STRIVE
Tackling the structural drivers of HIV

# Alcohol and HIV risk

TECHNICAL BRIEF
>> JUNE 2018

**Authors:** Katherine Fritz and Gerry Mshana

## What have we learned?

Hazardous alcohol use contributes to the acquisition of HIV through sexual risk and speeds the progression of disease.

Strategies exist to successfully reduce the harms caused by hazardous alcohol use, including HIV, but these have focused on individual-level interventions while neglecting the powerful role of unfettered alcohol availability, low prices and heavy advertising and promotion in low- and middle-income countries.

Long-term and sustainable reductions in hazardous alcohol use require structural interventions free of influence from the alcohol industry and with buy-in from multiple sectors. These structural interventions have potential to yield returns across a range of Sustainable Development Goals (SDGs) and are thus a 'best buy' for achieving long-term population-level improvements in health and economic wellbeing.

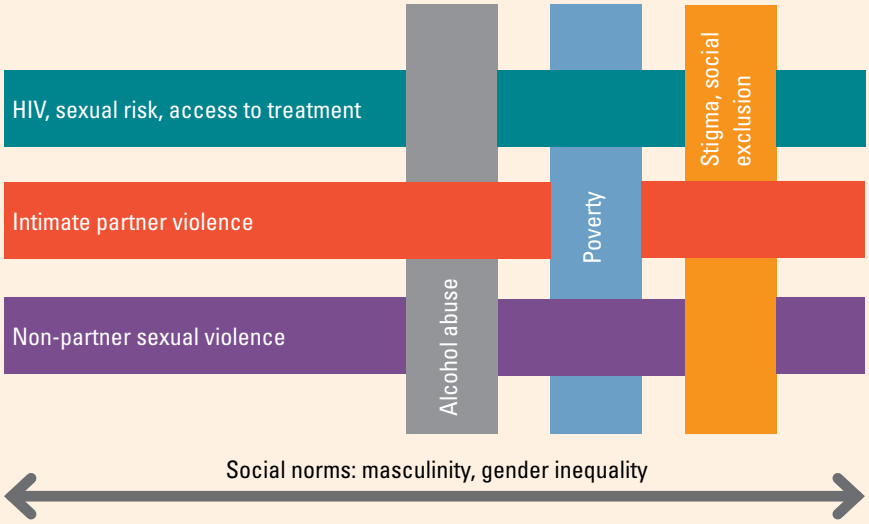
## What is the issue?

Harmful alcohol use causes an enormous burden of death and disease globally. The threat is most severe among younger age groups (20–39 years old) among whom 25% of annual deaths can be linked to harmful alcohol use. Harmful alcohol use contributes to over 200 diseases and types of injury, including a panoply of non-infectious diseases such as foetal alcohol syndrome, liver cirrhosis, many types of cancer and cardiovascular disease. Alcohol misuse is increasingly seen to contribute to the spread and progression of infectious diseases as well, including HIV and tuberculosis.

The STRIVE consortium of research partners chose to focus on the association of HIV risk and harmful alcohol use, for several reasons.

1. Research consistently shows that people who consume alcohol before sex are at increased risk of HIV infection and people who binge drink are at particularly high risk. Additionally, people living with HIV who drink alcohol are less likely to access medical care, have poorer treatment outcomes and may be more likely to spread the virus to others.
2. 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. 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. Addressing harmful alcohol use in high HIV-prevalence countries such as Tanzania has the potential to help curtail the spread of HIV nationally.
3. In light of the SDGs, harmful alcohol use presents a valuable opportunity to tackle factors that are the common antecedents of a variety of health, social, environmental and economic challenges. Harmful alcohol use is a good example because it contributes to such a wide range of health harms, injury and violence against women while also imperilling household and national economic resilience.

**Figure 1:** Multiple vulnerabilities: the weft and warp of women's lives




Credit: Katherine Fritz, presentation to Greentree II, 2015.

## 1 **Key finding:** Hazardous alcohol use contributes to the acquisition of HIV through sexual risk and speeds the progression of disease.

