Should Voluntary Counseling and Testing Counselors Address Alcohol Use with Clients? Findings from an Operations Research Study in Kenya

Drinking alcohol has been associated with HIV infection in several countries (Bryant 2006). In Kenya, data from the Demographic and Health Survey show that HIV prevalence among women who had ever consumed alcohol was 19 percent, compared to 9 percent among their never-drinking counterparts (CBS 2004). In Kisumu, Ayisi et al. (2000) found that after controlling for confounding variables, women who drank alcohol were 60 percent more likely to be HIV-positive than women who did not drink.

Alcohol is thought to fuel HIV transmission by blunting one’s self-monitoring behavior, thus increasing the likelihood of having multiple or casual partners and unprotected sex (Weiser et al. 2006; Zablotska et al. 2006; Morojele et al. 2003; Shaffer et al. 2004). A growing body of evidence also suggests a direct biomedical link between alcohol consumption and HIV infection and disease. Heavy and sustained alcohol use depresses the immune system and causes alcohol-induced malnutrition, which can increase vulnerability to HIV infection (Bryant 2006). Emerging laboratory evidence suggests that alcohol may morphologically alter cellular structure to increase both the HIV infectivity and vulnerability of cells (Liu et al. 2003; Bagby et al. 2003). Alcohol also interferes with liver function, affecting its ability to metabolize certain antiretrovirals (ARVs), particularly protease inhibitors, thus reducing their therapeutic efficacy and increasing the likelihood of drug resistance (Gail-Becker 2005; Bryant 2006).

Alcohol consumption is popular in Kenya, particularly among men, and both home-brewed and commercially prepared beverages...
are widely available. Data from Othieno et al. (2000) show that 29 percent of men and 7 percent of women attending health centers in both rural and urban Kenya were alcohol users. Research by Shaffer et al. (2004) suggests that alcohol misuse may be a serious problem among patients attending urban and rural clinics in western Kenya. In this study, 76 percent of males and 25 percent of females who were current drinkers reported hazardous drinking behavior based on WHO’s AUDIT\(^1\) scale. Despite alcohol’s role in HIV transmission and management, few HIV/AIDS services, including voluntary counseling and testing (VCT), routinely inquire about alcohol use among clients; thus, health providers are missing an important opportunity to address this potentially modifiable HIV risk factor.

With more than 800 VCT centers spread all over Kenya (NASCOP 2006), VCT services are now an important entry point for HIV prevention, treatment, and care. During pre-test counseling, clients are given information on modes of HIV transmission and triggers of risky behavior. Thus, the VCT setting offers an optimal venue for discussing alcohol as a factor in HIV transmission and for helping clients formulate a risk-reduction plan. Because both HIV and alcohol abuse are stigmatized, VCT centers can offer a supportive atmosphere to bring up risk behaviors that are otherwise uncomfortable to discuss, and can offer appropriate referrals.

In order to document whether there is an unmet need for alcohol counseling among VCT clients in Kenya, focus group discussions and exit interviews were conducted in a variety of VCT service delivery points. This research is part of a larger operations research project being implemented by the Horizons Program, Liverpool VCT and Care, and the Steadman Group. Its goal is to provide information on the alcohol and substance use counseling needs of clients seeking HIV services, and provide guidance on how substance use can be effectively integrated into HIV counseling and testing.

**Study Methods**

The researchers began the study in December 2005 by conducting 19 focus group discussions in Nairobi and Mombasa with different types of respondents: VCT counselors (4 groups), ARV/TB counselors (3 groups), counselors in substance abuse recovery facilities (3 groups), patients on ARVs (2 groups), patients in alcohol recovery sites (3 groups), and customers at local drinking establishments (4 groups). Information from the FGDs was used to design a questionnaire that was administered to clients accessing a total of 15 static and five mobile VCT sites\(^2\) in June 2006. These VCT sites were located in eight districts in Kenya: Nairobi, Mombasa, Malindi, Nyandarua, Kiambu, Thika, Muranga, and Maragua.

A trained interviewer was stationed at each participating facility over a two-week period and approached each potential respondent after s/he had been through the VCT session. Potential respondents did not have to have taken an HIV test, but needed to have undergone HIV pre-test counseling. A random sample of clients ages 18 years and older were approached, and 1,073 consented to be interviewed (89 percent acceptance rate). Respondents were interviewed face-to-face by the interviewer in a private area using a pre-tested questionnaire. Nearly half (48 percent) of the respondents were interviewed in Kiswahili, 36 percent in English, and 16 percent in Kikuyu.

