



Prevention of Alcohol-related HIV Risk Behavior

Introduction

I. Definition of the Prevention Area

Alcohol use in virtually all cultures reduces both the perception of risk and inhibitions to engage in risky behaviors. The association between alcohol use and high-risk behaviors, including inconsistent condom use with casual partners, greater number of lifetime and recent sexual partners, concurrency of sexual partners, intergenerational sex, the buying and selling of sex, and the experience of violent or coercive sex, is in turn associated with an increased risk of HIV infection.

II. Epidemiological Justification for the Prevention Area

Sub-Saharan Africa is home to two-thirds of all people living with HIV. South Africa has one of the highest volumes per capita of alcohol consumption in the world. There is evidence that alcohol consumption has been increasing over time in sub-Saharan Africa, where alcohol is the most commonly abused drug. Existing scientific evidence linking alcohol use with HIV sexual risk behavior already provides a compelling call to action, but more research is needed in developing countries to understand the sociocultural, psychological, and economic context of alcohol use, as well as the ways in which alcohol affects sexual behavior. In countries battling severe HIV epidemics, interventions that address problem drinking in conjunction with community-based efforts to reduce HIV risk behavior have the potential to reduce the spread of HIV.

III. Core Programmatic Components

Programs to change behaviors related to alcohol use and HIV risk may include population-based or venue-based interventions. School-based programs are an example of a population-based intervention. Venue-based projects target establishments, both legal and informal, where alcohol is served. Program developers and managers are challenged to go beyond mere knowledge-based programs, since knowledge about HIV risk behaviors is already high in some areas. To address the difficult situations that can arise when one or both partners have been drinking prior to sex, such as refusing sex with a partner who declines to wear a condom, many programs are providing supports and scripts that individuals can use to anticipate and handle high-risk situations, along with encouragement and support to avoid sex while intoxicated.

IV. Current Status of Implementation Experience

Effective programs to address the intersection of risky sexual behavior and alcohol consumption are still in their infancy. Programs that specifically address alcohol and HIV in developing countries are extremely rare. However, a small number of alcohol and HIV prevention interventions have recently been developed and implemented in sub-Saharan Africa and India. Below, we highlight these programs, all of which have been shown to be acceptable and feasible to implement in diverse community settings. Some of these programs show promise in bringing about behavior change, such as reducing recent and heavy alcohol consumption, improving both attitudes toward and the use of condoms, and reducing the frequency of consuming alcohol prior to sex. The interventions fall into the following three categories:

- Prevention of Alcohol-related HIV Risk Behavior among Youth
- Prevention of Alcohol-related HIV Risk among Women
- Venue-based Prevention of Alcohol-related HIV Risk

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What we know

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Alcohol Use and Sexual Risks for HIV/AIDS in sub-Saharan Africa: Systematic Review of Empirical Findings

Kalichman, S.C., Simbayi, L.C., Kaufman, M., et al. *Prevention Science* (2007), Vol. 8 No. 2, pp.141-151.

This review of the literature uses a conceptual model to understand the association between alcohol use and sexual risk taking in Southern Africa. Gender differences that emerged from existing research include that men drink more often than women, but women tend to consume greater quantities than men. Furthermore, women reported their sex partners were much more likely to drink before sex than they were. This review also includes findings on predictors and moderating factors (economic conditions, sexual coercion) of alcohol use. While strong evidence exists of an association between alcohol use and HIV, existing studies are primarily cross-sectional, and thus cannot provide evidence of causality. There is a need for longitudinal studies to examine this relationship. Other research gaps include using standard and well-defined measures of alcohol use and using population-based samples rather than convenience samples. The authors close with the implications for HIV prevention on individual, community, and structural levels.

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Exploring "Wine Shops" as a Venue for HIV Prevention Interventions in Urban India

Sivaram, S., Johnson, S., Bentley, M.E., et al. *Journal of Urban Health* (2007), Vol. 84 No. 4, pp. 563-576.

