Improving adherence to ante-retroviral treatment for people with harmful alcohol use in Kariobangi, Kenya

A Participatory Reflection and Action (PRA) Project Report

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Through institutions in the region, EQUINET has been involved since 2000 in a range of capacity building activities, from formal modular training in Masters courses, specific skills courses, student grants and mentoring. This report has been produced within the capacity building programme on participatory research and action (PRA) for people centred health systems following training by TARSC and IHI in EQUINET. It is part of a growing mentored network of institutions, including community based organisations, PRA work and experience in east and southern Africa, aimed at strengthening people centred health systems and people's empowerment in health.

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Executive summary

There is a high prevalence of HIV in Kenya, and while treatment for AIDS is expanding in coverage, efforts to treat those infected and to reduce new infection rates are hampered by various community and systems level barriers. Included in these is hazardous alcohol use. Alcohol consumption has been shown to contribute significantly to non-adherence to antiretroviral and anti-tuberculosis (TB) treatment in studies both from Africa and high income countries.

This study aimed to explore the understanding of and factors in adherence to ARV treatment in people living with HIV and AIDS (PLWHA) who are engaged in harmful alcohol use and to intervene on prioritised factors to improve adherence, using participatory research and action (PRA) methods. We sought to determine the perceptions of and understanding of alcohol abuse and ARV treatment among PLWHA, their peers, family members and health workers. We aimed to increase collaboration between the mental health workers from clinic and hospital level and the community to respond to identified barriers to improve adherence to ARV treatment in PLWHA who use alcohol in a socio-economically deprived urban area in Nairobi (Kariobangi). The work was implemented within a programme of the Regional Network for Equity in Health in east and southern Africa (EQUINET) that aimed to build capacities in participatory action research to explore dimensions of (and impediments to delivery of) Primary Health Care responses to HIV and AIDS. The programme was co-ordinated by Training and Research Support Centre (TARSC) in co-operation with Ifakara Health Institute Tanzania, REACH Trust Malawi and the Global Network of People Living with HIV and AIDS (GNPP+). TARSC in particular provided mentorship.

This work builds on a prior action research within EQUINET by members of the Department of Psychiatry, community nurses, an occupational therapist and other workers from Mathari Hospital together with community members from Kariobangi in Nairobi and TARSC to identify the mental health problems in that community and using PRA approaches to identify and implement community level interventions for prioritised problems. The current project was implemented from June 2008 to July 2009. Kariobangi area, in the eastern side of Nairobi City is densely populated, largely with semi-permanent houses and low income inhabitants**.** It used a similar broad design of baseline interview assessment of perceptions and practices amongst health workers and community members; identification using PRA approaches of factors affecting adherence to treatment in people abusing alcohol and potential areas and options for intervention; implementation and review of interventions at community and primary care level and follow up interview assessment to assess change in perceptions and practices amongst the same group of health workers and community members.
The proposal was approved by the Kenyatta National Hospital's ethical and research committee as well as the Mathari Hospital administration and permission sought from the relevant authorities and from the community members involved.

The majority of the PLWHA included in the study were socially disadvantaged, unemployed, and with low education. Social support was equally poor since a large number were widowed, separated or divorced. Most of the PLWHA who participated were single or divorced women, some of them admitted that they sometimes engaged in commercial sex to cater for their basic needs. These factors, together with poor health, limited their economic opportunities and security. In this context, alcohol use, noted by PLWHA, community members and health workers to be prevalent in the community, is not only encouraged by poor living and social conditions, but also by cost (it is relatively cheap) and by the social pressure to use alcohol to escape the mental stress caused by poverty. This is exacerbated by social attitudes that do not discourage alcohol use, and misconceptions that in fact encourage alcohol use, such as that alcohol can kill the HIV virus.

For PLWHA, alcohol is particularly problematic. It undermines the prevention and treatment resources reaching these communities as it reduces inhibitions over high risk behaviours, undermines use of condoms and other prevention resources, and reduces compliance with ARV treatment. Harmful alcohol use also leads to other psychosocial and physical problems. While these effects are observed by health workers and communities in the study area, the health workers focused more on the physical signs, whereas the community members were more concerned with the behavioural and social changes, which they also thought were more important in detecting alcohol use.

This study suggests that the problem of alcohol abuse is poorly recognised for both communities and health workers: It was generally under reported to services, with low numbers of people on ARVs reported to have alcohol related problems, so that health workers see only a small share of the problem. A survey of the local health centres providing ARVs showed that screening for alcohol use was not routinely done and protocols for managing alcohol related disorders were not available. Outreach services are weakly oriented to detect and manage the problem. Both health workers and community members could identify the gross forms of alcohol intoxication and dependence, but the concept of alcohol misuse and hazardous drinking did not appear to be common or easily understood by community members. None of the clinics used a formal alcohol screening instrument. Majengo clinic and the Comprehensive Care Clinics were run by medical doctors whereas Kariobangi and Comboni clinics were run by clinical officers and nurses, but the rates of detection of alcohol related problems did not differ much. The number identified by the patients themselves and the community health workers are higher than those officially recorded at the clinic.

Health workers and community members also recognise the problems PLWHA who use alcohol face, but rate these differently. Health workers rate non-compliance with drugs highest, while community members rate as highest priorities violence due to stress and legal problems. Both recognise the risk alcohol poses in leading to unprotected sex. For PLWHA on ARVs, tere are already challenges in dealing with the timing, frequency of medication and appointments and the availability and cost of food to support treatment. For PLWHA who use alcohol these difficulties are compounded.

There are a range of services in the community that could potentially address these barriers that are involved in nutrition, psychosocial, medical care, PHC, HIV prevention and treatment services, counselling, social, legal, information and referral support for PLWHA. However these do not explicitly deal with the treatment of alcohol and drug related problems in the community or the needs of PLWHA on ARVs who use alcohol, and their adherence to treatment. Further communication between health workers and their clients is not good and needs to be improved to better manage the situations leading to poor adherence to ARVs due to alcohol use.

Reflecting on these problems, the participants noted that counselling and education was important. This was implemented in the subsequent meetings. The health workers were taught how to use the AUDIT in identifying problem drinkers and how to recognise and manage alcohol related disorders such as withdrawal fits. The PLWHA were encouraged to form a registered group which could apply for funding on projects of their choice. The PLWHA and their family members were encouraged to support one another and to identify symptoms of harmful alcohol use among themselves. These were feasible within the network of PHC and community mental health resources in the community, although with additional support from the PRA research team. What was more difficult was implementing interventions aimed at improving the incomes of the affected PLWHA.

The PRA process and these activities were perceived by those involved to have reduced the harmful use of alcohol in those involved; to have made some improvements in community and health service support; in management of mental health and communication with families and in reducing stigma around alcohol use and HIV. During the project period compliance as measured by clinic attendance had improved for most of the clients. Although most of them said that they had stopped drinking, three clients had alcohol withdrawal seizures during one of the meetings. The compliance rate of people who abuse alcohol on ARVs was perceived to have increased, and harmful alcohol use to have been reduced. This was further verified by an improvement in the AUDIT scores (the test of harmful alcohol use).

The perception of the participants at the final meeting showed that the attitudes had shown some change. Communication between the health workers and the community members was rated slightly better and the community members felt that the administration members such as the chief were concerned with alcohol use in the community. The differences however were not statistically significant. The scores of the PLWHA on the repeat AUDIT questionnaire were however significantly lower than the baseline level.

This action research highlights that wider chronic health and social problems in the community impede uptake of resources for prevention and treatment for HIV and AIDS, unless specific measures are put in place to address these are part of health services and AIDS programmes. Alcohol abuse presents problems for ARV treatment for a range of reasons – affecting positive prevention, adherence, nutrition and efficacy of medicines so it should be a priority for inclusion in PHC approaches to AIDS. Yet this study indicates that it is not, despite the common presence of alcohol use in vulnerable communities. The study indicates that women are particularly vulnerable to the conditional that lead to harmful alcohol use, adding to their higher risk of HIV. Alcohol was noted in this study to be a stimulant for sexual libido and raised as a factor in violence and stress. The study suggests that it plays a role in perpetuating or even widening gender differences in power and sexual autonomy that further exacerbate the risk of HIV for women and their barriers to prevention and treatment. This needs to be further explored.

In terms of the PHC response, the study indicates that it is possible to improve communication between the health workers and the clients attending PHC; to strengthen screening for alcohol use routinely at all clinics; and to strengthen involvement of support groups and community (mental) health workers for follow up and counselling. Integrating these features into PHC approaches to prevention and treatment would appear to be an important part not only of responses to AIDS, but to PHC more generally.

Longer term follow up is needed to determine the sustained impact of the intervention. Random controlled trials should be conducted to test the hypothesis that interventions aimed at reducing harmful use of alcohol have an impact on the reduction in the spread of HIV. Problems encountered in the PRA work included great expectations at all levels fostered by handouts from other donors. Getting cognitively impaired people who have lost hope to plan any activity was extremely difficult and needs a longer time frame.