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\(^1\)Alcohol Use Disorders Identification Test (AUDIT) is a 10-item scale with a total score of 40 (see Table 1). Developed by WHO to identify risky drinking, alcohol misuse, and alcohol dependency (Saunders et al. 1993; Babor et al. 2001), it has been validated in many countries. A score of eight points and above indicates a likelihood of harmful or hazardous drinking.

\(^2\)The static sites were located in Nairobi, Mombasa, and Malindi. The mobile sites were in Nyandarua, Kiambu, Thika, Muranga, and Maragua.
Prior to data collection, the study protocol was cleared by Horizons’ ethical review process, and was approved by the National Council for Science and Technology. All respondents participating in the research gave written informed consent to participate.

The data were analyzed using SPSS and STATA. Pearson’s chi-square tests were used to test for statistical significance between dependent and independent variables. The severity of alcohol use was assessed using the AUDIT scale. All the group discussions were tape recorded and transcribed, and the data analyzed using NUD*IST (N6).

**Characteristics of the Survey Sample**

Table 1 shows the demographic characteristics of the survey respondents. Slightly over half (53 percent) of the participants were male, the mean age was 30 years (range: 18–85), 53 percent were single (never married), and 77 percent had a sexual partner. The vast majority were Christian (63 percent Protestant and 28 percent Catholic); 4 percent were Muslim.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n</th>
<th>%</th>
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<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>508</td>
<td>47</td>
</tr>
<tr>
<td>Male</td>
<td>565</td>
<td>53</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
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<td></td>
</tr>
<tr>
<td>Married</td>
<td>392</td>
<td>37</td>
</tr>
<tr>
<td>Single (never married)</td>
<td>578</td>
<td>53</td>
</tr>
<tr>
<td>Divorced/widowed/separated</td>
<td>103</td>
<td>10</td>
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<tr>
<td><strong>Highest level of education</strong></td>
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<td></td>
</tr>
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<td>Never attended school</td>
<td>24</td>
<td>2</td>
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<td>Primary education</td>
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<td>466</td>
<td>43</td>
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<td>University or above</td>
<td>68</td>
<td>6</td>
</tr>
<tr>
<td>Other formal education</td>
<td>138</td>
<td>13</td>
</tr>
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</table>

**Key Findings**

**More than a fourth of male VCT clients in the sample were current alcohol drinkers.**

All respondents were asked about drinking alcohol. Forty-four percent reported that they had ever drunk alcohol but they currently did not (former drinkers), and 35 percent reported that they had never drunk alcohol (never drinkers). A fifth (21 percent) of survey respondents said that they currently drank alcohol (current drinkers). Men were significantly more likely than women to be current drinkers (29 percent vs. 12 percent; p < .0001). The proportion of women who had never drunk alcohol was more than double that of men (51 percent vs. 21 percent; p < .0001). There was no difference in drinking behavior among clients by type of VCT service accessed (i.e., static vs. mobile).
Current consumers of alcoholic beverages were asked what they usually drank. Multiple answers were possible. Most (90 percent) reported drinking commercial beer, followed by spirits (44 percent), wine (36 percent), and homebrews (28 percent). Although not statistically significant, wine was more likely to be consumed by women than men (41 percent vs. 34 percent).

**Reported use of other addictive substances was low among the VCT clients participating in the study.**

All respondents were asked whether they use other addictive substances such as marijuana, khat, cocaine, heroine, and glue, among others. About 5 percent said they were current users, 12 percent were former users, and 83 percent had never used such substances. Men were significantly more likely than women to have ever tried at least one of these substances (27 percent vs. 5 percent; p < .0001).

**A large proportion of current drinkers were hazardous drinkers.**

Using the AUDIT scale, the frequency and severity of drinking in the study group was examined. Approximately 14 percent of all respondents had an audit score of eight points or above, which indicates hazardous drinking (Table 2). This included 20 percent of male clients and 7 percent of their female counterparts. When the analysis was confined to current drinkers, 34 percent of them were found to be harmless drinkers (AUDIT score 7 points or less). Therefore the remaining two-thirds (66 percent) were hazardous drinkers, including 68 percent of males and 59 percent of females. The mean AUDIT score among current drinkers was 13 (range 1 to 37), with men, on average, scoring higher than women (14 points vs. 10 points; p = 0.003). Thus, the majority of both male and female VCT clients in the study who reported drinking alcohol were likely to be serious drinkers, consuming alcohol to harmful levels.