The researchers surveyed 118 wine shop patrons, shop owners, and staff members in the southern Indian city of Chennai to determine whether wine shops could serve as a venue for HIV prevention activities. Over half of patrons reported three or more sexual partners in the past three months; similarly, over half reported that they were under the influence of alcohol before their most recent sexual encounter. Condom use was low overall, and there was little evidence that condoms were available at wine shops. Men reported drinking to help them relax and to make them more confident about having sex. Men visiting wine shops would facilitate contacts with sex workers for friends. The researchers conclude that wine shops could indeed be used as venues to reach heterosexual Indian men who may otherwise be hard to reach due to high mobility among the population.

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Summary of the Proceedings of Meeting on Alcohol, HIV Risk Behaviors and Transmission in Africa: Developing Programmes for the United States President's Emergency Plan for AIDS Relief (PEPFAR)

Ashley, J.W., Levine, B., & Needle, R. *African Journal of Drug and Alcohol Studies* (2006), Vol. 5 No. 2.

Evidence about the link between alcohol-related risk behavior and HIV transmission was presented at an Africa-wide meeting, with participants concluding that intervention programs should target populations that drink heavily and include multilevel interventions at drinking venues. Participants emphasized the need to take into account social and cultural norms that may increase alcohol-related risk behaviors. Speakers also highlighted the importance of addressing the particular risks of specific populations. For example, women may be subject to gender-based violence and may be at increased risk of HIV infection, while individuals in the military and uniformed services are at increased risk of alcohol abuse due to circumstances of service, and may be more likely to frequent sex workers given their distance from home and peer

pressure. The authors recommend incorporating intervention services into existing programs, such as HIV testing and counseling programs. Because government is the "largest financial stakeholder in the alcohol industry" in many countries, program developers may find resistance to implementing interventions.

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Alcohol Use and Sexual Behavior among Risky Drinkers and Bar and Shebeen Patrons in Gauteng Province, South Africa

Morojele, N.K., Kachieng'a, M.A., Mokoko, E., et al. *Social Science & Medicine* (2006), Vol. 62 No. 1, pp. 217-227.

The authors examined the association between alcohol use and risky sexual behavior by conducting in-depth interviews with risky drinkers and partners of risky drinkers and key informant interviews with bar owners, doctors, and police in Gauteng Province, South Africa. They also held small focus group discussions and observed activities in different drinking venues. Men and women alike reported that alcohol made them feel sexually disinhibited. Casual sex was more often linked with bars and shebeens (private homes where alcohol is sold to be consumed on site or taken out) than with other drinking venues. Unemployed people were most likely to be heavy drinkers.

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A Population-Based Study on Alcohol and High-Risk Sexual Behaviors in Botswana

Weiser, S.D., Leiter, K., Heisler, M., et al. *PLoS Medicine* (2006), Vol. 3 No. 10, p. e392.

Previous research examining alcohol use and sexual risk behavior has been limited by its dependence on samples drawn from clinics or drinking venues. This study of 1,268 adults in the five districts of Botswana where HIV prevalence is highest found that both men and women with the highest rates of problem drinking were more than three times as likely to have a history of unprotected sex with a non-primary partner as those who were not heavy drinkers. Male heavy drinkers were more likely to pay for sex, and female heavy drinkers were more likely to sell sex. This study supports the findings of previous research showing associations between alcohol use and sexual risk behavior and illustrates that the trends hold within a large population-based sample.

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Alcohol Use before Sex and HIV Acquisition: A Longitudinal Study in Rakai, Uganda

Zablotska, I.B., Gray, R.H., Serwadda, D., et al. *AIDS* (2006), Vol. 20 No. 8, pp. 1191-1196.

This is the first study to examine alcohol use in conjunction with sex and HIV acquisition in a prospective, longitudinal manner. Nearly 15,000 adults aged 15-49 years in Rakai, Uganda, were followed at 10- to 12-month intervals over an eight-year period to determine the associations between alcohol and HIV. Approximately one-third of both women and men reported that both partners consumed alcohol prior to sex. Alcohol use was positively associated with increased HIV risk behaviors, including inconsistent condom use, more partners, and more extramarital sex. Individuals who consumed alcohol prior to sex were more likely to develop HIV than those who did not. The authors suggest that both behavioral disinhibition and the immune-suppressing effects of alcohol could contribute to the association between alcohol and HIV.