### Evidence

Numerous studies have shown that alcohol use increases sexual risk behaviour such as unprotected sex and having sex with casual or commercial partners.[1-4]

According to a review of 20 cross-sectional and prospective studies in African countries, for example, alcohol drinkers have a 57% increased risk of HIV infection when controlling for confounders.[5] In another review of 10 prospective studies, any alcohol consumption increases risk of HIV by 77%; people consuming alcohol before or during sex were at an 87% increased risk.[1]

Adding to the case, alcohol use demonstrates a dose–response relationship with sexual risk. In one study, risk of HIV among binge drinkers was double that of non-binge drinkers.[6] In this study, an increase in blood alcohol concentration (BAC) of 0.1 mg/L leads to a 2.7% increase in the likelihood of engaging in condomless sex.

How does alcohol contribute to sexual risk behaviour? In multiple studies where people are randomly assigned to consume alcohol, drinkers report stronger intentions to engage in condomless sex, weaker sexual communication and negotiation skills and higher levels of sexual arousal.[7] The conclusion: under the influence of alcohol, the brain 'tunes in' to cues that prompt sex (sexual arousal) while 'tuning out' inhibiting cues (fear of HIV or pregnancy).

Current evidence equivocally supports the hypothesis that alcohol use has an independent causal relationship to risky sex. It remains possible that the relationship is confounded by known or unknown factors such as personality type or underlying psychiatric disorders. However, evidence overwhelmingly supports the hypothesis that among the constellation of factors driving sexual risk, alcohol use plays an important role, especially among heavy or binge drinkers.

Biology also plays a role. Alcohol drinkers may be at higher physiological risk of becoming infected with HIV and once infected may be more likely to transmit the infection. Alcohol abuse can cause liver disease, which is connected with immuno-suppression, potentially making one more susceptible to infection. People with alcoholic hepatitis and cirrhosis who are exposed to HIV for the first time do not have the ability to rapidly and efficiently fight infections.[8,9] Furthermore, alcohol consumption by people living with HIV can lead to increased secondary transmission risk. Alcohol use has been found to increase viral replication.[10] One study found a two-fold increase in vaginal HIV shedding in women on ART who were moderate-heavy drinkers.[11]

Alcohol misuse also has powerful negative effects on the progression of disease among those living with HIV. Alcohol reduces adherence to medication in general and to ARVs specifically. People living with HIV who consume alcohol were only 50–60% as likely to be adherent compared to people living with HIV who were non-drinkers or light drinkers.[12] Non-adherence among HIV patients was nearly double among non-binge drinkers and over four times higher among binge drinkers compared to non-drinkers.[13] Study results are highly consistent when controlling for mediating factors such as psychological disorders, health status and use of other substances.[4]

Alcohol users also have lower rates of HIV testing.[14-16] Alcohol use causes greater delay in engaging with medical care after testing positive[17] and delays and lowers retention in HIV treatment.[18-20]

Finally, alcohol misuse, especially binge drinking, increases the severity and frequency of intimate partner violence (IPV)[21] which is itself associated with acquisition of HIV and poor uptake of HIV prevention and treatment services for survivors of violence.[22] One systematic review pooled the results of studies and found that harmful use of alcohol was associated with a 4.6 fold increase of exposure to IPV compared to moderate or no alcohol use.[23] Risk of partner violence appears especially linked to heavy episodic drinking. A 10-country study in Latin America found that violence toward female partners was associated with binge drinking.[24]

## 2 **Key finding:** Strategies exist to reduce the harms caused by hazardous alcohol use, including those linked to HIV risk, but have been focused on individual-level interventions while neglecting the powerful role of unfettered alcohol availability, low prices, and heavy advertising and promotion in low- and middle-income countries.

To date, harmful alcohol use and its link to HIV risk have been treated primarily as a problem rooted in individual behaviour. Solutions therefore focus on treating addiction and preventing alcohol misuse among individuals at high risk for HIV infection through counselling interventions, school-based educational programmes for youth and community-based education for adults. Some of these approaches have proved effective in the short term but can be costly to implement. The field is still struggling to identify sustainable and cost-effective models for reducing hazardous alcohol use in the general public.