The AUDIT scale allows further assessment of drinking behavior by examining psychological or physical dependency on alcohol, and problems directly attributable to alcohol, such as bodily harm. Experience in using the scale also suggests appropriate follow-up based on AUDIT scores (see Table 2). As shown in Figure 1, almost a third (32 percent) of current alcohol users scored between 8 and 15, indicating that they might benefit from advice to reduce hazardous drinking. Another 33 percent scored 16 points and above, indicating that they already have alcohol problems or they are dependent on alcohol. These people require continued monitoring as well as further diagnostic evaluation of alcohol dependence.

Regardless of drinking status, most respondents planned to get tested for HIV and came by themselves to the VCT site.

The study investigated whether alcohol drinkers were more likely to go for HIV testing on impulse without prior planning, especially if under the influence of alcohol. Overall, most (79 percent) respondents had planned to come for HIV testing, and analysis by drinking status showed that there were no significant differences: 81 percent of current drinkers, 77 percent of former drinkers, and 80 percent of never drinkers had planned to come for HIV testing.
Table 2  The alcohol use disorders identification test (AUDIT)

<table>
<thead>
<tr>
<th>Questions</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Score</th>
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</thead>
<tbody>
<tr>
<td>1. How often over the last year have you had a drink containing alcohol?</td>
<td>Never</td>
<td>Monthly or less</td>
<td>2 to 4 times a month</td>
<td>2 to 3 times a week</td>
<td>4 or more times a week</td>
<td></td>
</tr>
<tr>
<td>2. How many drinks containing alcohol do you have on a typical day when you are drinking?</td>
<td>1 or 2</td>
<td>3 or 4</td>
<td>5 or 6</td>
<td>7 to 9</td>
<td>10 or more</td>
<td></td>
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<tr>
<td>3. In the last year, how often have you had six or more drinks on one occasion?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
<td></td>
</tr>
<tr>
<td>4. How often during the last year have you found it difficult to get the thought of alcohol out of your mind?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
<td></td>
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<tr>
<td>5. How often during the last year have you found that you were not able to stop a drinking session once you started?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
<td></td>
</tr>
<tr>
<td>6. How often during the last year have you been unable to remember what happened the night before because you had been drinking?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
<td></td>
</tr>
<tr>
<td>7. How often during the last year have you needed a drink in the morning to get yourself going after a heavy drinking session?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
<td></td>
</tr>
<tr>
<td>8. How often during the last year have you had a feeling of guilt or remorse after drinking?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
<td></td>
</tr>
<tr>
<td>9. In the last year, have you or someone else been injured as a result of your drinking?</td>
<td>No</td>
<td>Yes, but not in the last year</td>
<td>Yes, during the last year</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>10. In the last year, has a relative or friend or a doctor or another health worker been concerned about your drinking or suggested you cut down?</td>
<td>No</td>
<td>Yes, but not in the last year</td>
<td>Yes, during the last year</td>
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</table>

TOTAL SCORE

Scoring
Range of scores 0 – 40

Interpretation
Total score 7 points or less = Harmless drinking, no action needed
Total score 8–15: Hazardous drinking, need advice to cut down
Total score 16–40: Already have alcohol problems, need continuous monitoring and assessment for dependence.

Source: Babor et al. 2001
Among the 392 married clients, 12 percent of men and 11 percent of women came with their spouse. There was no difference in couple attendance by alcohol use status; clients who were currently consuming alcohol were no more likely to be accompanied by their spouses for HIV testing on the day of the interview than those who had stopped drinking or those who had never drunk alcohol.

**Nearly half of the sample of VCT clients were repeat testers.**

Nearly all respondents (98 percent), regardless of their drinking status, were tested on the day of the interview. About half of males (48 percent) and females (46 percent) had had a previous HIV test. Analysis by drinking status showed similar results: 52 percent of current drinkers, 46 percent of former drinkers, and 45 percent of never drinkers had been tested before.

**Less than 10 percent of substance users accessed VCT services while intoxicated.**

Among those currently using alcohol and/or other substances (n = 242), only 23 were intoxicated on the day of the interview. When asked what prompted them to be intoxicated before testing, 14 said that they “just happened to be drinking or using [substances] at the time,” and nine said that they were intoxicated because they needed to bolster their courage for the test. For most, being intoxicated did not jeopardize their ability to get services; 16 of those who were intoxicated on the day of the interview were still counseled and tested.

