

**UNITED NATIONS OFFICE ON DRUGS AND
CRIME (UNODC)**

**STUDY ON THE ASSESSMENT OF THE LINKAGES
BETWEEN DRUG ABUSE, INJECTING DRUG
ABUSE AND HIV/AIDS IN KENYA**

***A RAPID SITUATION ASSESSMENT (RSA) REPORT
2004***

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GLOSSARY OF ABBREVIATIONS:

AIDS	-	Acquired Immune Deficiency Syndrome
AMHF	-	Africa Mental Health Foundation
ARV	-	Anti-Retroviral
CDC	-	Centre for Disease Control
EADIS	-	East African Drug Information System
GAP	-	Global AIDS Programme
HIV	-	Human Immunodeficiency Virus
HCV	-	Hepatitis C Virus
IDU	-	Intravenous Drug User
INRA	-	Information Needs & Resources Assessment
MOH	-	Ministry of Health
NACC	-	National AIDS Control Council
NACADA	-	National Campaign Against Drug Abuse
NGO	-	Non-Governmental Organisation
NASCOP	-	National AIDS & STI Control Programme
NPSI	-	Nairobi Psychotherapy Services & Institute
PLWHA	-	People Living With HIV/AIDS
PY	-	Person Years
RSA	-	Rapid Situation Analysis
UN	-	United Nations
UNDCP	-	United Nations Drug Control Programme
UNAIDS	-	United Nations Joint Programme on HIV/AIDS
UNEP	-	United Nations Environmental Programme
UNODC	-	United Nations Office on Drug and Crime
UON	-	University of Nairobi
USA	-	United States of America
VCT	-	Voluntary Counselling & Testing
WHO	-	World Health Organisation
MMWR	-	Morbidity and Mortality Weekly Report

GLOSSARY OF STREET NAMES FOR DRUGS OF ABUSE

Alcohol	- Tindi, Kanywaji
Nicotine	- Mozo, Fegi, Faga
Cannabis Sativa	- Marijuana, Mjane, Bhang, Ganja, Kaya, Ngurai, Bomu
Catha edulis	- Miraa, Khat, Marungi, Njiti, Ngomba
Heroin	- Horse, Smack, "H", Brown Sugar
Heroin	- Horse, Smack, "H", Brown Sugar
Sedatives	- Downess, Gooffalls, Seconals, Zibugizi
Cocaine	- Cosmos, Shabash, Quawash, Gishuri
Piriton	- Zibugizi
Phencyclidine	- Zibugizi
Amphetamine	- Zibugizi
Rohypnol	- Zibugizi
Pethidine	- Zibugizi
Glue/Inhalants	- Glue

EXECUTIVE SUMMARY

There is a growing body of world literature that drug abuse has an association with HIV/AIDS. There are two main possible associations. People under the influence of drugs may lose inhibition, leading them to indulge in risky sexual behaviour that exposes them to HIV/AIDS. Secondly, people on Intravenous Drug Abuse (IDU) will expose themselves to HIV/AIDS through direct blood-to-blood transmission. Whereas the first association has been studied extensively and acknowledged in most countries, the latter has not been extensively studied in Africa and Kenya in particular. Kenya has developed policies on how to combat HIV/AIDS. Kenya is also at advanced stages of developing policy strategies for combating drug abuse at various fronts – education, treatment, rehabilitation, demand reduction and control of availability of drugs. In the absence of solid scientific data on the linkage between IDUs and HIV/AIDS, Kenya has not developed a strategy that addresses these issues. This study set out to establish this linkage, using both available secondary data and primary data, which were collected during the study using instruments developed for this purpose.

The first main finding of this study was the confirmation of lack of awareness in all the stakeholders of this association, with the stakeholders in these two problems working parallel to each other. This was reflected in the total lack of policy by the Government on the association between the two conditions.

The second major finding of this study was the actual linkages between IDUs and HIV. Those who knew they were HIV positive and were also on IDUs constituted 34-44% of the total of IDUs. On average only half knew their HIV status and half did not know their HIV status. Since they have equal chance of being HIV positive, then it can be concluded that 68-88% of all IDUs are also HIV positive, a figure that is similar to what has been found in other countries.