[View Full Text \(PDF, 115 KB\)](#)

Alcohol Use and Sexual Risk Behaviour: A Cross-Cultural Study in Eight Countries

Bianchi, G. World Health Organization (2005)

This report reviews published and unpublished documents on alcohol and sexual risk behavior, ranging from scientific publications to police and law enforcement records in Kenya, South Africa, Zambia, Belarus, Romania, the Russian Federation, India, and Mexico. Cultural issues, poverty, gender, the history of colonialism, and disruption of life following the fall of communist regimes and the rise of the free market have led to a range of connections between alcohol use and HIV. Proving one's masculinity by drinking and having multiple sex partners, for example, was universal. Although alcohol consumption was concentrated among men, it was increasingly becoming a female phenomenon, especially in Belarus and South Africa. The association between alcohol and sexual risk behavior was "far from linear"; in some cases, alcohol consumption occurs before risky sex, while in other cases drinking follows risky sexual activity. Obstacles to HIV prevention are also reviewed.

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Alcohol Use by Men Is a Risk Factor for the Acquisition of Sexually Transmitted Infections and Human Immunodeficiency Virus from Female Sex Workers in Mumbai, India

Madhivanan, P., Hernandez, A., Gogate, A., et al. *Sexually Transmitted Diseases* (2005), Vol. 32 No. 11, pp. 685-690.

This is among the first studies to assess alcohol use and risk of HIV or other sexually transmitted infection (STI) in India. Nearly 1,750 men from two STI clinics in Mumbai provided blood samples and filled out a questionnaire about their sexual and drinking histories. Fully 92% had ever had sex with a female sex worker (FSW). Compared to men who did not drink before sex, men reporting alcohol use while with a FSW had a significantly increased risk of infection with HIV or other STI and having unprotected sex with a FSW. Furthermore, having sex under the influence of alcohol was associated with unprotected sex, anal sex, and sex with more than 10 FSWs in one's lifetime. Because the primary study was for an HIV prevention program, detailed information on quantity, frequency, and type of alcohol consumed is not available. The authors call for further investigation of how alcohol use affects HIV risk in India.

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The Association between Alcohol Use, Sexual Risk Behavior, and HIV Infection among Men Attending Beerhalls in Harare, Zimbabwe

Fritz, K.E., Woelk, G.B., Bassett Ma,T., et al. *AIDS and Behavior* (2002), Vol. 6 No. 3, pp. 221-228.

The authors interviewed 324 beer hall patrons in Harare, Zimbabwe. Each of the patrons underwent HIV testing to determine the link between drinking and HIV. The authors found that HIV prevalence increased with more frequent drinking and with each of the following: meeting a sex partner at the beer hall, having sex while intoxicated, and paying for sex in the past six months. Men who had sex while intoxicated reported 20 times more episodes of unprotected sex and 27 times more episodes of paying for sex, compared to men who had not had sex while intoxicated. Having sex while intoxicated in the last six months was the single greatest determinant of recent HIV seroconversion. This study demonstrated the strong link between alcohol use and HIV risk behavior, as well as the feasibility of conducting HIV prevention interventions and research in beer halls.

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Putting it into practice

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Randomized Trial of a Community-Based Alcohol-Related HIV Risk-Reduction Intervention for Men and Women in Cape Town, South Africa

Kalichman, S.C., Simbayi, L.C., Vermaak, R., et al. *Annals of Behavioral Medicine* (2008), Vol. 36 No. 3, pp. 270-279.

This brief alcohol intervention focused on reducing HIV sexual risk behavior among shebeen (informal neighborhood drinking venue) patrons in Cape Town. Over 350 participants were randomly assigned to an intervention or a comparison group. The intervention group received a three-hour session teaching HIV and alcohol risk-reduction skills. The session covered HIV information/education, sexual communication skills building, and motivational interviewing to explore how alcohol can trigger lapses in safer sex. The comparison group received a one-hour alcohol education session. Three months after implementation, participants in the intervention group were more likely to practice all risk-reduction variables (increased condom use, consistent condom use, and acts completely protected by condom use; less drinking before sex, decreased likelihood of meeting a sex partner at a shebeen, etc.) compared to the comparison group. At six months, however, the only significant difference found between groups was less alcohol use before sex among the intervention arm. Furthermore, the heaviest drinkers did not benefit from the intervention. The authors conclude that such interventions are feasible to implement in low-income communities and may have significant short-term effects at the individual level.