**Women were more likely than men to be concerned about their partner’s drinking habits.**

Among all respondents with partners, about a fourth (26 percent) reported that their partners were current drinkers. Women were four times more likely than men to report that their partners drank alcohol (45 percent vs. 11 percent; p < .0001). Half of respondents with drinking partners were
concerned that their partners “drink too much.” Women whose partners drank alcohol were more likely to express this concern than men (54 percent vs. 36 percent; \( p = 0.03 \)). Also, 16 percent of the women with partners who drank felt that their partners needed to seek help because of their drinking. Only 2 percent of the men felt this way.

The FGDs with VCT counselors highlighted that women frequently link their partner’s drinking to their risk of HIV.

> They [the women] come and say that the husband takes a lot of alcohol but they don’t know how they can avoid him or explain to the husband that they have to use protection during sex.
> VCT counselor, Mombasa

> A woman had come for the test and she turned positive. She went along blaming the husband that he is the one who infected her because he drinks a lot and is very irresponsible.
> VCT counselor, Nairobi

Respondents with a partner who drank were asked whether anyone (e.g., a friend, relative, health provider, etc.) had ever told them that their partner drinks too much. Not surprisingly, significantly more women than men had received comments about their partner’s excessive drinking (46 percent vs. 28 percent; \( p = .021 \)).

One in three VCT clients who were current drinkers had been violent toward their partner.

Thirty-three percent of current drinkers reported that they had been violent toward their partner while under the influence of alcohol. The data showed that women (28 percent) were almost equally as violent toward their partner as men (35 percent). Further analysis of partner violence by seriousness of drinking showed that hazardous drinkers were more likely to have been violent toward their partner than non-hazardous drinkers (43 percent vs. 15 percent; \( p < 0.05 \)).

Although current drinkers were more likely to report having multiple partners than non-drinkers, there was no difference in condom use between the two groups.

All respondents were asked whether they had had sex in the last 12 months, and those who answered yes were considered currently sexually active. Overall, 82 percent of respondents were currently sexually active, including 85 percent of men and 78 percent of women (\( p = 0.002 \)). Current drinkers (94 percent) were the most likely to report current sexual activity, followed by former drinkers (84 percent), and never drinkers (72 percent); \( p < .0001 \).

Thirty-eight percent of the 870 currently sexually active respondents reported more than one sexual partner during the previous 12 months. Significantly more males than females had had multiple partners (48 percent vs. 25 percent; \( p < .0001 \)). Married men were also more likely than married women to report more than one partner in the last year (39 percent vs. 7 percent; \( p < .0001 \)).
Current drinkers (60 percent) were more likely to report multiple partners compared to former drinkers (36 percent), and nondrinkers (23 percent) (p < .0001) (Figure 2). The mean number of sexual partners among current drinkers was 2.2, among former drinkers it was 1.8, and among never drinkers it was 1.3.

**Figure 2  Percent with multiple partners among those sexually active in the past 12 months**

Association between drinking and multiple partners significant for all three groups (p < 0.05).

The data showed that slightly more current drinkers with multiple partners used a condom at last sex than non-drinkers, but the difference was not statistically significant; 42 percent of current drinkers, 33 percent of former drinkers, and 31 percent of never drinkers reported using a condom at last sex.

**VCT counselors frequently missed an opportunity to discuss alcohol use and related HIV risk with current drinkers.**

All respondents were asked whether the VCT counselor inquired about their alcohol use. Overall, 42 percent of respondents said they did. Among current drinkers, 44 percent were asked about their alcohol use, and 54 percent of this group were told that alcohol could be a HIV risk trigger. This suggests that the VCT counselors missed an opportunity to discuss alcohol use and how it can predispose people to engage in risky behavior with about half of current drinkers. VCT counselors also missed an opportunity to discuss alcohol and HIV with about two-thirds of respondents whose partners drink; only 34 percent of these clients were asked about their partner’s alcohol use.

The respondents who did not receive any advice about alcohol during their counseling session were asked whether they would have liked to receive any. Over two-thirds (69 percent) reported that they would have liked to receive advice on this topic. This includes 77 percent of current drinkers, 69 percent of former drinkers, and 65 percent of never drinkers.
VCT counselors acknowledged that alcohol is an issue for some clients and would welcome the opportunity to be better equipped to address it.

Data from FGDs with VCT counselors showed that they do encounter people who have been drinking.

…sometimes one can come in and even without asking or telling you, you can smell the alcohol or even from the way they talk you can tell if the person is drunk or even under the influence of alcohol.

VCT counselor, Nairobi

However, they noted that they do not routinely discuss alcohol use with their clients and that they feel uninformed about the subject.

