and evaluation frameworks (sectors with such capacity being more ready to commit)
- prioritising sectors with a history of working together or which are familiar with each other's institutional frameworks.

This approach to co-financing could provide a new way of financing high-impact interventions to achieve benefits across the interconnected SDGs and targets. Rather than expect any one sector to support such interventions, the new economic evaluation approaches, developed by STRIVE, show how cross-sectoral co-financing can support interventions that yield multiple benefits across sectors. The Sustainable Development Goals provide an important framework for interventions on the structural drivers of HIV. Social and structural drivers offer investment opportunities to realise co-benefits and deliver multiple impacts at scale. Although there are remaining evidence gaps, STRIVE's research shows the central importance of including responses to the structural drivers of HIV at the heart of the HIV response, not only to end AIDS and meet the 95-95-95 targets, but also to help achieve many other SDGs by 2030.

Samvedana Plus participants, northern Karnataka, India
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Research to impact

The consortium recognised that evidence-based change not only needs strong findings, but must also interface with the political and contextual. STRIVE's strategy to support research uptake for each study was thus shaped not by a rigid template but by a series of steps, much like shaping a theory of change, to identify the most effective potential levers of change: local government regulations, for instance, or funding criteria, tools for gathering population-level data or national legislation.

The research achieved direct impacts (as detailed in case studies listed in the annex), as well as setting the stage for ongoing impact in the future. Over the eight years of its work, STRIVE achieved or contributed to:

- **New global questions and frameworks for measuring and addressing structural factors** (in the Demographic Health Surveys, in global efforts to address stigma and discrimination)
- **Shifts in the design of programmes and interventions** (to keep adolescent girls in school, to reduce intimate partner violence against female sex-workers, to support young women who choose PrEP to prevent HIV infection, to use sport to engage and empower adolescent girls; to reduce stigma and discrimination against vulnerable populations in India)
- **Inputs into national AIDS control programmes** (sections on structural drivers in India and South Africa; technical working groups on PrEP, sex work and adolescent girls in South Africa)
- **Bringing underrepresented voices and perspectives to the policy-making arena** (adolescents and young people in South Africa presenting their own findings on the impact of alcohol availability and access)
- **New approaches for modeling and budgeting HIV resources** (for South Africa's investment case for the Global Fund; for UNDP training for government officials in seven African countries)
- **Reductions in violence against women and girls, and in the acceptability of this violence** (in Kampala, Uganda through the SASA! intervention; in rural North Karnataka, India through the Samvedana Plus intervention; in Mwanza, Tanzania through the MAISHA intervention)
- **Changes in state legislation or regulations** (including health and alcohol policies in Tanzania; protocols for schools in Karnataka State, India; support and entitlements for female sex-workers in Karnataka)

Overall, STRIVE set out (in 2011) to "*keep* structural drivers on the HIV agenda". However, the most optimistic expectations of anti-retroviral-based prevention soon encountered many of the same structural barriers that hindered earlier prevention mechanisms. STRIVE accordingly adapted the consortium goal, aiming to "*advance* structural drivers on the HIV agenda". Through new research and synthesis of the existing evidence base, and as a platform and portal for innovative thinking and shared learning, STRIVE is considered to have contributed to the increased priority and prominence of structural factors in efforts to address the epidemic.

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Key STRIVE resources

Research synthesis briefs

OVERARCHING NARRATIVES EMERGING FROM STRIVE'S WORK

- **A moment of convergence: STRIVE and the Sustainable Development Goals**
  http://strive.lshtm.ac.uk/resources/technical-brief-moment-convergence-strive-and-sustainable-development-goals
- **Biomedical and structural prevention: STRIVE in the era of cascades**
  http://strive.lshtm.ac.uk/resources/technical-brief-biomedical-and-structural-prevention-strive-era-cascades

Thematic briefs

- **Alcohol and HIV risk**
  http://strive.lshtm.ac.uk/resources/technical-brief-alcohol-and-hiv-risk
- **Co-financing for development synergies**
  http://strive.lshtm.ac.uk/resources/technical-brief-co-financing-development-synergies
- **Transactional sex and HIV risk**
  http://strive.lshtm.ac.uk/resources/technical-brief-transactional-sex-and-hiv-risk
- **HIV-related stigma and discrimination**
  http://strive.lshtm.ac.uk/resources/technical-brief-hiv-related-stigma-and-discrimination
- **Social norms**
  http://strive.lshtm.ac.uk/resources/technical-brief-social-norms
- **HIV risk and violence against women and girls**
  http://strive.lshtm.ac.uk/resources/technical-brief-hiv-risk-and-violence-against-women-and-girls

Evidence briefs

RESULTS OF TRIALS

- **The EMPOWER study: An evaluation of a combination HIV prevention intervention including oral PrEP for adolescent girls and young women in South Africa and Tanzania**
  http://strive.lshtm.ac.uk/resources/evidence-brief-empower-study-evaluation-combination-hiv-prevention-intervention-including
- **The EMPOWER study: An evaluation of a combination HIV intervention that includes oral PrEP for adolescent girls and young women in South Africa and Tanzania (findings from Tanzania)**
  http://strive.lshtm.ac.uk/resources/evidence-brief-empower-study-evaluation-combination-hiv-intervention-includes-oral-prep
- **Preventing intimate partner violence among women in Mwanza, Tanzania: Findings from the MAISHA cluster-randomised controlled trial**
  Forthcoming
  http://strive.lshtm.ac.uk/resources/preventing-intimate-partner-violence-among-women-mwanzatanzania-findings-maisha-cluster
- **Samvedana Plus: Reducing violence and increasing condom use in the intimate partnerships of female sex workers in Bagalkote district, north Karnataka, South India**
  http://strive.lshtm.ac.uk/resources/evidence-brief-samvedana-plus-reducing-violence-and-increasing-condom-use-intimate
- **Samata intervention to increase secondary school completion and reduce child marriage among adolescent girls from marginalised communities**
  http://strive.lshtm.ac.uk/resources/evidence-brief-samata-intervention-increase-secondary-school-completion-and-reduce-child