However, we know that, in the long term, harmful alcohol use is nourished by environments where heavy drinking is culturally normalised and alcohol availability, pricing and promotion are under-regulated. Under-regulation remains the norm in many low- and middle-income countries where the HIV epidemic is severe. Many countries do not

**Table 1**: The evidence to date: Preventing alcohol-related HIV transmission

| Type of intervention | Number of studies | Populations | Countries | Results |
|---|---|---|---|---|
| Individual or small group counselling | 16 RCTs<br>1 quasi-experimental | At-risk populations, general population | Russia, South Africa, Uganda, United States, Zambia | Proven short term effects |
| Bar-based | 2 RCTs | General population (men and women) | South Africa, Zimbabwe | Mixed effects |
| School-based | 3 RCTs<br>1 quasi-experimental | Girls, boys | Namibia, South Africa | Promising |
| Military | 2 RCTs | General population (men and women) | Angola, Nigeria | Promising |
| Community-based | 6 RCTs<br>1 quasi-experimental | Female sex workers, at risk populations, general populations | South Africa | Promising |

have alcohol policies or, where policies do exist, they are often written in collaboration with alcohol industry lobbyists rather than through transparent consultations that include ministries of health and other stakeholders with an interest in protecting the public's health and safety.[25,26] Alcohol's costly burdens to society in the form of chronic illness, death, disability, loss of educational attainment and economic productivity remain unaccounted for.

### Evidence

Most alcohol intervention studies, some with strong experimental designs, have been conducted in Eastern and Southern African countries.

Individual and small group brief motivational counselling[27-31] and community-based education approaches with bar patrons,[32] substance-abusing women[33-35] and the general population[36] have proven effective in decreasing alcohol use generally, decreasing alcohol use before sex, as well as increasing condom use. In South Africa, a brief motivational counselling intervention demonstrated a more than 25% increase in condom use over the 6-month follow-up period, with risk reduction significantly greater for the experimental condition than for the control condition at both follow-up visits.[28] In Uganda, hazardous drinking dropped from 40.1 to 8.8% among people living with HIV receiving a counselling intervention at 12-month follow-up.[37] Group education activities for students and with military personnel have achieved mixed short-term results.[38-42]

No studies have been conducted to measure the effect on HIV risk of limiting alcohol availability, enforcing under-age drinking laws, raising prices or limiting advertisement and promotion. STRIVE's research has helped build the evidence base for how alcohol availability, promotion and pricing helps set the stage for vulnerability, particularly among youth – the bulging population demographic at the nexus of both risk and future potential.

The evidence supporting the harmful effect of alcohol advertising on youth is compelling. A review of eight studies that followed a total of 13,000 youth aged 10–26 years from developed countries demonstrated that alcohol advertising was associated with initiation of drinking.[43] A recent study with 1,032 teenagers aged 13–20 years old in the US further confirmed the relationship between exposure to alcohol brand advertising and brand specific consumption in the past 30 days.[44]

STRIVE research shows that young people are negatively affected by growing up in environments where heavy drinking is normalised, alcohol advertisements represent aspirational images of accomplishment, alcohol is cheap and under-age restrictions are weakly enforced.[45-47] STRIVE research conducted in Tanzania, South Africa and India included GIS mapping of alcohol venues and photo representation of the effects of alcohol availability, marketing and promotion by young people using photovoice, a participatory action research method that engages participants in documenting their world using photographic images that are interpreted with captions.[48,49]

3 **Key finding:** Sustainable reductions in hazardous alcohol use require structural interventions free of influence from the alcohol industry and with buy-in from multiple sectors. These structural interventions have potential to yield returns across a range of SDG targets and goals and are thus a 'best buy' for achieving long-term population-level improvements in health and economic wellbeing.

In recognition of the significant burden of disease, disability and death caused by alcohol use, the World Health Assembly endorsed a global strategy in 2010.[50] The strategy aims to guide countries in developing comprehensive approaches to reducing

harm from alcohol using a broad array of strategies at the individual, community and population levels. In particular, the strategy draws attention to the cost effectiveness of regulating the price, availability and marketing of alcohol.

With respect to protecting youth from the hazards of alcohol use, most countries have laws to limit access to alcohol among young people such as setting legal age restrictions to purchasing and accessing alcohol.[51,50] Some countries have also imposed restrictions on marketing that targets young consumers.[52,53] These measures have had limited success as the industry and retailers continue to pursue young consumers through new avenues such as online advertisement and social media promotions, which are hard to monitor and control.

In many low- and middle-income countries, the path to strengthening regulation is complicated because government policy heavily favours industrial growth. The alcohol industry regularly touts its positive contributions to national economies. In South Africa, for example, the Industry Association for Responsible Alcohol Use claims that for every 1 South African rand in sales revenue generated by the liquor industry, 2.08 South African rands is added to the country's GDP and that taxation of alcohol sales, exports and those employed in the alcohol industry accounted for 1.7% of the government's total annual tax revenues.[54] Figures like these give the alcohol industry a powerful seat at the table when governments debate and form alcohol policy.