Less easily addressed are the levels of economic and nutritional deprivation that lead patients to engage in seemingly irrational behaviour that endangers their health. This calls for attention to the specific nutritional needs of PLWHA who use alcohol as part of their therapy, but also to the wider social and economic determinants that lead to harmful alcohol use, including those that use alcohol as an easy source of profits from poor communities. This calls for wider policies for economic and food security in vulnerable communities.

1. Introduction

There is a high prevalence of HIV in Kenya, the majority of which is due to sexual transmission. A range of socio-economic determinants, systems and resource constraints limit efforts to treat those infected and to reduce new infection. This report gives specific focus to the effects of hazardous alcohol use, and how primary health care (PHC) oriented approaches to AIDS can better deal with these. Alcohol use may affect HIV prevention and AIDS treatment in a number of ways. Alcohol use increases sexual arousal and the reduced inhibition from alcohol intake may increase the risk of unsafe sexual behaviours. Hazardous alcohol use may undermine adherence to treatment, while chronic intake of alcohol induces liver enzymes that metabolise some anteretrovirals (ARVs) leading to sub-therapeutic levels.

Estimates of adult HIV prevalence in Kenya range from 5.9-7.8%, with prevalence rates consistently higher in certain areas, such as the report of 40% adult prevalence in areas around Lake Victoria (CBS et al 2004, NASCOP MoH Kenya 2005; Kaiser Foundation (2008). The Kenya National AIDS Control Council estimated in 2005 that 1.4 million people were living with AIDS in Kenya (NACC 2005). The Kenya National HIV/AIDS Strategic Plan (KNASP) 2005/6 – 2009/10 prioritises the prevention of new infection in vulnerable groups and in the general population (NACC 2005). The vulnerable groups referred to include young girls, individuals in HIV discordant relationships, commercial sex workers (CSW) and their clients, migrant workers, and injecting drug users (IDUs). People with mental illness are not specifically profiled in the plan, even though they form an estimated 10% of the general population (Kiima et al., 2004) and are at increased risk of either getting HIV infection or spreading it to others. MacKinnon et al (1996) in a study on patients with mental disorders showed that the odds of being sexually active versus abstinent was twice higher among patients with elated mood, such as mania. They further found that having multiple sexual partners was nearly three times as likely among patients with positive symptoms of mental illness (such as hallucinations and delusions). The same study showed that trading sex was more than three times more likely among patients with schizophrenia than among those with other diagnoses and more than five times as likely among those with elated mood (ibid). Cournos et al. (1994) in a sample of patients with schizophrenia found that 50% of the patients had exchanged sex for money or goods and that behaviours limiting risk, such as consistent condom use, was uncommon.

Despite this increased susceptibility, there are no special programmes to cater for the needs of mentally ill patients who have HIV infection in Kenya (NACC, 2005). Likewise, those who abuse alcohol are also neglected. In Kenya, ARVs are costly and not available to all on the basis of need, with only 32% of the 5.3 million people in need of treatment in east and southern Africa accessing the drugs. Those who abuse alcohol often do not meet the criteria for initiation on ARV treatment, given that they are assessed as less likely to adhere to treatment guidelines, leading to drug resistance and treatment failure (WHO et al 2007).

Although an estimated 70% of females and 45% of males in east and southern Africa (ESA) abstain from alcohol, the region has the highest consumption of alcohol per drinker globally. Uganda is ranked number one with 20.0 litres of 100% ethanol consumed per drinker per year (Sasi Group and Newman, 2001). The prevalence of hazardous drinking in ESA is also reported to be high, with those who drink consuming high quantities per session and have high frequency of intoxication (Kirlmax, 2005). Studies in Kenya have found a prevalence of harmful alcohol use at approximately 50% of the general population (Acuda, 1995; Shaffer et al., 2004). In a 2008 study using participatory methods in Kariobangi urban area, Kenya, community members identified alcohol and drug abuse as common causes of mental disorders in their community, associated with high levels of poverty and unemployment in the area (Othieno et al., 2008).

Alcohol consumption has been shown to contribute significantly to non-adherence to antiretroviral and anti-tuberculosis (TB) treatment in studies both from Africa and high income countries (Cook et al., 2001). For example, studies from the United States of America associate heavy alcohol use with decreased compliance with medication as well as with poor response to HIV therapy. They show that treatment outcomes improve significantly when patients who abuse alcohol stop drinking, and that interventions that reduce harmful alcohol intake improve compliance and reduce risky sexual behaviour (Babor and Grant 1992; Bien, Miller and Tonigan, 1993). Controlling alcohol abuse can thus reduce the rate of new infections and slow the progression of the epidemic in this group.

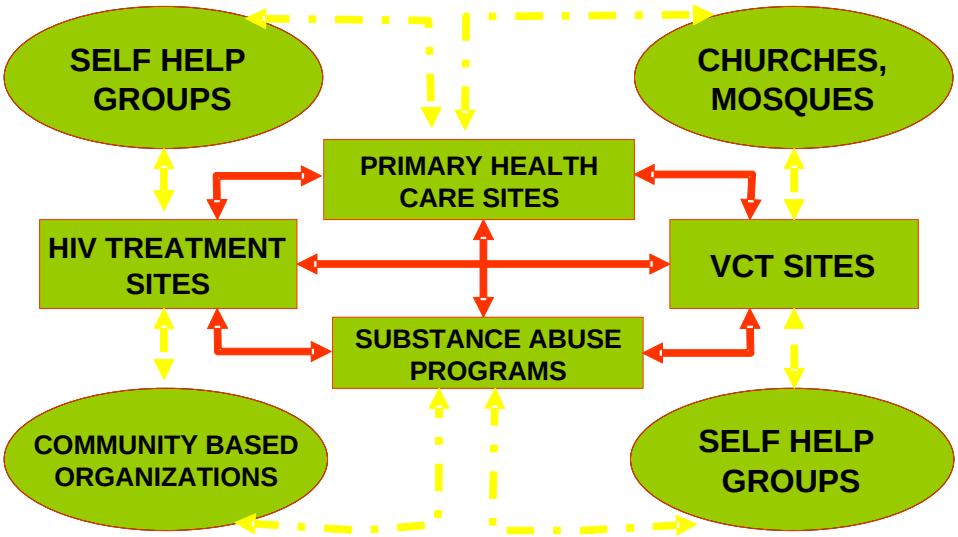
The April 2005 58th World Health Assembly (WHA) highlighted this association between alcohol consumption and unsafe sex, sexually transmitted infection and HIV/AIDS (Kirlmarx, 2005). A WHA resolution proposed action from member states to set population-based policy measures such as taxation or increasing the drinking age, based on their demonstrated cost effectiveness in countries with moderate and high levels of alcohol consumption. The Assembly further noted alcohol consumers as a critical target group for HIV prevention, treatment and care interventions, if prevention, treatment and care goals were to be achieved. The case for giving specific focus to people engaging in harmful alcohol use in AIDS programmes has thus been made at technical and policy levels. Less has been done, however, in implementing this policy recognition in practice.

Most countries in sub-Saharan Africa have developed community-based programmes to strengthen community capacity to address the needs of people living with HIV and AIDS (PLWHA) (Min of Health 1997). In Kenya, apart from state services, churches and non-governmental organisations (NGOs) based in socially deprived communities are working with PLWHA to provide counselling, financial support, food and medicine. Kenyatta National Hospital, in collaboration with the Department of Psychiatry, University of Nairobi, runs a Patient Support Centre where patients who have other medical needs and are also HIV positive are referred for further help. The Comprehensive Care Centre at the hospital supplies anti-retroviral drugs (ARVs) and offers periodic assessment for PLWHA. However, special programmes for identifying and treating patients with alcohol problems are not available at these centres. The few services for alcohol detoxification and rehabilitation in Nairobi are privately run, with only one public centre based at Mathari Hospital. There is thus a need to strengthen primary level services and to involve communities in identifying and reducing harmful alcohol use.

Strategies for reducing harmful alcohol use include physician advice, taxation, roadside random breath testing, restricted sales access and advertising bans. Chisholm et al (2004) reviewing cost effectiveness of these different strategies concluded that taxation would be less cost effective in populations with a low prevalence of heavy drinking. In Africa, since a substantial amount of alcohol consumed is produced and sold through illegal outlets, increasing taxation may actually increase the volume of illicit brew consumed. Offering advice in primary care centres and roadside breath testing were found to be the least cost effective in areas with a high prevalence of heavy drinkers (more than 5%) such as Europe or North America, but more suitable for populations with a concentration of fewer, but heavy drinkers, such as in Africa. A recent study in South Africa among a small group (n = 112) of South African female alcohol users showed that the women were responsive to behavioural interventions (Wechsberg et al., 2008).

The intervention described in this report thus sought to identify and strengthen options for intervention at primary care and community level. An example of an approach to community level management of alcohol use disorders, including for PLWHA, is shown in Figure 1 below.

