The sprawling townships surrounding Cape Town, South Africa, are home to one of the most severe HIV epidemics in the world (National Department of Health [NDH] 2007). In these densely packed neighborhoods, where many of the tiny homes and shops are fashioned from reclaimed tin and timber, one sees places to drink at every turn. Some are licensed taverns, but many are unlicensed bars set up in homes. There are few jobs in these poverty-stricken townships, so selling alcohol—mostly beer—is a good way to make money. And unemployment—especially in places where there are few recreational facilities or other diversions—also creates demand for alcohol.

Because drinking alcohol before sex is a known contributor to risky sexual behavior, it is perhaps not surprising that many drinkers find themselves seeking treatment for a sexually transmitted infection (STI) at one of Cape Town’s public clinics. In 2005, HIV prevention researchers from the South Africa Human Sciences Research Council (HSRC) and the U.S.-based University of Connecticut teamed up to conceptualize, implement, and test a program to reduce alcohol-related sexual risk among STI patients seeking care at a primary health care clinic. The program was called Phaphama, which means “wise up” in Zulu and other South African languages.

Using well-established HIV behavior change methods, this unique program—which wrapped up operations in late 2009—combined counseling to reduce hazardous drinking with HIV risk-reduction
counseling in a single 60-minute session. This intensive, time-efficient approach has led to documented successes in changing not just one but several sets of behaviors that are notoriously resistant to change.

Alcohol Use and Risky Sex

Programs that specifically address the link between alcohol and HIV are extremely rare. However, a small number of promising interventions have recently been developed and implemented in sub-Saharan Africa and India. These provide valuable lessons about the feasibility, acceptability, and effectiveness of several approaches to reducing alcohol-related risky sexual behavior.

Research has shown that alcohol impairs the ability to judge risk and increases sexual arousal (George and Stoner 2000). Ample research also strongly suggests that alcohol use and HIV risk behavior are associated in many countries around the world, including in southern Africa (Cook and Clark 2005; Kalichman et al. 2007a). In Africa, drinking venues themselves have also been associated with HIV risk, as they provide an opportunity for sexual networking to occur in the context of drinking (Lewis et al. 2005; Kalichman et al. 2008a).

With an overall adult HIV prevalence of 18 percent, South Africa is experiencing one of the world’s most severe HIV epidemics (NDH 2007). At the same time, South Africa also has one of the highest yearly per capita alcohol consumption rates in the world (10.3 to 12.4 liters per drinker) (Morojele, Parry, and Matzopolus 2008). Alcohol is the third largest contributor to death and disability in South Africa, after unsafe sex and interpersonal violence (Morojele, Parry, and Matzopolus 2008).

Fortunately, information about the hazards of alcohol use is increasingly incorporated into HIV prevention campaigns in South Africa. For example, the Soul City mass media campaign, which includes a serial television drama where fictional characters dramatize both HIV risk behavior and strategies for averting infection, is currently producing episodes that focus on alcohol-related risky sex and relevant prevention strategies. Community-based HIV service organizations also do outreach activities at bars. However, opportunities to raise awareness about alcohol use as a contributor to risky sex are still rare in clinical health care services. The Phaphama Program demonstrates one model for integrating alcohol education into clinical services for STI clients, who are at high risk for HIV infection and urgently need effective risk-reduction interventions.

Developing the Phaphama Program

Beginning in 2002, Dr. Leickness Simbayi of the South Africa Human Sciences Research Council and Dr. Seth Kalichman of the University of Connecticut began to develop better models for
preventing HIV among STI patients. Their first step was to design an HIV education and risk-reduction counseling program for patients receiving treatment for their STIs. However, it soon became clear that many patients were returning to the clinic with repeat infections. Clearly, the original program was not effective enough for these patients in producing long-term risk reduction. Following the suggestion of several clinic nurses, who believed alcohol use might be a key obstacle to these patients’ success, Simbayi and Kalichman added content on alcohol use as a risk factor for HIV to the original HIV risk-reduction counseling program for STI patients. The overall goals of the enhanced alcohol-HIV counseling program were to help participants:

• Reduce the number of sexual partners.
• Reduce the number of unprotected sex acts and increase condom use.
• Reduce the frequency of alcohol use before sex.
• Increase knowledge about HIV, including how to prevent transmission.
• Reduce AIDS-related stigma.
• Increase personal intentions to reduce HIV sexual risk behaviors.
• Increase a personal sense of confidence that one can reduce HIV sexual risk behaviors.
• Reduce alcohol outcome expectancy (e.g., reducing the belief that “I am a better sex partner after I have been drinking”).