Not surprisingly perhaps, only a few countries in sub-Saharan Africa such as Kenya, South Africa and Botswana have national alcohol policies in place[55] although many are in the process of drafting them. For example, Tanzania started the process of drafting a policy in 2012. Some countries in sub-Saharan Africa have implemented macro measures to address the production and marketing of alcohol. For example, Botswana introduced a 30% tax on alcohol to make it inaccessible especially to young consumers.[56] Countries in the region have also set age limits to the purchase of and access to alcohol, although these have not been implemented effectively.[57] In India, most alcohol policy is made at the state level and varies greatly among states. At the national level, alcohol advertising is banned though this law is circumvented by alcohol producers who use surrogate advertising (promotion of a brand name through the disguise of another product such as bottled water). The alcohol industry attempts to influence policy using political contributions.[58]

## Evidence

Studies support the effectiveness and cost effectiveness of establishing and enforcing laws and policies:[59]

| | |
|---|---|
| Enforcement of bans or comprehensive restrictions on exposure to alcohol advertising (multiple media) | 1.2% reduction in prevalence of harmful drinking and a 3% reduction in drinking volume per additional level of restriction for beer, wine and spirits across four types of media |
| Enforcement of restrictions on the physical availability of retailed alcohol (via reduced hours of sale) | 1.8–2.1% reduction in prevalence of harmful drinking for men and 4% reduction for women; consistent inverse relationship between increased restrictions and total drinking volume |
| Enforcement of drink-driving laws and blood alcohol concentration limits via sobriety checkpoints | 15-20% reduction in road traffic deaths and alcohol-related disability |
| Increase in excise taxes on alcoholic beverages | Varies by country, taxation strategy and unrecorded use. Evidence from Thailand is particularly compelling where a 10% increase of the inflation-adjusted taxation rate of the total alcohol market was significantly associated with a 4.3% reduction in the prevalence of lifetime drinking among Thai youth[60] |

## What is the impact?

STRIVE researchers from the National Institute of Medical Research and Mwanza Intervention Trials Unit in Tanzania and Soul City Institute in South Africa have been working hard to address two clear gaps in the national policy-making process around alcohol:

1. the lack of evidence-informed discussions about alcohol's impact on public health
2. the lack of youth and community voices in alcohol policy discussions

In Tanzania, the government had for several years been developing a national alcohol policy but the process was hampered by lack of evidence on the health and social repercussions of alcohol consumption. STRIVE researchers from NIMR and MITU conducted a mapping and gap analysis of laws and regulations, were invited to be part of working meetings to draft and review the national alcohol policy and helped convene a day-long summit to discuss research evidence and ensure public health priorities were discussed and considered by the multi-sectoral group. One area of concern for STRIVE researchers, the Ministry of Health and youth advocates was the packaging of spirits into small (50–100ml) and very cheap plastic packages (locally called sachets or *viroba*). These sachets increased youth access to alcohol by making it easy to hide and affordable. Based on awareness raising by the STRIVE researchers in collaboration with NGOs and advocacy groups, and against the lobbying efforts of the liquor industry to maintain the packaging, the Tanzanian government legally banned sachets on 1 March 2017, joining Ivory Coast, Senegal, Malawi and Rwanda in doing the same.

In South Africa, Soul City Institute (SCI) recognised that young people, their parents and educators need to play an active role in deciding what strategies should be used to help youth make smart decisions about alcohol use. The evidence generated by STRIVE researchers helped to elucidate the ways young people are influenced by aggressive marketing, youth-friendly packaging and pricing and unfettered expansion of licensed and unlicensed alcohol outlets. These findings were synthesised into a policy brief shared at a media briefing that resulted in numerous print and television stories. SCI's STRIVE research has been taken up the Southern Africa Alcohol Policy Alliance and used to strengthen public-health arguments on policy.