The third major finding was that there was a regional variation in risky sexual behaviour across the five study sites astride the line from the Coast in the East to the Western border of the country. It is therefore misleading to pool country data together.

Fourthly, in one region, mainly in the western side of Kenya, where already there is high prevalence rates of HIV/AIDS, there is relatively small prevalence of IDUs, though case reports were made by people who did not know their HIV status. This is a potentially explosive situation in the event IDUs were to increase in prevalence, hence the need to move very fast to prevent any emergence of IDUs in this area.

A serological survey in Mombasa revealed the close relationship between drug abuse, injecting drug abuse and HIV/AIDS. A proportion of 49.5% of IDUs tested positive for HIV, although this is most likely an underestimate.

It can therefore be concluded that there is a linkage between drug abuse and in particular intravenous drug use (IDUs) and HIV transmission in Kenya. This calls for appropriate policy to take this reality into consideration.

INTRODUCTION

Policy and Strategy on Drug Abuse and HIV/AIDS Control

The national drug policy and legislation involves drug control legislation and the legal framework under which treatment and rehabilitation of drug abuse takes place. The national policy on drug abuse in Kenya was developed on the premise that the Kenya government ratified three major United Nations Conventions on Narcotic Drugs and Psychotropic Substances, namely:

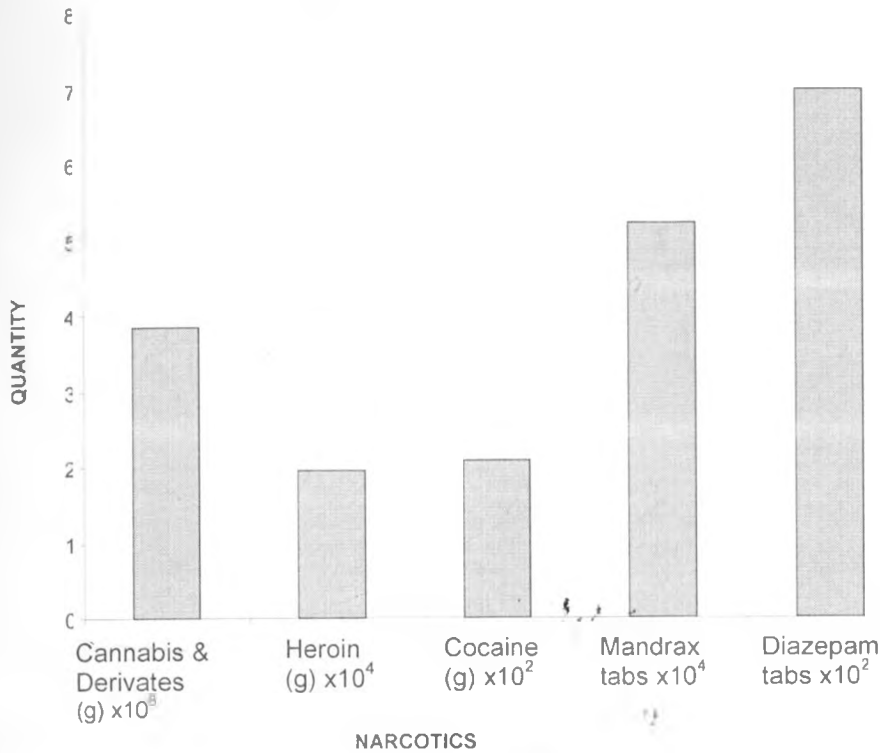
1. The Single Convention on Narcotics of 1961.
2. The Convention on Psychotropic Substances of 1971.
3. The Convention against Illicit Trafficking on Narcotic Drugs and Psychotropic Substances of 1988.