With funding from the U.S. Government’s National Institute of Alcoholism and Alcohol Abuse (NIAAA) and the National Institute of Mental Health (NIMH), the Phaphama Program was rolled out in 2006 in STI clinics in Ekurhuleni, Queenstown, and Cape Town, and continued through the end of 2009.

During counseling sessions, clients received personalized information about how their drinking behavior could lead to risky sex and got help from the counselor to develop an action plan for reducing those risks. Because no model existed for working with STI patients on reducing alcohol-related HIV risk, the designers of Phaphama adapted the Brief Intervention for Hazardous and Harmful Drinking (Babor and Higgins-Biddle 2001; Babor et al. 2001), an approach promoted by the World Health Organization. It uses the Alcohol Use Disorders Identification Test (AUDIT) to fit clients into one of four categories: (1) nondrinkers, (2) low-risk drinkers, (3) high-risk drinkers, and (4) probable alcohol dependence. Based on the results of the AUDIT, a health care worker provides a brief counseling session lasting from 5 to 15 minutes tailored to the individual’s pattern of alcohol use. The counseling session typically includes information on alcohol-related harm, help in identifying high-risk situations related to drinking, and development of a personal plan to reduce drinking.

The designers of Phaphama combined the Brief Intervention for Hazardous and Harmful Drinking with their previous HIV risk-reduction counseling model for STI patients to create a 60-minute counseling curriculum to address the intersection of alcohol use and HIV risk.
To ensure the program content was relevant to the South Africans attending STI clinics, program staff met with South African voluntary counseling and testing (VCT) counselors, other counselors, trainers, and STI researchers to tailor the content. For example, the program designers adapted the visual images used to elicit motivation for behavior change. They also adapted the information component to counter common myths about HIV typically heard in the townships, where most STI patients who attend primary health care clinics live. Finally, they added culturally relevant content on HIV-related stigma and created locally appropriate examples of risk and risk reduction for the behavioral skills–building components.

Implementation

Clinic nurses screened patients for eligibility for the Phaphama Program. All repeat patients attending the clinic for STI treatment were eligible to participate. After receiving STI care, patients were referred to a Phaphama counselor.

At the beginning of the counseling appointment, clients first completed the 10-question AUDIT using an audio-assisted, self-interviewing (ACASI) computer program that led the client through the questions. The AUDIT asks such questions as, “How many alcoholic drinks do you have on a typical day when you are drinking?” and “How often during the last year have you had a feeling of guilt or remorse after drinking?” Answers can range from “never” to “four or more times a week.” Each answer has a numeric point value. At the end of the AUDIT, points are added up for a cumulative “score,” which the counselor shared during the counseling session.

After completing the AUDIT, the client and counselor began the session, which took about one hour and was accompanied by a flip chart of visual aids. The first 20 minutes were devoted to basic information about how HIV is transmitted and how it can be prevented. The counselor then spent about 20 minutes guiding the client through motivational exercises to identify and analyze personal HIV risk behavior, including which situations tend to trigger risky sex and how ready the client feels to make changes to reduce those risks. At this point, clients who scored an AUDIT score of eight or higher (which

Counselor: “Triggers are things around you that make you want to have sex. They are your turn-on; they get you going. They can be people, places, substances, or feelings. People triggers are something you like about a person. Places could be a quiet place or a club. Substances could be alcohol or drugs.”
signifies high-risk drinking) received counseling on alcohol use. The counselor introduced the idea that alcohol or other substances may act as a trigger for risky sex for some people and asked the client to consider how this might be true for them.

The counselor then provided the client’s AUDIT score and explained how to interpret it using the “Drinkers Pyramid” tool (Figure 1).

Clients with scores of 8 to 19 were identified as high-risk drinkers. According to the AUDIT, they may be experiencing negative social, physical, or psychological outcomes related to their drinking and could benefit from specific advice to reduce their alcohol intake. Individuals with AUDIT scores above 20 were referred for professional diagnostic evaluation and possible treatment for alcohol dependency.

The client and counselor also discussed the physical and emotional effects of high-risk drinking, using a visual aid (Figure 2).

Using the image of a ladder (Figure 3), the counselor also helped clients explore how ready they were to reduce the amount and frequency of their drinking and how confident they felt about doing so.

**Figure 1. The Drinker’s Pyramid.**

Counselor: “This is a drinker’s pyramid. When you did your computer assessment, you were asked questions about your alcohol use. The computer calculated that your AUDIT score is _______. This means that alcohol is (not a problem for you, could be a problem for you, may be a problem for you, probably is a problem for you).”
The counselor wrapped up the discussion on alcohol by asking the client to document a concrete plan to reduce drinking, using the format shown in Figure 4. The remainder of the counseling session was devoted to skills building in condom use and negotiation, and to role-playing risk scenarios from the client’s own past to explore how to avert those risks in the future.