RESULTS OF STUDIES

- **Parivartan for girls: addressing restrictive gender norms in Mumbai, India**
  http://strive.lshtm.ac.uk/resources/parivartan-girls-addressing-restrictive-gender-norms
- **Youth, alcohol use and HIV in Tanzania**
  http://strive.lshtm.ac.uk/resources/evidence-brief-youth-alcohol-use-and-hiv-tanzania
- **Alcohol availability, marketing and sexual health risks to youth in South Africa**
  http://strive.lshtm.ac.uk/resources/evidence-brief-alcohol-availability-marketing-and-sexual-health-risks-youth-south-africa
- **Normalising alcohol consumption among youth in Mumbai, India**
  http://strive.lshtm.ac.uk/resources/evidence-brief-normalising-alcohol-consumption-among-youth-mumbai-india

Measurement briefs

- **Measuring transactional sex and HIV risk**
  http://strive.lshtm.ac.uk/resources/technical-brief-measuring-transactional-sex-and-hiv-risk
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- **Measuring alcohol-related HIV risk**
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- **Measuring HIV stigma and discrimination**
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Impact case studies

NATIONAL LEVEL IMPACT

- **Samata: Supporting marginalised girls in Karnataka, India to stay in school**
  http://strive.lshtm.ac.uk/resources/impact-case-study-samata-supporting-marginalised-girls-karnataka-india-stay-school
- **MAISHA – set to reduce violence against women in Tanzania**
  http://strive.lshtm.ac.uk/resources/impact-case-study-maisha-set-reduce-violence-against-women-tanzania
- **Engaging adolescent girls in a sports-based programme to challenge norms in their communities in Mumbai, India**
  http://strive.lshtm.ac.uk/resources/impact-case-study-engaging-adolescent-girls-sports-based-programme-challenge-norms-their
- **Prioritising combination HIV prevention for adolescent girls and young women in South Africa**
  http://strive.lshtm.ac.uk/resources/impact-case-study-prioritising-combination-hiv-prevention-adolescent-girls-and-young-women
- **Youth voices in alcohol policy processes in South Africa**
  http://strive.lshtm.ac.uk/resources/impact-case-study-youth-voices-alcohol-policy-processes-south-africa
- **Alcohol policy in Tanzania**
  http://strive.lshtm.ac.uk/resources/impact-case-study-alcohol-policy-tanzania
- **HIV stigma reduction in India**
  http://strive.lshtm.ac.uk/resources/impact-case-study-hiv-stigma-reduction-india

GLOBAL LEVEL IMPACT

- **Stigma framework and measurement**
  http://strive.lshtm.ac.uk/resources/impact-case-study-stigma-framework-and-measurement
- **Questions on transactional sex in the DHS**
  http://strive.lshtm.ac.uk/resources/impact-case-study-questions-transactional-sex-dhs
- **Co-financing for HIV and development synergies**
  http://strive.lshtm.ac.uk/resources/impact-case-study-co-financing-hiv-and-development-synergies

Stories of change

- **"Study first, marry later" Samata: Keeping girls in secondary school**
  http://strive.lshtm.ac.uk/resources/stories-change-study-first-marry-later
- **"Love isn't expressed through violence" Samvedana Plus: Reducing violence and increasing condom use in the intimate partnerships of female sex workers, Karnataka, India**
  http://strive.lshtm.ac.uk/resources/stories-change-love-isnt-expressed-through-violence

Infographics

- **Transactional sex: What it is and why it matters**
  http://strive.lshtm.ac.uk/resources/transactional-sex-what-it-and-why-it-matters
- **The HIV prevention cascade**
  http://strive.lshtm.ac.uk/resources/hiv-prevention-cascade

Learning labs

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Videos and multimedia

http://strive.lshtm.ac.uk/resources/multimedia

STRIVE

Tackling the structural drivers of HIV

A DFID-funded research programme consortium at work from 2011 to 2019, STRIVE has been led by the London School of Hygiene & Tropical Medicine.

Research partners:

- International Center for Research on Women-Asia Hub, India
- International Center for Research on Women, USA
- Karnataka Health Promotion Trust, India
- London School of Hygiene & Tropical Medicine
- Mwanza Intervention Trials Unit, Tanzania
- National Institute for Medical Research, Tanzania
- Wits Reproductive Health and HIV Institute, South Africa

Research affiliates:

- United Nations Development Program – HIV, Health and Development Group, US and international
- Soul City Institute for Social Justice, South Africa

STRIVE has investigated how different structural factors – including gender inequality and violence, poor livelihood options, stigma, and heavy alcohol use – influence HIV vulnerability and undermine the effectiveness of the HIV response. The consortium has designed and evaluated interventions to tackle structural barriers and synthesised evidence to provide multi-sectoral approaches to reducing HIV and achieving Sustainable Development Goals.

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