The Narcotic Drugs and Psychotropic Substances (Control) Act, 1994, is the latest Kenyan legislation against drugs trafficking and abuse. This enactment was followed by the setting up of the Interministerial Drug Control Committee, whose responsibility was to evaluate drug policies in the country. The greatest achievement of the Interministerial Committee was the production of the Drug Master Plan in 1998 which was approved in early 2001. That same year the National Agency for the Campaign against Drugs (NACADA) was formed to enhance advocacy against drugs of abuse in the country. Its major objective was coordination, implementation, monitoring and evaluation of programmes on the campaign against drug abuse in Kenya. This agency had been holding consultative meetings to develop a strategic plan that would include public awareness campaigns, interventions for special groups, counselling services and rehabilitation for the vulnerable, the youth, and support services. These included: Institutional framework of drug abuse control, strategies of drug abuse treatment and in prevention education activities. In addition, NACADA has been working with all stakeholders, both in the private and public sectors.

The following data, based on the Kenya Police Narcotics Seizures: 2001 and the trends in Kenya Police Narcotics Seizures: 1999-2001 illustrate the growing criminal activities related to drugs of abuse trafficking in Kenya.

The key findings of this study from Kenya will be merged with reports from two other African countries, Malawi and Tunisia (where the same study has concurrently been conducted) into a package that will be disseminated widely to advocate for action in other African countries.

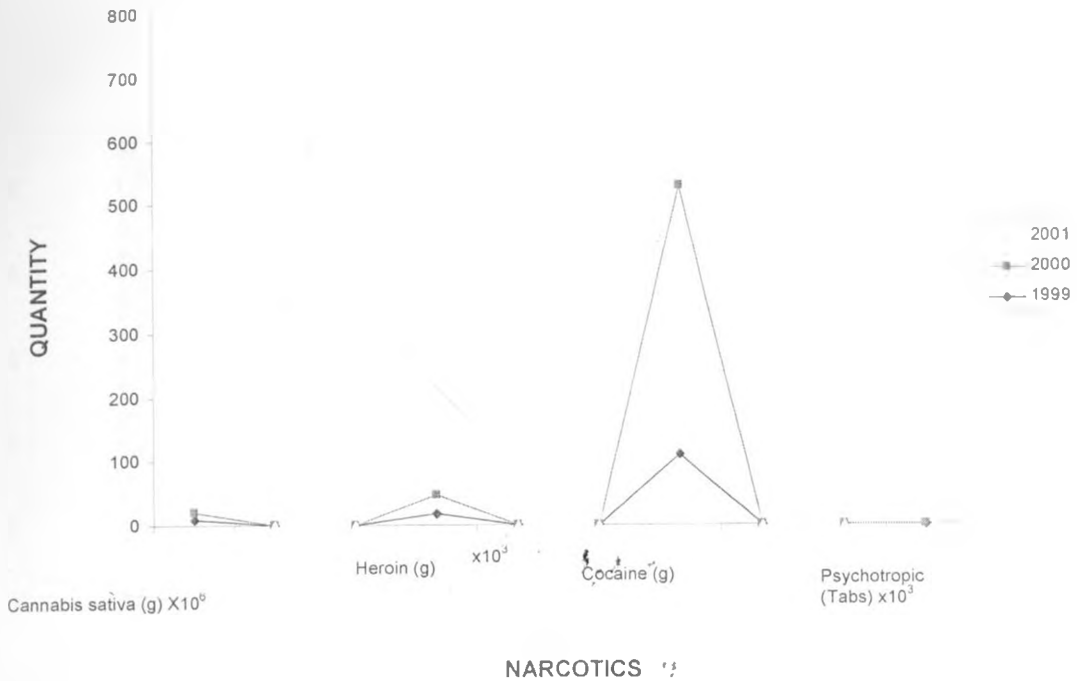
CHART 1: KENYA POLICE NARCOTICS SEIZURES: 2001



Source: Kenya Anti-narcotics police Unit (2001)

The largest haul of narcotics (chart 1) in the year 2001 was *Cannabis sativa* (3.8×10^8 g), followed by heroin (4.4×10^4 g) and cocaine at 2.1×10^2 g. In the tablet forms, Mandrax (methaqualone) was the highest seizure (5.2×10^4) followed by diazepam at 6.9×10^2 tablets. These drug seizures showed that both injecting and other modes of use of the drugs of abuse were available in Kenya.