Figure 1: Community level integrated management of HIV and Alcohol Disorders



Source: Figure constructed from Morris et al (2006)

In this model, providers at all sites are cross-trained in HIV and addiction; Voluntarty Counselling and testing (VCT), PHC and HIV Treatment sites all screen for substance abuse and provide assessment and referrals for alcohol dependence and intervention for at risk drinking and PHC and HIV sites are able to address ongoing medical complications of substance abuse and monitor medications used to support abstinence, such as naltrexone.

We implemented this action research at the primary care and community level to better understand and modify through participatory reflection and action (PRA) approaches, the specific factors in the pathways that impact on compliance with ARV treatment. Based on the evidence from the literature and our experience we understood such factors to include:

- perceptions of and understanding of alcohol abuse and ARV treatment among PLWHA, their peers, family members and health workers;
- openness of communication in issues around ARV treatment and alcohol abuse between people on treatment and health workers;
- existence of a sustained chronic care strategy and integration of management of alcohol abuse within the organisation of ARV treatment;
- skills for early identification and intervention at the primary care level, and
- strength of community based support groups for PLWHA and those who use alcohol in harmful ways.

We aimed through this work to increase the adherence to ARV treatment among PLWHA residing in Kariobangi, and particularly those abusing alcohol.

Specifically we sought to:

- identify perceived and reported rates of alcohol abuse amongst people taking ARVs at primary health care facilities in the area;
- assess the extent to which health workers at the primary care facilities were able to detect and integrate alcohol abuse into their health management;

- determine the openness to discuss and engage on the experience and determinants of alcohol abuse among people on ARV treatment;
- assess the extent of understanding in PLWHA and health workers of alcohol abuse, and its impact on ARV treatment and the factors leading to reduced adherence to ARV amongst people abusing alcohol;
- encourage greater openness and communication between PLWHA on treatment and health workers in the management of alcohol abuse;
- support ARV compliance and adherence in people who abuse alcohol, and
- encourage primary care and community level health workers to detect harmful alcohol use and to offer appropriate advice and intervention.

The work was implemented within a programme of the Regional Network for Equity in Health in east and southern Africa (EQUINET) that aimed to build capacities in participatory action research to explore dimensions of (and impediments to delivery of) Primary Health Care responses to HIV and AIDS. The programme was co-ordinated by Training and Research Support Centre (TARSC) in co-operation with Ifakara Health Institute Tanzania, REACH Trust Malawi and the Global Network of People Living with HIV and AIDS (GNPP+). TARSC in particular provided mentorship.

2. Methods

This work builds on a prior action research within EQUINET by members of the Department of Psychiatry, community nurses, an occupational therapist and other workers from Mathari Hospital together with community members from Kariobangi in Nairobi and TARSC to identify the mental health problems in that community and using PRA approaches to identify and implement community level interventions for prioritised problems (Othieno 2008). At the time of this study the same PRA team was still active. During the previous work, the community members established community support groups for people with psychiatric disorders and these were also still present. The current project was implemented from June 2008 to July 2009.

It used a similar broad design of baseline interview assessment of perceptions and practices amongst health workers and community members; identification using PRA approaches of factors affecting adherence to treatment in people abusing alcohol and potential areas and options for intervention; implementation and review of interventions at community and primary care level and follow up interview assessment to assess change in perceptions and practices amongst the same group of health workers and community members.

Although the PRA process is a non-invasive procedure, it does touch on a person's personal private data. To safeguard a participant's private data, the researchers ensured that any individual information gathered was only used for the purpose of the study. The participants were assured that the individual information would not be divulged to any other parties. The proposal was approved by the Kenyatta National Hospital's ethical and research committee as well as the Mathari Hospital administration. Permission was also sought from the Ministry of Education Science and Technology to engage in the community work. Patients and PLWHA were required to sign informed consent before enrolment into the project. The aims of the study were explained to the community members before they were engaged in it. They were assured that their individual identities would not be revealed in any reports or publications without their consent. The participants consented to being photographed at the meeting. Any photographs used in this report were taken and used with their consent, as a means of combining visual with other forms of evidence.

The research team comprised members of the Department of Psychiatry, community nurses, an occupational therapist and other workers from Mathari Hospital with input from TARSC on

the design, review of tools, analysis and writing. The research team drew on the previous programme of work and their experience in the community to identify community groups that deal with PLWHA, with a snowball method to ensure inclusion of all relevant groups based on a criteria of community level organisation and work with PLWHA. The following groups were identified: Women Fighting AIDS in Kenya (WOFAK), Kenya Widows and Orphans Support Group, Kenya Network of Women - Korogocho group, Maendeleo Afya Kwa Wote (MAKWAK), Rehema Day Care and Orphan Projects, I am Worth Defending and Kariobangi Health Centre community based care for HIV and tuberculosis (TB). The activities being implemented by these organisations are shown in the table below

Table 1: Community level organisations working with PLWHA in Kariobangi identified by the research team

Organisation	Activities
Women fighting AIDS in Kenya WOFAK, Kenya Network of Women	A women support group of mostly widowed women, most are HIV positive, engage in petty business
Kenya Widows and Orphans Support Group, Sinaga Women and Children, Rehema Day Care and Orphan Projects	Social groups supporting widows and orphans in the community
I am worth defending	A youth group that runs counselling programmes for youth involved in drug use, and those who have been sexually abused. They also teach self-defence using martial arts
Maendeleo Afya Kwa Wote	An organisation run by one of the church leaders, it voices issues concerning men, particularly where they feel the men's rights have been neglected; one such area is that of men who are abused physically or emotionally by their spouses
Rehema Day Care and Orphan's Project	Run by a church based organisation. It offers education at a highly subsidised rate and for free to those who cannot afford. They also provide lunch for the children

The contact persons for the organisations described above together with the chief in Korogocho and Kariobangi communities formed the entry points to the community. As they were working with orphans and those widowed due to HIV they knew people in the community who had been affected by the disease. Since they are already involved in the care of people living with HIV (PLWHIV) they helped to identify such individuals. The PLWHA identified from the organisations were asked in turn to identify and inform their colleagues who were similarly affected. Since they attended the same clinics and knew of neighbours who were living with HIV. Through snowballing a group of 20 PLWHA was approached and invited to participate in the project. Additionally, the health workers at the local clinics were requested to identify individuals who were on ARV treatment and were also using alcohol. The contact persons in the community groups identified others involved in the care of PLWHIV and they in turn identified those on ARVs and were using alcohol in harmful ways. Other entry points were the NGO clinics providing health services for PLWHIV in the Kariobangi community.

After obtaining clearance and consent from the various authorities and participants as above, the research team invited the community and organisation members identified above to a first meeting. Twenty nine (29) community members, social workers, community based organisations (CBOs) offering community services to PLWHA (See Table 1), PLWHA (ten of

the 29) family members, church leaders, and members of support and counselling groups attended this first meeting. Also at the meeting were members from the department of psychiatry, community nurses from Mathari Hospital and mental health workers from Kariobangi Health Centre.

At this first meeting baseline measures of perceptions and adherence were taken through interview of the 29 participants using a 5 point rating scale for responses. The purpose was to gauge the participants views on alcohol use in the community, the social problems associated with its use and the measures for supporting adherence to ARV treatment both to inform the study team and to provide a baseline against which follow up assessment could be done .after the action research.

After the baseline assessment, the programme was introduced and perceptions and rates of alcohol use gauged using participatory methods, particularly focus group discussions and tools for drawing experience and views from delegates. This was a “listening phase” of the programme. The project leaders also explained the purpose of the project and stressed the participatory role each member was supposed to play. The participants agreed on snowballing approaches to involving other PLWHA in the community in the project so that the numbers of PLWHA involved grew in subsequent meetings.

A second meeting was held to further draw perceptions and experience on alcohol use and treatment in PLWHA, reflect to identify collective analysis of the causes and responses to problems identified and to identify actors and areas for intervention. Role plays were used to discuss and draw perceptions on the health problems associated with alcohol use. Through a “Marketplace” approach participants could visit and record on charts their views on alcohol use among PLWHA. Spider diagrams were used to identify the stakeholders working with PLWHA and alcohol dependent individuals. The participants were asked to identify important steps in reducing prevalence of harmful alcohol use in the community for PLWHA. Where there were divergent views ranking and scoring was done using stars on a chart.

By the third meeting, held in October 2008, sixty seven PLWHA were now participating in the meeting, as support for the process grew. During this meeting discussions on the harmful effects of alcohol took place, exploring reasons why people drink and corrective measures that could be taken. The meetings were used to reinforce the steps people identified that they could take to reduce harmful drinking.

At a subsequent meeting held one month later (November 2008) the first steps were taken to assess change in outcomes. This involved measures of alcohol use, clinic attendance and other parameters indicating compliance were recorded. As this was still early in the intervention the actions identified were continued into 2009, and the same measures of compliance were reassessed after a period of 7 months, in July 2009.