The counselor wrapped up the discussion on alcohol by asking the client to document a concrete plan to reduce drinking.

Evaluation

The program was evaluated using a randomized-controlled design. A total of 143 STI patients who attended primary health care clinics and were alcohol drinkers consented to participate in the evaluation. These patients were randomly assigned to receive either the 60-minute alcohol and HIV risk-reduction session or a 20-minute one-on-one HIV education session.

Before receiving either intervention, evaluation participants completed a survey about their HIV risk history, past alcohol and other drug use, and detailed information on their sexual behaviors and condom use. Participants retook the same survey three months and again six months after taking part in the programs to determine whether Phaphama Program participants had improved their risk behavior in the months after counseling, compared to those who had only received HIV education.

Overall, the results showed a 65 percent reduction in unprotected sex for Phaphama participants,
who reported significantly more risk reduction than those in the comparison group. These reductions were sustained over a six-month period. In the three months following participation in the program, alcohol use before sex was also significantly lower for those who had received the alcohol-HIV counseling. The perception that alcohol use would result in enhanced sexual pleasure was also lower after three months among those who participated in Phaphama. For both alcohol outcomes, the effects were not sustained after six months.

The lack of sustainability of the alcohol outcomes suggests that the sexual risk-reduction behavior changes may also deteriorate over time and indicates the need for more intensive alcohol risk-reduction intervention components and maintenance intervention strategies (Kalichman et al. 2007b: 599).

Some behaviors, knowledge, and perceptions were not affected at all by participation in the program. For example, numbers of sexual partners remained the same between the baseline survey and the follow-up surveys for both groups of evaluation participants. There were also no differences between the groups in terms of their HIV knowledge, stigmatizing attitudes about AIDS, intention to change risk behaviors, and feelings of self-confidence to reduce risk.

### What Worked Well

The Phaphama Program successfully led to at least short-term reductions in alcohol-related HIV risk behavior. The program demonstrated several key areas of strength.

**The program is evidence-informed and highly relevant:** Designers of the program adapted existing intervention models and behavior-change theory with proven effectiveness to develop their own approach. In this way, they maximized their opportunity for success. The program was also very relevant in its response to the convergence of two severe public health problems (harmful alcohol use and HIV) that are well recognized in South Africa but rarely addressed in tandem.

**Clients and counselors appreciated the individualized approach:** The Phaphama Program represented a very personalized approach to assisting clients. By asking the client to reflect at length on personal risk experiences, on what triggered that risk, and on how alcohol plays a role, the client was encouraged to develop personal solutions with support from the counselor.

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**The results showed a 65 percent reduction in unprotected sex for Phaphama participants, who reported significantly more risk reduction than those in the comparison group.**

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![Figure 4. Client Plan Template.](https://via.placeholder.com/150)
Counselors reported that participants seemed to appreciate the individualized attention they received for a full 60 minutes, an unusually sustained appointment in health care settings. Counselors also said they themselves appreciated the opportunity to engage with clients in this personalized way. This type of intervention is particularly appropriate for individuals who may not be comfortable receiving information and counseling in a group setting.

The program was very specific in the way it targeted its audience: By focusing on STI patients, the Phaphama Program was designed to address the HIV prevention needs of a most-at-risk population (MARP). Because they have an STI, clinic patients are known to have engaged in sexual risk. Evidence suggests that, for many of these individuals, alcohol use is a powerful trigger to engaging in that risk. This intervention provided an HIV prevention service in a very specific way to a very specific population at a very specific time, when they may be most receptive to intervention, having already taken the step of seeking help for their STI symptoms. In this way, the program maximized its opportunity to successfully promote risk reduction among those who demonstrably need it.

The program capitalized on existing health care infrastructure: The Phaphama Program was integrated into existing clinical care services. Although finding clinic space for counseling sessions was at times problematic, this approach added value to existing programs and services for a small additional investment. Around the world, HIV programs struggle to effectively integrate services to make prevention, treatment, and support services more accessible. The Phaphama Program represents one successful model for integrating HIV services into the existing health care system that can be implemented immediately.

Challenges

Serving the needs of individuals with persistent HIV risk behavior coupled with high-risk drinking is a challenging mission indeed. Even with a highly skilled cadre of experienced risk-reduction counselors and a sound, evidence-based curriculum, Phaphama encountered several profound challenges to its success.

Creating demand, expanding reach: Attracting patients to participate in the program was not easy. Thirty-six percent of those invited to participate said they were not interested and, of those who agreed to participate, another 25 percent proved unable to do so. The program is time-intensive. At 60 minutes for the counseling session alone, many clinic patients simply are not willing or able to make the
Further research should show whether similar results are possible by delivering the program content in a group-based format in either a clinical setting or other community settings. The Phaphama team has begun such work with some promising results (Kalichman et al. 2008b). Based on additional work implementing the Phaphama model in different countries and contexts, opportunities for scaling up this model within STI and/or HIV test settings should be explored to ensure that greater numbers of people are reached.