[on being asked whether alcohol use is discussed]

Not exactly. But in risk assessment you ask about the risks—so you may be able to catch whether he drinks or not.

VCT counselor, Nairobi

We really do not have knowledge on handling alcohol addicts.

VCT counselor, Nairobi

But both VCT counselors and ARV adherence counselors would be receptive to learning more and to incorporating alcohol counseling into service delivery.

Me, I believe knowledge is power. As much as maybe we have not been confronted so far by anybody or a situation here you have to deal with alcohol and drugs, as long as you are in the VCT room, a time will come when you will be confronted with such a situation. So if you have the knowledge, definitely you are more effective.

VCT counselor, Mombasa

At times clients are under the influence of alcohol. VCT counselors should get more knowledge about alcohol counseling…I think from my view, it is good to be incorporated with VCT….

VCT counselor, Nairobi

Service providers should be equipped with counseling knowledge of alcohol and drugs. I support the idea of training. We need to have people who have the skills on alcohol and drug counseling….

ARV counselor, Mombasa

Conclusions and Recommendations

This study was motivated by the fact that little is known about alcohol use among VCT clients and their need for alcohol counseling. Data from this study indicate that many clients are affected by alcohol as a
result of their own or their partners’ drinking; therefore, VCT providers have an important role to play in discussing alcohol use with clients and in making referrals as appropriate. But the study also shows that VCT providers frequently miss the opportunity to discuss alcohol use in the context of HIV; half of drinkers and two-thirds of those with partners who drink were not asked about alcohol use during counseling. VCT counselors conceded that they felt uninformed about alcohol and HIV even though they encounter clients who could benefit from appropriate counseling and referrals. Thus, this research supports the formal incorporation of alcohol counseling into VCT service provision.

The following recommendations emerged from the study:

- Train VCT counselors on the role of alcohol as a trigger of HIV risk and as a catalyst of AIDS. Such training should also equip providers to discuss risk-reduction options with clients in the context of alcohol and HIV. These options would include partner reduction, mutual monogamy, and condom use.

- Develop and implement simple tools for screening VCT clients for alcohol use and job aids to facilitate client counseling. Such tools would help VCT providers choose and implement appropriate counseling and referral strategies based on clients’ drinking levels.

- Work with VCT providers to identify how and when to integrate alcohol counseling. VCT counselors may be overloaded; therefore programs need to work with them to identify workable strategies for providing alcohol counseling.

- Help VCT counselors to recognize that male and female clients may have different counseling needs. This study shows that male clients are at greater risk of HIV than female clients in terms of their alcohol consumption and sexual activity. Because both of these behaviors are linked to masculinity and social acceptability, VCT counselors need to help men develop less harmful behaviors and still be accepted by their peers. For female clients, VCT providers may need to focus more on alcohol use in relation to their partners. Respondents whose partners drink may be at risk of both HIV infection and domestic violence. Therefore, VCT counselors need to take this into account when recommending risk-reduction options.

- Promote couple testing and counseling. Like HIV, alcohol use often affects both members of a couple; therefore, HIV and alcohol risk reduction strategies should be discussed with both members of the couple present. VCT facilities could have special activities to encourage couple counseling, such as a special day for couples only, or opening late or on weekends to allow working partners to come together for VCT.

- Strengthen referral systems to existing services. These include substance abuse treatment centers for patients with severe drinking problems, and domestic violence support services for clients, particularly females, that are affected by partner violence.

- Develop communication materials on alcohol use and HIV risk taking. VCT programs should develop educational materials to distribute to clients and the community that highlight the dual epidemics of alcohol use and HIV transmission. Such materials would not only help to trigger discussions on alcohol use between clients and VCT providers, but would also provide information on how individuals can help their family members and partners.
Next Steps

Based on the results of this study, the project partners are piloting the integration of alcohol education and counseling into VCT service provision. A training module has been developed to equip VCT counselors with the requisite knowledge and skills to address alcohol issues with clients. Thirty-seven counselors from seven VCT sites have been trained to screen clients for alcohol use, and based on the results, to provide a brief intervention and/or appropriate referrals. The project has also identified communication materials (posters and brochures) that will be made available at the facilities for use by clients. Final data collection to assess the pilot project is planned for March 2007. If successful, the project will be scaled up to other VCT sites and the alcohol module will be incorporated into the national VCT training guidelines.

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References


National AIDS and STI Control Program (NASCOP) and Ministry of Health. 2006. Verbal communication.


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The principal investigators of this study are Caroline Mackenzie of Horizons/Population Council and Karusa Kiragu of Horizons/PATH.


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