The measures of alcohol use, clinic attendance and compliance used were drawn from tested methods. An objective measure of alcohol use was done using the Alcohol Use Disorders Identification Test (AUDIT). It is a 10 – item questionnaire designed to assess the following domains: Alcohol use (questions 1-3); dependence symptoms (questions 4-6) and harmful alcohol use (questions 7-10). It has been used in a wide variety of settings and cultures and is considered as an international screening instrument. The recommended cut-off point is eight. At this level most studies have found favourable sensitivity and acceptable specificity for current alcohol use disorders as well as the risk of future harm (Barbor et al., 2004). The instrument was administered to the PLWHA at baseline and after the intervention. The results were used to determine any changes in the pattern of alcohol use.

Compliance and adherence to ARV treatment was done using a purpose designed questionnaire. The number of missed appointments during the preceding month was recorded as well as the number of times the subject had missed taking medication or engaged in unprotected sex and other risky behaviour. They were asked if the undesired behaviour was the result of alcohol consumption. The behaviour before and after intervention were compared. The records at the clinics where the PLWHA attend were also assessed using a questionnaire to determine the number of clients seen and how frequent the diagnosis of alcohol use disorder was made. The rates were roughly rated as either high or low. This was compared with the perception of the participants at the workshop.

There were some problems in the implementation of these methods. In the baseline assessment only twenty of the twenty nine usable questionnaires were returned as the rest were either illegible or incompletely filled. It is likely that this under-represented the community and PLWHA views as it is more likely that these were the questionnaires where there would be problems in completing the form. We chose not to do an interviewer administered questionnaire to avoid bias in responses that may be felt to be sensitive, but note from the experience the need to greatly simplify any future self administered tools being used in the community. This was a qualitative study and the participants were identified through snowballing as the PLWHA identified their colleagues. This is a cause for biased sampling. However in the circumstances it would not have been easy to get a random sample of PLWHA.

3. Findings

3.1 The Baseline assessment

Of the twenty-nine (29) participants who attended the initial meeting, ten were PLWHA, thirteen were mental health workers and the rest community and CBO members. The baseline assessment questions assessed the views of the participants on alcohol use and management of alcohol related problems in the community. The findings of the twenty usable questionnaires are shown in Table 2 below. Statistical disaggregation of health worker and community member responses was not feasible because of the small sample size.

The results in the table indicate that respondents felt that:

- They had a relatively good understanding of alcohol related problems;
- Harmful alcohol use in the community is perceived to be high, but community concern low;
- Support from communities, faith based organisations, police, health services and chiefs for people with alcohol related problems is perceived to be low;
- Health workers at primary care level have limited ability to manage alcohol related disorders;
- Compliance rates of people who abuse alcohol on ARVs is low;
- Stigma and poor communications within families, health services and communities affects management of alcohol abuse.

There was no clear view on the rate of harmful use of people on ARVs as the responses were relatively evenly spread.

The majority of the participants (90%) thought that alcohol dependence should be treated as a medical problem rather than as a social problem and 80% felt that alcohol interferes with medical treatment to a significant degree. Over half (55%) felt that alcohol problems in the

community were managed more poorly than the other health problems. (Data not shown in the table).

Table 2: Baseline assessment: Frequency and means of participants responses (N=20)

	% responses (N=20)						
QUESTION	**Extremely high**	**Very high**	**High**	**Low**	**Very low**	**None at all**	**Average score**
My understanding of alcohol related problems is	30	15	50	5			3.7
The level of harmful alcohol in my community is	10	70	15	5			3.85
The community concern over alcohol is	15		20	35	25		2.4
Family involvement in support and care of people with alcohol problems is	5			40	40	15	1.45
Community support for people with alcohol related problem is		10	10	55	25		2.05
Church / Mosque support for people with alcohol related problem is		15	15	30	35	5	2
Police support for people with alcohol related problem is		15		15	25	45	1.15
NGO support for people with alcohol related problem is	5	10	10	40	20	15	1.95
Health centre support for people with alcohol related problem is			10	40	30	15	1.47
Health worker support for people with alcohol related problem is		5	20	55	10	5	2.1
The ability of the primary health care worker at the community to detect alcohol related disorders is	10	10	20	40	10	10	2.4
The ability of the primary health care worker to manage alcohol related disorders is		5	10	55	20		2.1
The ability of the primary health care worker to manage alcohol related disorders among PLWHA is	5	5	10	45	25		2.1
Chiefs support for people with alcohol related problem is			5	10	25	60	0.6
The rate of harmful alcohol use among people on ARVs is	25	20	20	15	15	5	3.1
The compliance rate among those people on ARV who abuse alcohol is	10	10	10	25	35		2.3
Family openness on alcohol related problem in the family is	15	5	10	40	25	5	2.3
Community openness (talking about, sharing information) on alcohol related problem is	10		15	35	25	15	1.9
The stigma associated with HIV in this community is	25	25	30	5	15		3.4
The stigma associated with alcohol problems in this community is	20	20	40		20		3.2
The effectiveness of health services in managing mental health problems is	5	10	20	30	30	5	2.15
The communication between families and health services on mental health problems is	5	15	15	35	20	10	2.2

None at all = 0; very low = 1; low = 2; high = 3; very high =4; extremely high = 5
Totals less than 100% are due to non response

High perceived levels of harmful alcohol use combined with low ratings of community concern over alcohol, low support from community level actors and low rating of health workers' ability to manage alcohol related problems indicate a health and social problem that

is poorly addressed at community level. The stigma and lack of open communication associated with alcohol related problems indicate one set of factors associated with this perception of poor management. While these perceptions indicated consensus in the group there were more mixed views on the rate of harmful alcohol use amongst people on ARVs. Further there was a relatively high rating of understanding of alcohol related problems, possibly due to the influence of the bias towards health worker responses discussed in the methods section.

The sociodemographic characteristics of PLWHA who participated in this study are summarised below. This was assessed later in the study when a larger number of PLWHA had been recruited than at the time of the baseline, but is presented at this stage of the report to give an understanding of the charatceristics of the PLWHA involved in the subseqent discussions using PRA approaches.

Most of the PLWHA involved had no partners, were unemployed, had low levels of education and lacked adequate social support. Most of them lived in rented houses. Thus they had no permanent adresses making it difficult for any individually oriented care strategies to follow them up.

Table 3: Characteristics of the PLWHA included in the study (N=67)

Variable	Total	%
Marital status		
Never married	11	15.7
Divorced	7	10
Separated	17	24.3
Cohabiting	1	1.5
Married	9	12.9
Widowed	22	31.4
Employment		
Never employed	42	63.0
Laid off work	5	7.5
Retired	1	1.5
Education		
None	6	8.6
Primary	44	62.9
Secondary	16	22.9
College	1	1.4
Housing		
Own	7	10.4
Rented	53	79.1
Friends	1	1.5
Parents	5	7.5
Street	3	4.5
Other	1	1.5
Religion		
Catholic	47	70.1
Protestant	17	25.4
Muslim	2	3.0
Other	1	1.5

Through purpose designed questionnaires and the patients' clinic records, the attendance at the health centres, sexual behaviour and compliance to ARV medication of the PLWHA were recorded. Additionally, a sample of the clinics, which the patients attended, was visited and the patient's attendance verified from the clinic records.

Table 4: Adherence to treatment among the PLWHA N = 70 (Number and % shown)

QUESTION	Always	Frequently	Sometimes	Not at all
I attend the clinic regularly	34 (48.6)	10 (14,3)	17 (24.3)	
I take my medications as prescribed	25 35.7)	13 (18.6)	20 (28.6)	2 (2.9)
I have had to take my medicines off schedules	7 (10.0)	15 (21.4)	32 (45.7)	7 (10.0)
I miss taking my medicines	2 (2.9)	3 (4.3)	38 (54.3)	20 (24.6)
I miss taking my medication because of forgetting	5 (7.1)	5 (7.1)	36 (51.4)	16 (22.9)
I miss taking my medication as a result of drinking alcohol	9 (12.9)	12 (17.1)	33 (47.1)	11 (15.7)
I follow the doctors instructions	24 (34.3)	8 (11.0)	24 (34.3)	5 (7.1)
I follow the clinicians dietary advice	13 (18.6)	6 (8.6)	29 (41.4)	12 (17.1)

Numbers totalling to less than 100% due to non responses

Six patients (9%) admitted to forgetting to take their medicine in the past 24 hours, while 11 (16%) had forgotten to take their medication during the previous week. Nearly two thirds (61%) indicated that they missed taking their medicines, mainly due to forgetting or drinking alcohol. There was a far lower level of compliance with doctors instructions or dietary advice. Adherence to treatment is thus a problem even at self reported level in this group, and challenges exist to follow up and community level responses due to their social, economic and tenure insecurity.

3.2 Findings of the PRA process: alcohol abuse in the community

Following the baseline and in the first PRA meeting we explored further the perceptions on alcohol use through role play. Two participants role played the case of a patient presenting with the following complaints, one as the client and one the health worker.