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Substance Use and Sexual Risk Prevention in Cape Town, South Africa: An Evaluation of the Healthwise Program Prevention

Smith, E.A., Palen, E.A., Caldwell, L.L., et al. *Science* (2008), Vol. 9 No. 4, pp. 311-321.

The South Africa HealthWise Program is a school-based program for eighth and ninth graders that combines life skills training with education on sexual risk prevention. It helps youth manage their leisure time by encouraging them to develop personal interests and take personal responsibility for making healthy choices. Among over 2,000 low-income students in Cape Town who participated in a randomized, controlled trial, students in the intervention arm reported less recent alcohol use than those in the control arm, including heavy alcohol use. Furthermore, students taking part in the intervention were also more confident and more knowledgeable about how to use condoms, compared to students who had not participated in the program. HealthWise did not have an effect on these students' sexual debut, however, nor did it decrease sexual risk behavior among sexually active students.

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Efficacy of an American Alcohol and HIV Prevention Curriculum Adapted for Use in South Africa: Results of a Pilot Study in Five Township Schools

Karnell, P., Cupp, P., Zimmerman, R., et al. *AIDS Education and Prevention* (2006), Vol. 18 No. 4, pp. 295-310.

This project adapted an American alcohol and HIV prevention curriculum for ninth grade students in five schools in KwaZulu-Natal Province. Three schools were randomly assigned to receive the intervention; two schools served as comparisons. The intervention consisted of a series of audio monologues in which four fictional teenage characters talk about the dilemmas they face in deciding whether to use alcohol and/or have sex. The monologues were a jumping-off point for class discussions and group assignments. Students filled out behavioral surveys at baseline and five months after the intervention. Among those becoming sexually active during the project, students in the intervention group reduced their frequency of alcohol use before or during sex compared to those in the control group. Furthermore, females in the intervention group reported feeling more confident to refuse sex compared to controls. The intervention had no effect on alcohol use or alcohol-related problems, however, nor did it affect students' perceived social norms regarding sex, attitudes toward condoms, or condom-use self-efficacy.

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Substance Use, Sexual Risk, and Violence: HIV Prevention Intervention with Sex Workers in Pretoria

Wechsberg, W.M., Luseno, W.K., Lam, W.K., et al. *AIDS and Behavior* (2006), Vol. 10 No. 2, pp.131-137.

For South African women who engage in sex work, a confluence of factors including frequent unprotected sex, alcohol/substance abuse, and the threat of violence can lead to sustained vulnerability to HIV. This article describes a pilot study in which an intervention first developed for crack-abusing women in the United States was adapted and tested with Black South African sex workers who use cocaine. The Pretoria Women's Co-op Project intervention consisted of two private, one-on-one sessions between a participant and an interventionist. The sessions included personalized assessment of drug use and sexual risk, risk reduction planning, violence prevention strategies, and how to access community resources. The intervention emphasized cultural, gender-based, and lifestyle influences affecting women's risk within the context of sex work.

Ninety-three women were randomly assigned to either the intervention or a comparison intervention. The comparison intervention was an adaptation of the NIDA Standard Intervention in which participants received two one-hour HIV education and risk-reduction skills-building sessions over a two-week period. A behavioral survey was conducted at baseline and at one month post-intervention. In both the intervention and comparison groups, women reported decreases in unprotected sex with clients, in daily use of alcohol and cocaine, and in use of alcohol and drugs during sex work. The decreases were not significantly different between the two groups.

Women in the intervention group were more likely to use condoms than women in the comparison group, and women in both groups increased their use of the female condom. Both groups continued to experience violence, including being robbed, beaten, and raped. Overall, the pilot study showed the feasibility of adapting a U.S.-based intervention for South African women and of recruiting women to participate. However, evidence of its benefits over a comparison intervention is limited.