### REFERENCES


1. Baliunas, D., et al., Alcohol consumption and risk of incident human immunodeficiency virus infection: a meta-analysis. *International Journal of Public Health*, 2010. 55(3): p. 159–166.
2. Fisher, J.C., Bang, H., and Kapiga, S. H., The association between HIV infection and alcohol use: a systematic review and meta-analysis of African studies. *Journal of Sexually Transmitted Diseases*, 2007. 34(11): p. 856–863.
3. Samet, J.H., et al., Alcohol consumption and HIV disease progression. *Journal of Acquired Immune Deficiency Syndromes*, 2007. 46(2): p. 194–199.
4. Shuper, P.A., et al., Causal considerations on alcohol and HIV/AIDS – a systematic review. *Alcohol and Alcoholism*, 2010. 45(2): p. 159–166.
5. Fisher, J., et al., Patterns of alcohol use, problem drinking, and HIV infection among high-risk African women. *Journal of Sexually Transmitted Diseases*, 2008. 35(6): p. 537–544.
6. Rehm, J., et al., Alcohol consumption and the intention to engage in unprotected sex: systematic review and meta-analysis of experimental studies. *Addiction*, 2012. 107(1): p. 51-59.
7. Scott-Sheldon, L., et al., Alcohol use predicts sexual decision-making: a systematic review and meta-analysis of the experimental literature. *AIDS and Behavior*, 2016. 20(1): p. 19–39.
8. Friedman, S.L., Liver fibrosis - from bench to bedside. *Journal of Hepatology*, 2003. 38(S1): p. 38–53.
9. Friedman, S.L. and Bansal, M.B., Reversal of hepatic fibrosis - fact or fantasy? *Liver Biology and Pathobiology*, 2006. 43(S1): p. S82-S88.
10. Wu, E. and Metzger, D., Association between alcohol use and HIV viral load. *J Acquir Immune Defic Syndr*, 2011. 56(5): p. 1–5.
11. Theall, K.P., et al., Alcohol consumption and HIV-1 vaginal RNA shedding among women. *Journal of Studies on Alcohol and Drugs*, 2008. 69(3): p. 454–458.
12. Hendershot, C.S., et al., Alcohol use and antiretroviral adherence: review and meta- analysis. *Journal of Acquired Inmune Deficiency Syndrome*, 2009. 52(2): p. 1–26.
13. Braithwaite, R., et al., A temporal and dose-response association between alcohol consumption and medication adherence among veterans in care. *Alcoholism: Clinical and Experimental Research*, 2005. 29(7): p. 1190–1197.
14. Bengston, A.M., et al., Levels of alcohol use and history of HIV testing among female sex workers in Mombasa, Kenya. AIDS Care - *Psychological and Socio-Medical Aspects of AIDS/HIV*, 2014. 26(12): p. 1619–1624.
15. Fatch, R., Bellows, B., and Hahn, J., Alcohol consumption as a barrier to prior HIV testing in a population-based study in rural Uganda. *AIDS and Behavior*, 2013. 17(5): p. 1713–1723.
16. Vagenas, P., et al., Being unaware of being HIV-infected is associated with alcohol use disorders and high risk sexual behaviors among men who have sex with men. *AIDS and Behavior*, 2014. 18(1): p. 120-127.
17. Samet, J., et al., Trillion virion delay: time from testing positive for HIV to presentation for primary care. *Archives of Internal Medicine*, 1998. 158(7): p. 734–740.
18. Cunningham, C., et al., Type of substance use and access to HIV-related health care. *AIDS Patient Care and STDs*, 2006. 20(6): p. 399-407.
19. Giordano, T.P., et al., Patients referred to an urban HIV clinic frequently fail to establish care: factors predicting failure. *AIDS Care - Psychological and Socio-Medical Aspects of AIDS/HIV*, 2005. 17(6): p. 773–783.
20. Korthuis, P.T., et al., Unhealthy alcohol and illicit drug use are associated with decreased quality of HIV care. *Journal of Acquired Immune Deficiency Syndromes*, 2012. 61(2): p. 171–178.
21. Heise, L., (2011) What works to prevent partner violence? An evidence overview. London: STRIVE, London School of Hygiene and Tropical Medicine. http://strive.lshtm.ac.uk/resources/what-works-prevent-partner-violence-evidence-overview
22. Heise, L. and McGrory, E., (2015) Violence against women and girls and HIV: Report on a high level consultation on the evidence and its implications, 12–14 May, 2015. Greentree Estate. STRIVE, London School of Hygiene and Tropical Medicine. http://strive.lshtm.ac.uk/resources/greentree-ii-violence-against-women-and-girls-and-hiv
23. Gil-González, D., et al., Alcohol and intimate partner violence: do we have enough information to act? *European Journal of Public Health*, 2006. 16(3): p. 278-284.
24. Graham,K., et al., Comparison of partner physical aggression across ten countries, In *Unhappy Hours: Alcohol and partner aggression in the Americas*, K.Graham,etal., Eds. 2008, Pan American Health Organization (PAHO): Washington D.C. p. 221-246.
25. Jernigan, D.H., Global alcohol producers, science, and policy: the case of the International Center for Alcohol Policies. *American Journal of Public Health*, 2012. 102(1): p. 80-89.
26. Bakke, Ø and Endal, D., Vested interests in addiction research and policy alcohol policies out of context: drinks industry supplanting government role in alcohol policies in sub-Saharan Africa. *Addiction*, 2010. 105(1): p. 22-28.