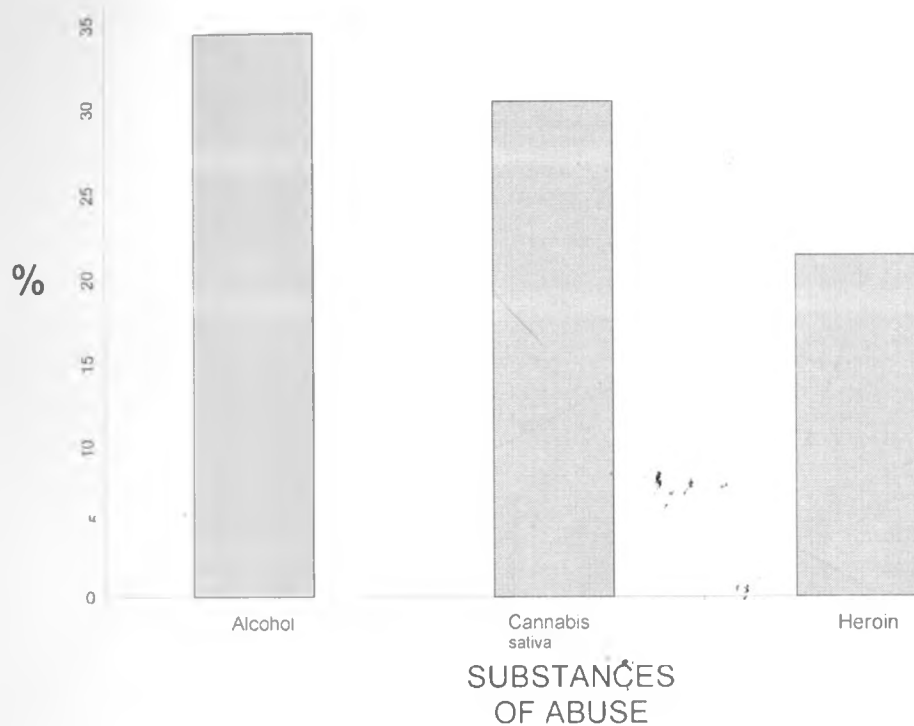
CHART 2: TRENDS IN KENYA POLICE NARCOTICS SEIZURES: 1999-2001



Source: Kenya Anti-narcotics police Unit (2001)

Cocaine (+97.4%) and psychotropic drugs (+99.5%) showed the largest growth in the seizures (chart 2) of all forms of drugs of abuse between the years 1999-2001 followed by heroin (+40.0%) and *Cannabis sativa* (+27.0%). All drugs of abuse showed increasing trends in between 1999-2001. These police seizures of narcotic drugs of abuse found reflection in clinical situations i.e. treatment centres as confirmed in various surveys such as the UNODC, Global AIDS Programme (GAP) and the East Africa Drug Information System (EADIS) of the year 2001/2 in Nairobi. This was illustrated more by the admissions of drug abusers to Brightside Drug Rehabilitation Centre, Nairobi: 1998-2001 (chart 3) and in-patient psychiatric morbidities at the Mathari Hospital: 2000 (chart 4).