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Development of an Opinion Leader-Led HIV Prevention Intervention among Alcohol Users in Chennai, India

Sivaram, S., Srikrishnan, A.K., Latkin, C.A., et al. *AIDS Education and Prevention* (2004), Vol. 16 No. 2, pp.137-149.

This article describes a community-based intervention implemented in wine bars in Chennai. Community popular opinion leaders (CPOs) were trained to become advocates for HIV risk reduction at drinking venues. The CPO approach is rooted in the Diffusion of Innovation Theory and hypothesizes that people popularly seen as leaders within their social circles can influence the opinions and actions of their peers. Research revealed the important role wine bars play in establishing and maintaining personal and social networks: these networks also assist men in identifying and procuring the services of female sex workers. Despite accurate knowledge of HIV transmission, use of condoms was rare among these men. CPOs were identified using participant observation, peer nominations, and nominations from wine bar staff members. The recruitment and training of the pilot CPOs showed this is a feasible intervention model.

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Tools and Curricula

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Researchers Adapt HIV Risk Prevention Program for African-American Women

Williams, J.S. *NIDA Notes* (2004), Vol. 19 No. 1.

Developed in the early 1990s, the United States National Institute on Drug Abuse (NIDA) standard intervention is an HIV/AIDS education program that adds HIV prevention for drug users and their sex partners to CDC's standard HIV testing and counseling intervention. This article describes the elements of the NIDA standard intervention and how it has been effectively tailored to meet the needs of populations at risk.

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Brief Intervention for Hazardous and Harmful Drinking: A Manual for Use in Primary Care

Babor, T., & Higgins-Biddle, J. World Health Organization Department of Mental Health and Substance Dependence (2001).

Brief interventions--practices that identify a real or potential alcohol problem and motivate an individual to do something about it--have a positive impact on alcohol abuse. This manual provides the rationale for using alcohol abuse screening tools and brief interventions in the primary care setting. It also provides clinicians guidance on how they can quickly and effectively screen patients for alcohol problems and provide information, support, encouragement, and joint problem-solving. Sample scripts are provided, as are patient education materials. When used together with AUDIT: Alcohol Use Disorders Identification Test: Guidelines for Use in Primary Care, providers have access to a comprehensive approach to alcohol screening and brief intervention in the primary health care setting.

[View Full Text \(PDF, 232 KB\)](#)

AUDIT: Alcohol Use Disorders Identification Test: Guidelines for Use in Primary Care

Babor, T., Higgins-Biddle, J., Saunders, J., et al. World Health Organization Department of Mental Health and Substance Dependence (2001).

This manual introduces AUDIT, the Alcohol Use Disorders Identification Test, a simple screening tool that primary care providers can use to identify patients who may benefit from reducing their alcohol consumption. This updated edition of AUDIT incorporates advances in research, clinical experience, and evaluation over a twenty-year period. It includes both interview and self-screening instruments. This manual is designed to be used in conjunction with [Brief Intervention for Hazardous and Harmful Drinking: A Manual for Use in Primary Care](#).

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The HIV and Alcohol Prevention in Schools Project

The HIV and Alcohol Prevention in Schools (HAPS) project demonstrates the effective adaptation to South Africa of two successful HIV and alcohol prevention curricula from the United States. The project combines participatory classroom and media interventions targeting at-risk adolescents in eight schools. Preliminary results indicated significant differences between students in the intervention and control conditions on sexual and alcohol refusal self-efficacy, attitudes about sex and about alcohol, and intention to use alcohol with sex. Results also suggest that when appropriately adapted for cultural differences, behavioral interventions developed in western countries may be effective in other contexts.

[View HAPS Website](#)

[View Amazing Alternatives curriculum](#)

[View Reducing the Risk curriculum](#)

Motivational Interviewing

Motivational Interviewing (MI), a counseling technique for eliciting behavior change, has been used alcohol and substance

abuse and health promotion interventions. This webpage from National Registry of Evidence-based Programs and Practices from the United States Department of Health and Human Services Substance Abuse and Mental Health Services Administration contains summaries on MI outcomes, quality of research, study populations, readiness for dissemination, costs, and replication. A link is provided to access relevant manuals.