27. Kalichman, S.C., et al., HIV/AIDS risk reduction counseling for alcohol using sexually transmitted infections clinic patients in Cape Town, South Africa. *Journal of Acquired Immune Deficiency Syndromes*, 2007. 44(5): p. 594-600.
28. Kalichman, S.C., et al., Randomized clinical trial of brief risk reduction counseling for sexually transmitted infection clinic patients in Cape Town, South Africa. *American Journal of Public Health*, 2012. 101(9): p. 9–17.
29. Hahn, J.A., et al., Decreases in self-reported alcohol consumption following HIV counseling and testing at Mulago Hospital, Kampala, Uganda. *BMC Infectious Diseases*, 2014. 403(14): n.p.
30. Abdala, N., et al., Efficacy of a brief HIV prevention counseling intervention among STI clinic patients in Russia: a randomized controlled trial. *AIDS and Behavior*, 2013. 17(3): p. 1016-1024.
31. Carrico, A.W., et al., Critical review: when the party is over: a systematic review of behavioral interventions for substance-using men who have sex with men. *Journal of Acquired Immune Deficiency Syndromes*, 2016. 73(3): p. 299-306.
32. Kalichman, S.C., et al., Randomized community-level HIV prevention intervention trial for men who drink in South African alcohol-serving venues. *European Journal of Public Health*, 2014. 24(5): p. 833-839.
33. Wechsberg, W.M., et al., Efficacy of the Young Women's CoOp: an HIV risk-reduction intervention for substance-using African-American female adolescents in the South. *Journal of Child & Adolescent Substance Abuse*, 2017. 26(3): p. 205-218.
34. Wechsberg, W.M., et al., A brief intervention for drug use, sexual risk behaviours and violence prevention with vulnerable women in South Africa: a randomised trial of the Women's Health CoOp. *BMJ Open*, 2013. 3(5): n.p.
35. Wechsberg, W.M., et al., Substance use, sexual risk, and violence: HIV Prevention intervention with sex workers in Pretoria. *AIDS and Behavior*, 2006. 10(2): p. 131-137.
36. Jewkes, R., et al., Impact of stepping stones on incidence of HIV and HSV-2 and sexual behavior in rural South Africa: cluster randomised controlled trial. *BMJ Open*, 2008. 337(506): n.p.
37. Hahn, J.A., et al., Decreases in self-reported alcohol consumption following HIV counseling and testing at Mulago Hospital, Kampala, Uganda. *BMC Infectious Diseases*, 2014. 403(14): n.p.
38. Zimmerman, R.S., et al., Effects of a school- based, theory driven HIV and pregnancy prevention curriculum. *Perspectives on Sexual and Reproductive Health*, 2008. 40(1): 42-51.
39. Karnell, A.P., et al., Efficacy of an American alcohol and HIV prevention curriculum adapted for us in South Africa: results of a pilot study in five township schools. *AIDS Education and Prevention*, 2006. 18(4): p. 295-310.
40. Smith, E.A., et al., Substance use and sexual risk prevention in Cape Town, South Africa: an evaluation of the HealthWise program. *Prevention Science*, 2008. 9(4): 311-321.
41. Essien, E.J., et al., Effectiveness of a video-based motivational skills-building HIV risk-reduction intervention for female military personnel. *Social Science & Medicine*, 2011. 72(1): 63-71.
42. Bing, E.G., et al., Evaluation of a prevention intervention to reduce HIV Risk among Angolan soldiers. *AIDS and Behavior*, 2008. 12(3): 384-395.
43. Smith, L.A. and Foxcroft, D.R., The effect of alcohol advertising, marketing and portrayal on drinking behaviour in young people: systematic review of prospective cohort studies. *BMC Public Health*, 2009. 9(51): n.p.
44. Naimi, T.S., et al., Amount of televised alcohol advertising exposure and the quantity of alcohol consumed by youth. *Journal of Studies on Alcohol and Drugs*, 2016. 77(5): p. 723–729.