"A 30 year old male having lack of sleep, hallucinations (seeing visions), tremors, sweating and unsteady gait for the past three days. The symptoms get worse at night. In addition he has poor appetite and is running a fever. He is divorced and is currently living alone. He has not reported to work in the past one week."

The "health worker" took further history to try and make a diagnosis and differential diagnosis (other possible causes of the picture presented). The participants then took the role of health worker, listed and discussed the possible causes. Most participants attributed the symptoms to physical illness caused by infections – malaria or typhoid. Some said it was due to lack of food, since he was single and had no wife to cook for him.

Using a list of diagnostic criteria for alcohol use disorders the facilitator then led the group to test whether there was a link between the symptoms elicited and alcohol use. The symptoms of alcohol use were enumerated and participants concluded that there could be a link with the symptoms presented. Other alcohol related disorders were discussed with input from a facilitator. In the discussions concepts of alcohol use, alcohol abuse, harmful alcohol use, hazardous drinking, alcohol dependence, and withdrawal effects were raised and discussed.

Participants had a number of questions and comments on these concepts. Community members noted that alcohol was used as a medicine and that people did not always consider it as harmful. Of concern they raised that some people in the community think that alcohol can kill the HIV virus in the body and is thus a form of cure.

> *"In our community washing children with a local brew of alcohol is a means of treating measles rash – it has worked for a long time"*
>
> Community member, Kariobangi

> *"Drinking strong alcoholic spirits is a treatment for typhoid. I think it is a good cure. Some people believe that the strong drinks can kill the HIV virus"*
>
> Community member, Kariobangi

The community members only recognized gross cases of alcohol intoxication as harmful.

After the discussions participants noted that people who are not health workers often passed on false beliefs about alcohol. They agreed that alcohol could not be used to treat any disease including HIV or AIDS. .This led to further discussion on whether alcohol abuse in fact undermined treatment for AIDS.

3.3 Findings of the PRA process: alcohol and ARV treatment

The perception of rates of alcohol abuse among people taking ARVs at primary health care facilities at Kariobangi was drawn from participants by flipchart voting. People were asked to individually rate with a star the box that they considered to match their views. They were told not to worry what others think - to give only their own views. The results are presented in Table 5 below.

Table 5: Views of the prevalence of alcohol abuse in the Kariobangi community

	High	**Medium**	**Low**
Use of alcohol is			
Harmful use of alcohol in the community is	********** ********** 22	** 2	
Harmful use of alcohol among people on ARV treatment is	******* 6	********** **** 14	**** 4

Participants then discussed the results. There was general agreement that the use of alcohol in the community was high. One participant, a person living with HIV said,
"Alcohol is found everywhere in the community. It is even cheaper than food."

It was also noted to be easy to get alcohol on credit if you do not have money. Seven hundred and fifty ml of alcohol could be bought for as little as five Kenya shillings (US$ 20c). The drink purchased with this was normally a strong spirit drink, often adulterated with impurities such as methanol and formaldehyde. At this price and availability in the community, alcohol use was not seen to be reduced by unemployment or low socioeconomic status. In contract those who were not occupied were seen as susceptible to alcohol use.

Alcohol use in people on ARVs was rated as less common than in the general community (see Table 3). Participants suggested that people on ARVs undergo a lot of counselling about the harmful effects of alcohol that other community members do not get. The views of PLWHA and those of health workers differed on this issue, however, with PLWHA observing that the rates of alcohol use were just as high as and sometimes higher in people taking ARVs than that of other community members.

Given the general agreement about high levels of alcohol use, participants explored the effects of alcohol use and the support available to PLWHA through use of a market place, a PRA approach in which flip chart stands are used as ideas points and participants visit the stands to discuss and record their views on the questions on the flipcharts. Through this participants discussed the reasons for alcohol abuse amongst PLWHA, the types and sources of support for PLWHA who take alcohol at the Health Centre or dispensary and the ways that the community can help and support PLWHA who are using alcohol to improve on their health and quality of life.

Participants recording views at a "market place"
Source: C Othieno 2008

The market place discussions indicated that people see PLWHA using alcohol in a harmful way

- **To deal with stigma and for social acceptance:** participants referred to a desire to be accepted by the community, to prove that they are just like any other person, so that they can also be sexually attractive. They also referred to the stigma associated with HIV and the peer pressure to drink, as well as the confidence they get from alcohol to talk freely about life issues.
- **To deal with psychological problems such as denial, hopelessness and revenge**
  Alcohol was seen to make one forget that they are HIV positive. Participants referred to the loss of hope, problems and thinking that can be forgotten with alcohol. Some also felt that PLWHA drank intentionally to spread the virus.
- **Due to ignorance and physical addiction.** People were felt to be ignorant of the dangers of using alcohol or to think that since alcohol is "strong" (concentrated) it can kill the HIV virus. It was also noted that ARV drugs make one feel hungry and since people have no food they resort to alcohol.
- **Because of poverty,** as they have no money to buy food, alcohol is cheap and the withdrawal symptoms from addiction can be cured.

Participants felt that alcohol use in PLWHA leads to social problems, including breakdown of families and divorce, parents not providing fees for their children because they spend all the money on alcohol, school dropouts and loss of jobs. Alcohol was recognised to be addictive with risks of malnutrition or death due to overdose or accident. For people taking ARVs it was seen to increase libido, lead to greater risk behaviours and to reduce compliance with treatment as it makes people forget to take their drugs.

PLWHA who take alcohol were observed to have available medical support (free drugs and counselling on adherence) and psychosocial support through social workers home visits and support groups. Participants noted that education was needed on how to take care of oneself e.g. avoiding alcohol, good nutrition, good drug compliance and on proper drug use. PLWHA who took hazardous levels of alcohol were seen to need food, health checks, and free condoms and contraception support.

Participants discussing views at a "market place"
Source: C Othieno 2008

It was felt that the community can help and support PLWHA who are using alcohol to improve on their health and quality of life by giving psychosocial support for nutrition, life skills, to promote drug adherence and awareness and work with alcohol related problems, including through opinion leaders. It was felt that community health workers should play a leading role in this support and medical advice should be sourced from the dispensary (primary care level).

While these sources of social support were available, participants also felt that individuals affected by alcohol should also do more to help themselves. This led to some debate on the relative role of social support and community actions to address stigma vs the role of interventions at the individual level. Both social and individual interventions were raised, however. For example changing drinking patterns also called for banning of the sale of illegal brews in communities but law enforcers tended to be corrupt and could not be relied on to enforce the laws.

The PLWHA talked of their experiences and that of their friends who took alcohol while on ARV drugs. They said,
"We know that taking alcohol is bad. But we do not reveal it to the doctor. We know they might chase us away"
"It reduces hunger. The ARV drugs make one feel hungry and if you do not have money to buy food you take alcohol and then sleep".

A community mental health worker and a client (PLWHA) who had recovered from alcohol abuse presented their cases. The client said
"I was diagnosed with HIV five years ago. After several tests the doctor gave me some drugs. I had been drinking alcohol and continued drinking for up to two years after starting treatment. I feared discussing the drinking with the doctor. I knew he would be hostile to me if I did. I saw that my health was deteriorating. That is when I stopped drinking"

The health workers also admitted that they often acted in a hostile way to patients who abuse alcohol. They said this was because they felt frustrated. They felt that while they worked hard to improve their patients health, these patients did not appreciate their efforts:
"It is a thankless job; the patients never appreciate our efforts. This makes us sometimes act in a hostile way out of frustration"

Health worker, Kariobangi

The reasons why health workers were hostile to people who drink were discussed. The health workers felt that patients who drink were not trying hard enough to help themselves. Because of the frustrations they felt with these patients they reacted in a rejecting way. This in turn alienated the patients and led them to not discuss their problems freely.

The factors identified in the PRA process thus point to a range of social determinants leading to unsafe alcohol use that further undermines health and social wellbeing. Hence, for example, while poor food security and cheap prices lead people to use alcohol in place of food, harmful use of alcohol itself leads to further under-nutrition. While AIDS interventions have offered new opportunities for counselling and support to health of people on ARV who also use alcohol, participants also felt that efforts should be made to strengthen awareness and responses within communities.

3.4 Levels of and awareness on harmful alcohol use

As one measure towards improved awareness, participants were paired and asked to administer the AUDIT questionnaire (described in the methods section) to each other in turns. They made the scores according to the responses given. Then the whole group discussed the problems encountered. The concept of a “standard drink” was not familiar to some participants. This was explained using the local measures of beer the 330 ml can and the 500ml bottle. Participants noted that the local brews often had varying concentrations and were therefore not easy to quantify.

In discussion, a number of signs of alcohol use were raised by community members and heath workers (See Table 6). Community members placed greater weight on the behavioural effects of alcohol use, whereas the health workers were more concerned with the physical manifestations.