[View Website](#)

Popular Opinion Leader (POL)

Popular Opinion Leader (POL) interventions identify and enlist the help of key opinion leaders to change risky sexual norms and behaviors. The program is based on the principle that trends and innovations are often instigated by a small but influential group of leaders, which then diffuse throughout the population. The United States Centers for Disease Control and Prevention successfully used POL interventions in gay bars to encourage safer sexual norms and behaviors through informal social interaction. This webpage provides links to resources and tools that can be used when implementing a POL intervention, an evaluation field guide and instruments, and contact information for requesting implementation materials.

[View Website](#)

Project Northland

Project Northland was a large randomized community trial for the prevention of adolescent alcohol use, sponsored by the National Institute on Alcohol Abuse and Alcoholism of the U.S. National Institutes of Health. The project ran from 1991 to 1998 targeting youth in 24 schools and 28 communities in northeastern Minnesota during their 6th, 7th, and 8th grade years. The three-year intervention involved classroom curricula, parental involvement programs, extracurricular peer leadership, and community-wide task force activities. The results of Project Northland supports the effectiveness of primary prevention programs that comprehensively engage youth, parents, and the community.

[View Project Northland Website](#)

South Africa HealthWise Project

HealthWise is a comprehensive risk-reduction and life skills curriculum targeting eighth and ninth grade students in Western Cape province of South Africa. An international research collaboration between Penn State University and University of the Western Cape, HealthWise was designed to reduce the transmission of HIV/AIDS and other STIs, reduce drug and alcohol abuse, and increase positive use of leisure time. HealthWise was adapted from similar curricula from the United States, [TimeWise](#). The HealthWise project website hosts a project description as well as slides describing the theoretical underpinnings and logic model for the curriculum.

[View Project Website](#)

TimeWise

TimeWise is a published curriculum that teaches youth how to use their free time in healthy ways. The TimeWise Learning Lifelong Leisure Skills project ran from 2001 to 2003 and targeted middle-school youth in the rural Eastern United States to increase positive free time use and mitigate or prevent the initiation of substance use. Based on interrelated theoretical foundations such as Intrinsic Motivation Theory, Self-determination Theory, and Constraints Theory, TimeWise was designed to teach students to determine personally satisfying and meaningful leisure activities; understand the benefits of participating in healthy leisure; alleviate boredom and increase optimal experience in leisure time; and identify and overcome constraints to participating in desired activities. The project website includes a detailed description of the curriculum and a link to ETR Associates, from whom the published curriculum may be purchased.

[View Timewise Project Website](#)

Learn more

United States National Institute on Alcoholism and Alcohol Abuse (NIAAA)

NIAAA is a United States (U.S.) National Institutes of Health website providing extensive information and resources on prevention initiatives for populations that are at risk for alcohol abuse. The site includes a database of alcohol-related biomedical research, educational materials on alcohol abuse prevention and the association of alcohol use and other diseases, including HIV. The focus of NIAAA and the website is on U.S.-based activities, although some information on alcohol programs and consumption in other countries is available in the database.

[View Website](#)

United States Substance Use & Mental Health Services Administration (SAMHSA)

This website is a repository for the United States (U.S.) Office of Applied Statistics searchable database on substance abuse and mental illness. SAMHSA collects national statistics on the incidence and prevalence of mental illness, alcohol, tobacco and illicit drug use. The site includes reports, publications and references on a wide range of substance use and mental health topics in U.S. populations. It also contains a database of evidence-based practices for the prevention and treatment of mental and substance use disorders.

[View Website](#)

The World Health Organization (WHO) Management of Substance Abuse

Management of Substance Abuse is a section of the WHO website that offers a large databank on substance use and mental health around the world. The Global Information System on Alcohol and Health includes comprehensive regional and country-level information and standard indicators on substance use trends and related mortality in all United Nations member countries. These data are updated on a regular basis. The site also houses a database of publications and resources on alcohol abuse as a risk factor for HIV, as well as programmatic approaches for HIV prevention related to alcohol use.

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