45. Soul City Institute, Policy Brief: Alcohol Marketing, Youth and Sexual Health Risks. n.d.
46. Osaki, H., et al. Using PhotoVoice to inspire youth participation in alcohol policymaking in Tanzania. Presentation at the 2017 Global Alcohol Policy Conference, Melbourne, Australia, October 4-6, 2017.
47. Letsela, L., Alcohol availability, marketing, and sexual health risk amongst urban and rural youth in South Africa: a community based qualitative study. Presentation at the 41st South African Community Epidemiology Network on Drug Use Regional Meeting, Pretoria, South Africa, April 11, 2017.
48. Vaughan, C., Participatory research with youth: idealising safe social spaces or building transformative links in difficult environments? *Journal of Health Psychology*, 2014. 19(1): p. 184–192.
49. Wang, C., PhotoVoice: a participatory action research strategy applied to women's health. *Journal of Women's Health*, 2009. 8(2): p. 185–192.
50. World Health Organization, *Global Strategy to Reduce the Harmful Use of Alcohol*. 2010. www.who.int/substance_abuse/publications/global_strategy_reduce_harmful_use_alcohol/en/
51. Cook, W.K., Bond, J., and Greenfield, T.K., Are alcohol policies associated with alcohol consumption in low- and middle-income countries? *Addiction*, 2014. 109(7): p. 1081–1090.
52. Siegfried, N., et al., Restricting or banning of alcohol advertising to reduce alcohol consumption in adults and adolescents. *Cochrane Database of Systematic Reviews*, 2013. 9: n.p.
53. Simon, M., Reducing youth exposure to alcohol ads: targeting public transit. *Journal of Urban Health*, 2008. 85(4): p. 506-516.
54. Industry Association for Responsible Alcohol Use, The South African Liquor Industry: Our Contribution. 2010.
55. Ferreira-Borges, C., et al., Alcohol control policies in 46 countries: opportunities for improvement. *Alcohol and Alcoholism*, 2015. 50(4): p. 470–476.
56. Pitso, J.M.N. and Obot, I.S., Botswana alcohol policy and the presidential levy controversy. *Addiction*, 2011. 106(5), p. 898–905.
57. Taylor, M., et al., Understanding high school students' risk behaviors to help reduce the HIV/AIDS epidemic in KwaZulu-Natal, South Africa. *Journal of School Health*, 2003. 73(3): p. 97–100.
58. Benegal, V., India: alcohol and public health. *Addiction*, 2005. 100(8): 1051-1056. https://onlinelibrary.wiley.com/doi/full/10.1111/j.1360-0443.2005.01176.x
59. World Health Organization, Alcohol Control Interventions for Appendix 3 of the Global Action Plan for Non Communicable Diseases Identification of Interventions. 2014.
60. Sornpaisarn, B., et al., Can pricing deter adolescents and young adults from starting to drink: an analysis of the effect of alcohol taxation on drinking initiation among Thai adolescents and young adults. *Journal of Epidemiology and Global Health*, 2015. 5(4): p. S45–S57.


**More information:** http://strive.lshtm.ac.uk/themes/alcohol-and-hiv


### Acknowledgements

This analysis is the work of STRIVE colleagues: Katherine Fritz and Priti Prabhughate (International Center for Research on Women), Gerry Mshana and Haika Osaki (National Institute for Medical Research, Tanzania), and Lebohang Letsela and Renay Weiner (Soul City Institute, South Africa).

### Suggested citation

Fritz, K., Mshana, G.; STRIVE Technical Brief: Alcohol and HIV Risk; International Center for Research on Women, Washington D.C., USA; London School of Hygiene & Tropical Medicine, London, UK; 2018.


### 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.


This brief was supported by UKaid from the Department for International Development. However, the views expressed do not necessarily reflect the department's official policies.