Table 6: Signs of alcohol use according to the community and health workers

Signs	**Community**	**Health workers**
Psychological		
Violence	+	
Abusive	+	
Avoiding people (kuhepahepa)	+	
Funny behaviour	+	
Unusual extreme happiness	+	
Crying without provocation (aimlessly)	+	
Talking to oneself/ confused speech	+	**+**
Physical		
Vomiting	+	
Urinating and soiling oneself	+	
Bad smell/ smell of alcohol	+	**+**
Sleeping anyhow (kulala ovyo) promiscuity or excessive sleepiness/ sleepy red eyes	+	**+**
Tremors	+	
Slurred speech		**+**
Weakness		**+**
Lips change colour		**+**
sweating		**+**
Dry skin		**+**
Restlessness		**+**
Staggering		**+**

In four groups, participants explored the specific issues faced by different types of people on ARVs: pregnant woman, older man, young man and young woman. The discussion was structured through use of a spider diagram, with the type of person in the middle (body) and the legs were used to identify and discuss the different problems that alcohol abuse posed for them in relation to their HIV status and treatment, taken from their perspective and from the perspective of their family, the health worker and others.

Each group then used beans to rank and score the top three problems that they felt were most important for PLWHA, and again those that were most important for the health workers.

Health workers and community members discuss the problems a young man living with HIV faces if he abuses alcohol. Source C Othieno 2008

The problems fell into major groups the socio-economic, psychological and physical health problems (See Table .7).

Table 7: Problems identified by community members and health workers for different categories of PLWHA

Community member	Problems identified by community members	Problems identified by health workers
Young man	Violence due to stress, breaking of the law, lack of coordination (poor organisation), dropping out of school, irresponsible fatherhood	Non-compliance to drugs, absenteesim from work, unprotected sex
Young woman	Revenge by infecting others Idleness Avoid stress	Denial Ignorance Low self esteem
Old man	Poor health Lack of respect from the community Irresponsibility and neglect of his family	Poor adherence Poor nutrition Poor health; recurrent opportunistic infections
Pregnant woman	HIV/STI spread Injury to foetus Expected date of delivery not known hence she would be unprepared	HIV/STI spread Child malnutrition and school dropout Poor adherence to clinic, risk of increases blood pressure

The socioeconomic problems included breaking the law, absenteeism from work, dropping out of school, irresponsible fatherhood. The psychological and social issues raised included lack of organisation, stress, denial, hallucinations and illusions and sleep problems. This was noted to lead to poor drug compliance, poor appetite and neglect of personal hygiene, as well as medical problems, including unprotected sex, infections, STIs and loss of weight.

Health workers ranked as priorities

- non-compliance with drugs,
- absenteeism from work and
- unprotected sex.

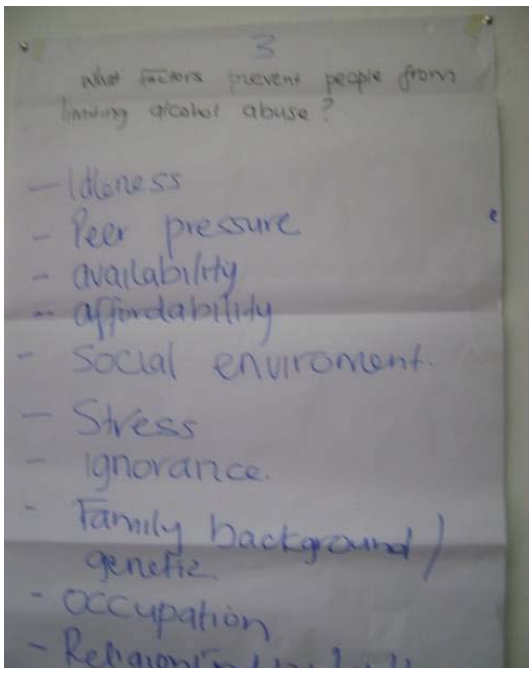
Community members ranked as priority problems

- violence due to stress,
- breaking of the law and
- unprotected sex.

There was little agreement between the two groups except in relation to unprotected sex.

The participants felt that social factors were the most important in preventing people from limiting alcohol use. They cited idleness, peer pressure, availability of alcohol, social environment and occupation. Religion, tradition and cultural factors were also considered as important factors in dealing with alcohol abuse, as were stress, ignorance and family background. Some felt genetic factors also affected the response.

In contrast, limiting alcohol abuse was seen to be more likely where poor health made one less able to tolerate alcohol. Gastritis for example leads to severe vomiting when alcohol is taken.



Factors listed by participants as preventing people from quitting alcohol consumption
Source C Othieno 2008

Other ways of limiting consumption proposed in the PRA processes included actions to limit availability of alcohol (such as legislation to limit drinking hours and deterrent fines for disorderly behaviour); community pressure; actions to provide alternative employment, social or recreational activities; religious support and reflection.

Added to the barriers identified to limiting alcohol use, participants identified a number of factors that affect adherence to ARV treatment for all clients, including:

1. The timing of the medication - if a once daily dose at night or morning, then it is easier to remember.
2. Frequent and multiple drug dosages was seen to lead to non compliance. It is not easy for the patients to remember to take medication all the time. Sometimes they are away from home and may not have carried their medications.
3. Availability of food. The ARV drugs make one hungry and therefore one could not take them without having eaten. Some felt it was better to forgo the dose.
4. Frequent appointments were seen to be difficult to keep due to competing social needs. An employer may not give his worker frequent days off to attend the hospital. Where travelling is involved the costs of transport costs may also be difficult to meet.

From this discussion participants observed that they needed to plan interventions to support PLWHA to address the constraints to adherence and the barriers to stopping harmful alcohol use. To support this they explored the institutional resources within the community that were supportive and involved in the promotion of the health of PLWHA and that could sustain interventions for PLWHIV and alcohol dependent individuals

3.5 Responses to harmful alcohol use in PLWHA

In three groups, participants listed all the stakeholders working with PLWHIV and alcohol dependent individuals in the community. These were written on circles of paper and Venn diagrams used to map the stakeholders, the links between them and their strength of the relationship to each other and to the PLWHA. The Venn diagrams of each group were reviewed by the delegates.

Using the Venn diagram to identify stakeholders working with PLWHA
Source C Othieno 2008

The services provided in the community were identified across the groups as

- Feeding programmes
- Psychosocial and psychoeducation support: VCT, home visits, hospice services
- Support for orphans and vulnerable children
- Medical care; including medicines, screening and treatment for sexually transmitted infections**,** general medical care terminal care and inpatient services, psychiatric services.
- PHC services, including immunisation, family planning, maternal and child clinics.
- HIV prevention and treatment services, included voluntary counselling and testing (VCT), prevention of mother to child transmission (PMTC), prevention and treatment of TB, provision of ARVs.
- Social, legal and referral support for PLWHA, including counselling, disclosure, HIV testing, support, visiting each other; visiting mothers an providing nutritional information.

Notably, there were no services that were devoted to the treatment of alcohol and drug related problems in the community. The team thus explored further how existing services may better address the combined needs of PLWHA on ARVs who use alcohol, and the factors undermining adherence to treatment.

A community health care worker from Kenyatta National Hospital gave an example of a patient who had AIDS and was taking ARVs, highlighting the approach taken to their management.

A single mother of a 12 year-old girl works as a bar maid in a city restaurant. She lives with a house help who takes care of her daughter when she is on duty. Her daughter is HIV positive and has been on ARVs for six years, but she does not know why she takes the drugs. The mother has not tested for HIV and is rarely at home. When off duty she drinks with friends. Her daughter has been brought for review by the house help and she tells you that since she is well now she should stop taking the drugs.

The discussion on the case study pointed to a number of issues already raised in this report, but also raised the issue of the communication between health workers and clients around such situations and the management of PLWHA on ARVs, particularly when alcohol use is involved. This was further explored using a PRA method called Johari's window, as outlined in Loewenson et al (2006). The method shows four windows of a heath worker talking to a client, in which a blindfold is on none, one of each or both respectively. This was used to discuss the patterns of communication between the health workers and the clients regarding alcohol use. The views are shown in Table 8 below.

Table 8: Communication patterns raised by the Johari's window

Both health worker and client are blindfolded: No communication between the two. Health worker does not see the client's needs and the client does not understand the health worker. Blindfolding means lack of understanding	The client is blindfolded: Health worker lacks the information because client has not opened up, although service provider has opened up and is willing to listen to the client.
The health worker is blindfolded The client is stating their problem but the health worker is unable to probe further.	Health worker and client have no blindfold. They are communicating and they both understand each other

Discussing these perceived situations, participants agreed that the first scenario was the one most commonly encountered whereas the last scenario would be the ideal one. As found in the baseline assessment, participants observed that the communication between health workers and their clients was not good and that it should be improved to better manage the situations leading to poor adherence to ARVs.