**Developing better strategies for serving women:** The Phaphama Program reached about six times as many men as women. In South Africa, as in many other parts of the world, many more men than women seek STI treatment at clinics. Programmers should develop alternative strategies to ensure that women can access clinic-based alcohol and HIV prevention services. Providing these services in conjunction with antenatal clinic services and at other HIV testing sites may help. Outreach, particularly to women who engage in transactional sex at bars, may also bring them into services that include STI treatment and accompanying counseling for alcohol and HIV prevention. Finally, for many women, the greatest threat of HIV transmission comes from their steady male partners. This threat is exacerbated when their partners engage in harmful drinking that leads to risky sex. In the end, reducing hazardous alcohol use among men may be one of the best ways to reduce women’s vulnerability to HIV.

**Lack of community-based support for sustaining reductions in risk over time:** In economically stressed communities, opportunities to drink abound and support for moderating alcohol use and risky sex is rare. Although a single 60-minute session in a clinical setting led to some behavior change over a three- or six-month period, interventions are not fully effective if they are not sustained.

**Lack of services for treatment of alcohol dependency:** It is inevitable that the AUDIT will identify people with likely alcohol dependency. For these individuals, HIV risk reduction counseling may be ineffective without accompanying treatment for the underlying dependency. Unfortunately, many developing countries lack any type of treatment services for those who need them. For those countries, such as South Africa, where services do exist, cost and availability are obstacles to use. Public health systems need to create many more alcohol and other drug dependency treatment services to effectively address the health needs of this sector of the population.

**Recommendations**

**Use high-intensity, individualized programs for most-at-risk individuals seeking help:** Individuals who have STI symptoms are at high risk for contracting HIV. By seeking care for those symptoms, STI patients are exhibiting a willingness to reach out for help. The clinic visit, therefore, may
be a particularly important “teachable moment” for many. Personalized counseling on HIV risk reduction, including exploration of the role alcohol can play as a trigger for risk, may be an extremely strategic technique for reaching most-at-risk individuals.

**Incorporate counseling on alcohol into existing HIV prevention counseling services:** Existing HIV risk-reduction counseling can easily incorporate education and counseling on reducing harmful alcohol use; this program showed it is feasible for STI services. Similar efforts can be followed to incorporate alcohol content into HIV voluntary counseling and testing programs or into community-based group counseling or workshop forums.

**Ensure programs are equally accessible to women and men who are at risk:** Motivations for and patterns of alcohol consumption often differ between women and men. Likewise, health care–seeking behavior also differs between women and men. Programmers must be aware of which population is likely to be best served by various approaches so that women and men have equal access to services.

**Future Programming**

Alcohol and HIV risk-reduction counseling provided through existing primary health care clinics is a relatively simple strategy for delivering HIV services to individuals at greatest risk. The Phaphama model is well-documented and ready for adaptation to other clinical settings in African countries and to other parts of the world. Because it is based on well-researched behavior-change theory and counseling models that have been implemented with success in many parts of the world, programmers may find the content relatively simple to replicate once basic cultural adaptations are made. However, successful implementation of the program also requires human and financial resources to be made available for training and ongoing monitoring and support of the clinic staff that will implement the program and to ensure adequate clinic space is available for the uninterrupted private counseling sessions. Simple cultural adaptations can ensure its appropriateness. As the program model is implemented more widely, programmers should document improvements to its content and evidence of its effectiveness in producing long-lasting behavior change.

Certainly, other approaches are also needed to address the social context in which individuals attempt to change their behavior. New strategies are necessary to ensure that families, communities, and governments provide a supportive social and policy environment for sustainably reducing the wide range of negative effects of hazardous drinking, including HIV risk. The future of HIV prevention programming on alcohol and HIV will involve finding ways to combine individual-centered programs such as Phaphama with community-based and legal/policy interventions to ensure an enabling environment to sustain individual change. Examples include:

- Providing intensive counseling services for MARPs in combination with promoting alternative income generation for women who engage in transactional sex.
- Providing alternative recreation opportunities for people living in low-income and high-density urban neighborhoods so that drinking is not the only way to relieve boredom.
- Enforcing liquor licensing laws to reduce the number of alcohol retail outlets and ensure those that are licensed sell and serve alcohol responsibly.
- Creating mass media campaigns to broadcast messages about how to be healthier by moderating alcohol use.

Coordinating these multilevel approaches will require the involvement of policymakers at the national and provincial levels to ensure strategic development plans are in place, locate adequate funding for them, and collect data on their impact.
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