Poor communication was also seen to lead to the sometimes very different impressions of what is taking place in the communities. Generally, as discussed earlier, harmful use of alcohol was seen to be high in the community, although lower for PLWHA on ARVs. Information on the use of alcohol in the community was obtained from the clinics that provide care for the PLWHA. Out of the 20 clinics visited, only 3 provided data on their patients: Kariobangi Health Centre, Comboni Clinic, Majengo Clinic, and Comprehensive Care Clinic (next to Kenyatta National Hospital). These are public clinics and cater for clients from the lower socioeconomic groups. The quality of screening for alcohol use in these clinics could be determined, while the quality in the clinics not included could not be determined.

Table 9: Alcohol use in clients reporting to the three public sector clinics in Kariobangi Nov-Dec 2008

Clinic	Number of PLWHA registered	Cases of alcohol related problems documented past 6 months (Nov –Dec to June-July 2009)	Definite clinical diagnosis of alcohol disorder recorded	Clients assessed using a screening instrument such as AUDIT
Comboni	590	6	1	0
Kariobangi Health Centre	787	10	6	0
Comprehensive Care Centre (KNH)	600	7	2	0

The findings from the clinic records shown in Table 9 indicate a much lower level of harmful alcohol use when compared to the perceptions raised in the PRA discussions. The significantly lower levels in the clinic records suggest that health workers could be missing the cases through ineffective screening, poor communication with clients and poor links between services and community level organisations and networks. Health workers could also be reluctant to complicate their work with dealing with alcohol abuse, given the deeper social determinants that lead to it, even though it may ultimately undermine the successful outcome of their treatment programmes.

As a result while improving communication between health workers and communities was identified as a priority for improving PHC oriented responses to treatment in this community, it was also recognised that PHC oriented responses needed to address community level factors leading to poor adherence for clients to be able to use the information effectively.

4. Planning and implementing interventions to improve adherence

The participants used the evidence generated in the process to date to prioritise the factors that enable or limit alcohol abuse, and develop interventions. While the contexts and determinants for harmful alcohol use demand deeper socio-economic changes, the interventions that were identified were those that were felt to be feasible and within the domain of the PLWHA and health workers, to initiate a process of building action and control in the situation. The interventions identified were in

1: Those aimed at improving communication between services and PLWHA on alcohol use, including counselling, awareness activities, teaching and information sharing

2: Those aimed at giving greater psychosocial support and attention to PLWHA using alcohol, including enlisting support groups in follow up, home visits by community based mental health workers, and providing skills and information to support activities and coping strategies

3: Those aimed at improving the incomes of the affected PLWHA, mainly through activities and projects to generate income.

Of these, those prioritised by the PLWHA, community members and health workers jointly were (in order of ranking):

1. Counselling especially adherence counselling
2. Enlisting support groups for follow up to support adherence
3. Increased awareness and activity, including through education, on coping skills, and on options for dealing with problems

Religious instiotutions and groups, health services, community leaders, support groups and chief's community meetings (termed "Barazas") were seen to be important vehicles and forums for taking these actions forward.

In follow up to this, in addition to the actions taken to increase awareness and support networks during the PRA process with the core group involved, as already described, further measures were taken to improve the counselling on adherence and to provide wider dissemination of information on adherence and alcohol use to those on the PLWHA client list in the area. Support groups and home visits were increased and attention given to PLWHA on ARV treatment who were involved in harmful use of alcohol.

About 600 clients were registered at the Kariobangi Comprehensive Care Centre. Those found to have poor compliance were involved in the follow up intervention. Other PLWHA were also recruited from the support groups and home visits. A meeting was held with the PLWHA recruited in the area who were abusing alcohol at Kariobangi, to discuss and share information on the adverse effects of alcohol on treatment. They were then followed up with home visits and support group activities in the subsequent months.

Two support groups of thirty members each met twice a week. During the meetings the members shared experiences and supported each other.The community based health workers and community nurses from Mathari Hospital who were coordinating the meetings visited the clients who defaulted from attending the meetings. They encouraged them to attend and enquired if they had any problems such as physical illness that prevented them from attending. This was done twice a week on Tuesdays and Wednesdays.

Some of the PLWHA who also had alcohol related problems wished to form and register an association, but these efforts were unsuccessful. Although most had expressed a wish to find some kind of work, they could not decide or agree on a definite income generating activity that they would do collectively within the time frame reported here. The instability and insecurity reported earlier in this group make setting up such an activity not simple, and it required greater resources and time than were available to this work.

Efforts were also made to strengthen interaction with the health services. A third meeting was held in November 2008, attended by seventy PLWHA. The majority (60) were female, with an average age of 38.5 years (range 21 – 69; sd 10.7). The majority of the participants came from Korogocho 46 (66%) followed by Kariobangi 7 (10%); Gituthuru 5 (7%) and one each from Baba Dogo and Gomongo, sub areas of Nairobi within the catchment area of the care centre. The majority had had partners in the past, although only 9 (12.9%) were currently married and the average number of children per person was 4 (range 1 – 11). Half (50%) had more than 3 children.

During the third meeting with PLWHA, the participants were given the AUDIT to score. Sixty-eight (68) of the participants scored above 8 points which indicated that they were drinking hazardously. The scores ranged from 6 – 36 with a mean of 26 (s,d 7). This meeting was used to set up a discussion using PRA approaches with the health worker team that involved listening to the PLWHA and providing information to issues raised. Four patients actually had generalised convulsions during the meeting. Most of the PLWHA were familiar with such reactions and attributed it to lack of the morning dose of alcohol. Some gave the advice that they should not have eaten before drinking alcohol. The health workers provided information on the use of alcohol and the health and adherence issues and these were discussed. These PLWHA were amongst the group who were also supported by home visits and support groups for follow up adherence counselling.

5. Follow up assessment

A final review meeting was held in July 2009. Only 41 of the 67 PLWHA that had been involved in the prior PRA process were available at the final meeting, although this was significantly more than the 10 who responded to the initial baseline assessment. Three health workers and two community based workers attended the meeting, with a total of 46 participants together with the 41 PLWHA. They all filled the final assessment forms. We assessed the feedback on the PRA process and interventions through repeat of the AUDIT score, repeat of the baseline assessment and through discussion with participants.

The results of the repeat of the questionnaire administered at the baseline are shown in Table 10 below, comparing the average scores from both rounds.

Table 10: Average scores for the baseline and final assessments by the participants to the process (N= 46)

QUESTION	Average score at baseline	Average score at the final assessment
My understanding of alcohol related problems is	3.7	2.55
The level of harmful alcohol in my community is	3.85	2.93
The community concern over alcohol is	2.4	2.45
Family involvement in support and care of people with alcohol problems is	1.45	2.24
Community support for people with alcohol related problem is	2.05	1.95
Church / Mosque support for people with alcohol related problem is	2	1.90
Police support for people with alcohol related problem is	1.15	2.10
NGO support for people with alcohol related problem is	1.95	1.40
Health centre support for people with alcohol related problem is	1.47	1.98
Health worker support for people with alcohol related problem is	2.1	2.21
The ability of the primary health care worker at the community to detect alcohol related disorders is	2.4	1.98
The ability of the primary health care worker to manage alcohol related disorders is	2.1	2.07
The ability of the primary health care worker to manage alcohol related disorders among PLWHA is	2.1	2.20
Chiefs support for people with alcohol related problem is	0.6	2.21
The rate of harmful alcohol use among people on ARVs is	3.1	2.29
The compliance rate among those people on ARV who abuse alcohol is	2.3	2.86
Family openness on alcohol related problem in the family is	2.3	2.62
Community openness (talking about, sharing information) on alcohol related problem is	1.9	2.05
The stigma associated with HIV in this community is	3.4	2.12
The stigma associated with alcohol problems in this community is	3.2	2.52
The effectiveness of health services in managing mental health problems is	2.15	3.55
The communication between families and health services on mental health problems is	2.2	2.69

Average calculated from ratings where None at all = 0; very low = 1; low = 2; high = 3; very high =4; extremely high = 5

Overall the differences were not statistically significant using the paired t-test: t = - 0.277; df = 21; significance (2 tailed) = 0.784; 95% C I = - 0.386 – 0.296. The results in the table indicate, however, that according to respondents views

- The perceived rating of the understanding of alcohol related problems fell during the process. This may be due to the increased inclusion of PLWHA in the process compared to the higher share of health workers in the initial assessment, but also as has been found in other PRA processes, the increased awareness of knowledge gaps that rises as people become more aware of issues;

- Harmful alcohol use in the community and in people on ARVs was perceived to have fallen.

- Community concern was still felt to be low and support from communities, faith based organisations, police, health services and chiefs for people with alcohol related problems was still perceived to be low, although with some improvements in the ratings given to police, health centre support, and particularly chiefs;

- Health workers at primary care level were still seen to have limited ability to detect and manage alcohol related disorders, but the rating of the services in management of mental health and in communicating with families on these issues improved;

- The compliance rate of people who abuse alcohol on ARVs was perceived to have increased;

- Stigma and poor communications within families, health services and communities continued to be seen to be an issue affecting management of alcohol abuse, although there was a perceived improvement in the rating of openness in families and a reduction in stigma associated with HIV and alcohol problems.

The baseline and repeat AUDIT scores for the 41 PLWHA traced are shown below

Table 11: Repeat AUDIT scores for the PLWHA (N=41)

AUDIT score	Baseline	Repeat after intervention
Mean	25.08	18.7
Median	26	18
Standard deviation	6.81	6.65
Range	6 – 36	5 – 31

Using a paired sample t-test on 41 of the participants a mean difference of 6.24 (s.d. 10.4) was noted. The difference was statistically significant t = 3.828 df = 40 p < 0.00; (95% CI = 2.94 – 9.54). The PLWHA who attended the final meeting indicated that they were mostly compliant with the medical advice and the scores suggest that harmful alcohol use had fallen in this group.

6. Discussion

The majority of the PLWHA included in the study were socially disadvantaged, unemployed, and with low education. Social support was equally poor since a large number were widowed, separated or divorced. These factors, together with poor health, limited their economic opportunities and security.

In this context, alcohol use, noted by PLWHA, community members and health workers to be prevalent in the community, is not only encouraged by poor living and social conditions, but also by cost (it is relatively cheap) and by the social pressure to use alcohol to escape the mental stress caused by poverty. This is exacerbated by social attitudes that do not discourage alcohol use, and misconceptions that in fact encourage alcohol use, such as that alcohol can kill the HIV virus.

For PLWHA, alcohol is particularly problematic. It undermines the prevention and treatment resources reaching these communities as it reduces inhibitions over high risk behaviours, undermines use of condoms and other prevention resources, and reduces compliance with ARV treatment. Harmful alcohol use also leads to other psychosocial and physical problems. While these effects are observed by health workers and communities in the study area, the health workers focused more on the physical signs, whereas the community members were more concerned with the behavioural and social changes, which they also thought were more important in detecting alcohol use. This study suggests that the problem of alcohol abuse is poorly recognised for both communities and health workers: It was generally under reported to services, with low numbers of people on ARVs reported to have alcohol related problems, so that health workers see only a small share of the problem. Outreach services are weakly oriented to detect and manage the problem. Both health workers and community members could identify the gross forms of alcohol intoxication and dependence, but the concept of alcohol misuse and hazardous drinking did not appear to be common or easily understood by community members. None of the clinics used a formal alcohol screening instrument. Majengo clinic and the Comprehensive Care Clinics were run by medical doctors whereas Kariobangi and Comboni clinics were run by clinical officers and nurses, but the rates of detection of alcohol related problems did not differ much. The number identified by the patients themselves and the community health workers are higher than those officially recorded at the clinic.

Discussions with the patients also revealed that the use of ARVs was erratic, but this is not reflected in the clinic attendance which is almost perfect. During the third meeting with the PLWHA who abuse alcohol a number of them had generalised epileptic fits after they had taken tea. Presumably the high load of carbohydrates coupled with the low thiamine levels triggered this. The daily recommended dose of thiamine (vitamin B_1) is 1.5 mg. People who take alcohol need larger amounts than this. However because of poor absorption found in such patients increasing the oral dose does not help.

Health workers and community members also recognise the problems PLWHA who use alcohol face, but rate these differently. Health workers rate non-compliance with drugs highest, while community members rate as highest priorities violence due to stress and legal problems. Both recognise the risk alcohol poses in leading to unprotected sex. For PLWHA on ARVs, tere are already challenges in dealing with the timing, frequency of medication and appointments and the availability and cost of food to support treatment. For PLWHA who use alcohol these difficulties are compounded.

There are a range of services in the community that could potentially address these barriers that are involved in nutrition, psychosocial, medical care, PHC, HIV prevention and treatment services, counselling, social, legal, information and referral support for PLWHA. However these do not explicitly deal with the treatment of alcohol and drug related problems in the community or the needs of PLWHA on ARVs who use alcohol, and their adherence to treatment. Further communication between health workers and their clients is not good and needs to be improved to better manage the situations leading to poor adherence to ARVs due to alcohol use.

Health workers, community members and PLWHA themselves identified and implemented a series of interventions aimed at aimed at improving communication between services and

PLWHA on alcohol use, including counselling, awareness activities, teaching and information sharing; and at giving greater psychosocial support and attention to PLWHA using alcohol, including enlisting support groups in follow up, home visits by community based mental health workers, and providing skills and information to support activities and coping strategies. These were feasible within the network of PHC and community mental health resources in the community, although with additional support from the PRA research team. What was more difficult was implementing interventions aimed at improving the incomes of the affected PLWHA.

The PRA process and these activities were perceived by those involved to have reduced the harmful use of alcohol in those involved; to have made some improvements in community and health service support; in management of mental health and communication with families and in reducing stigma around alcohol use and HIV. The compliance rate of people who abuse alcohol on ARVs was perceived to have increased, and harmful alcohol use to have been reduced. This was further verified by an improvement in the AUDIT scores (the test of harmful alcohol use).

6.1 Lessons learned for PHC responses to AIDS

This action research highlights that wider chronic health and social problems in the community impede uptake of resources for prevention and treatment for HIV and AIDS, unless specific measures are put in place to address these are part of health services and AIDS programmes. Alcohol abuse presents problems for ARV treatment for a range of reasons – affecting positive prevention, adherence, nutrition and efficacy of medicines so it should be a priority for inclusion in PHC approaches to AIDS. Yet this study indicates that it is not, despite the common presence of alcohol use in vulnerable communities. The study indicates that women are particularly vulnerable to the conditional that lead to harmful alcohol use, adding to their higher risk of HIV. Alcohol was noted in this study to be a stimulant for sexual libido and raised as a factor in violence and stress. The study suggests that it plays a role in perpetuating or even widening gender differences in power and sexual autonomy that further exacerbate the risk of HIV for women and their barriers to prevention and treatment. This needs to be further explored.

In terms of the PHC response, the study indicates that it is possible to improve communication between the health workers and the clients attending PHC; to strengthen screening for alcohol use routinely at all clinics; and to strengthen involvement of support groups and community (mental) health workers for follow up and counselling. Integrating these features into PHC approaches to prevention and treatment would appear to be an important part not only of responses to AIDS, but to PHC more generally.

Less easily addressed are the levels of economic and nutritional deprivation that lead patients to engage in seemingly irrational behaviour that endangers their health. This calls for attention to the specific nutritional needs of PLWHA who use alcohol as part of their therapy, but also to the wider social and economic determinants that lead to harmful alcohol use, including those that use alcohol as an easy source of profits from poor communities.

One of the problems identified as contributing to high levels of alcohol use in the community was lack of a national policy on alcohol use. We were not able to obtain participation from the NACADA – the National Agency against Alcohol and Drug Abuse –in the process and recognise that community level initiatives such as this one need to feed into and be provided with an enabling context through such a national policy framework. This should be based on community and not facility level assessment of the epidemiology of alcohol use in Kenya, and should address the laws regulating the production and sale of alcohol and their enforcement and the legal and commercial practices for advertising and sale of alcohol. At

the same time, such policies need to be put in the context of wider policies for economic and food security in vulnerable communities.

6.2 Lessons learned on using PRA approaches

As a qualitative study, studies such as this may be biased by the possibility that the participants would only say the things that they thought the health workers or research team would like to hear. However we found that through use of PRA approaches the PLWHA were quite free with the community based health workers, with whom they were closely associated, and the PRA methods were able to elicit candid discussions and information that participants would want to base action on. This potential for control of the bias that may be found in subjective evidence is a positive feature of PRA methods.

There were challenges for the facilitators. The experience suggests that while it is important to think on ones feet to be responsive to the process and accommodate divergent views, it would also be useful to rehearse the tools and techniques before their use in workshops.

Longer term follow up is needed to determine the sustained impact of the intervention. Random controlled trials should be conducted to test the hypothesis that interventions aimed at reducing harmful use of alcohol have an impact on the reduction in the spread of HIV. Problems encountered in the PRA work included great expectations at all levels fostered by handouts from other donors. Getting cognitively impaired people who have lost hope to plan any activity was extremely difficult. In assessing the effectiveness of the intervention one has to take into account the loss to follow-up due to high mobility and perhaps mortality in the group. Perhaps a balance needs to be made in the use of directive and non-directive methods to get a model community income generating programme started that can serve as an example.

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Equity in health implies addressing differences in health status that are unnecessary, avoidable and unfair. In southern Africa, these typically relate to disparities across racial groups, rural/urban status, socio-economic status, gender, age and geographical region. EQUINET is primarily concerned with equity motivated interventions that seek to allocate resources preferentially to those with the worst health status (vertical equity). EQUINET seeks to understand and influence the redistribution of social and economic resources for equity oriented interventions, EQUINET also seeks to understand and inform the power and ability people (and social groups) have to make choices over health inputs and their capacity to use these choices towards health.

EQUINET implements work in a number of areas identified as central to health equity in the region:

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- Health rights as a driving force for health equity
- Health financing and integration of deprivation into health resource allocation
- Public-private mix and subsidies in health systems
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