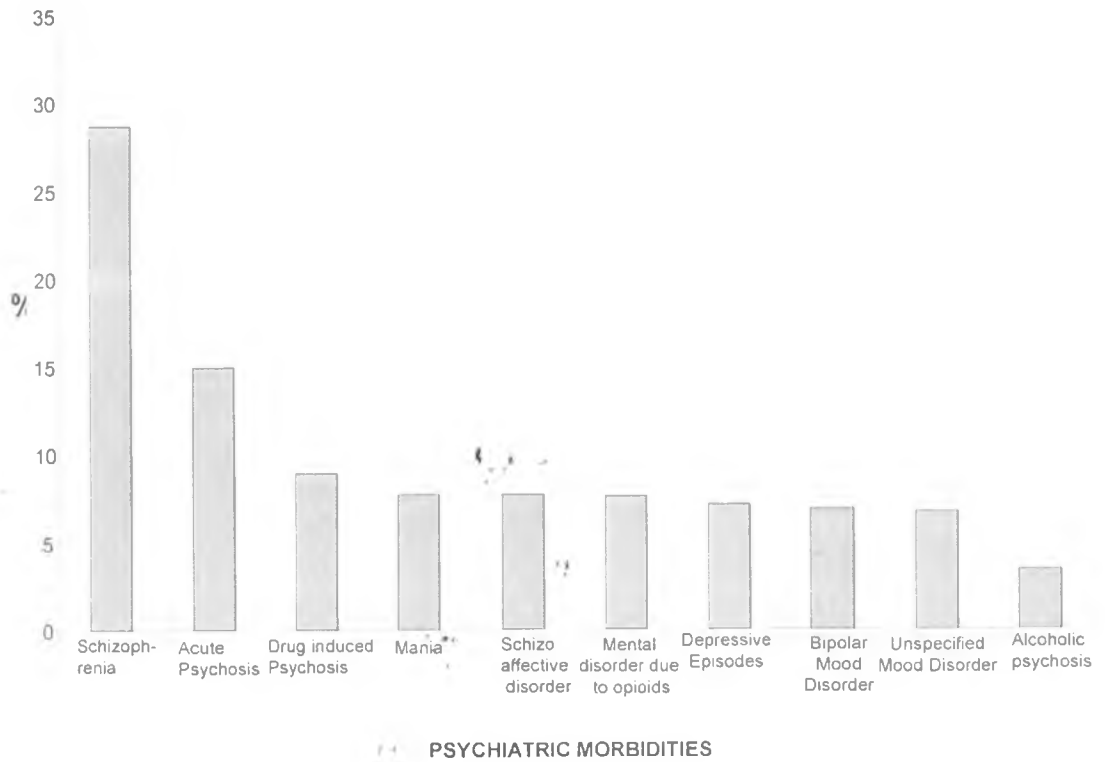
CHART 3: THE LEADING CAUSES OF ADMISSIONS TO BRIGHTSIDE DRUG REHABILITATION CENTRE (NAIROBI): 1998-2001



Source: INRA, Nairobi, Kenya, 2001.

The Information Needs and Resources Assessment (INRA) report of 2001 was commissioned by the UNODC, GAP and EADIS and findings showed that the commonest drugs of abuse among patients admitted at Brightside Drug Rehabilitation Centre, Nairobi, was alcohol (33.0%), followed by *Cannabis sativa* (29.0%) and heroin, came a close third at (20.0%). This trend was similarly repeated at the Red Hill Drug Rehabilitation Centre, Limuru.

Chart 4: TOP 10 IN-PATIENT PSYCHIATRIC MORBIDITIES AT MATHARI HOSPITAL:YEAR 2000



Source: INRA, Nairobi, Kenya, 2001.

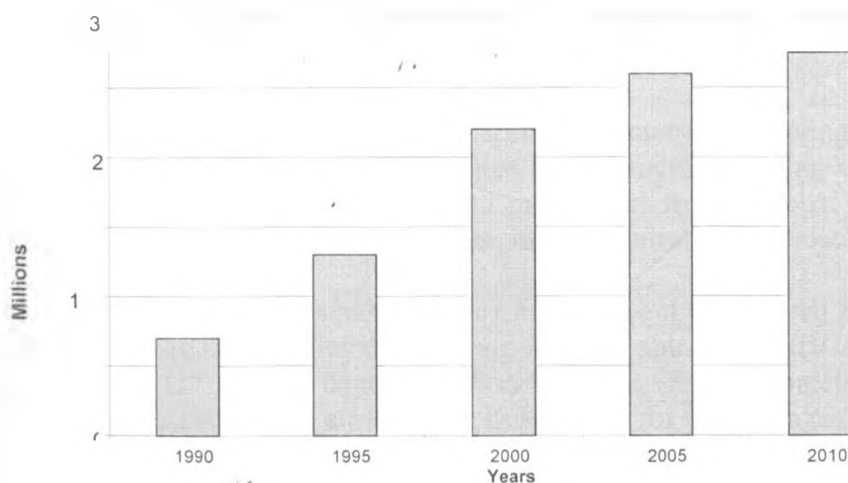
Drug induced psychosis was the third (8.9%) commonest psychiatric morbidity while mental disorders due to opioids/narcotics (7.6%) was the sixth while alcoholic psychosis (3.4%) was the tenth commonest morbidity at Mathari Hospital in the year 2000 among the in-patients. This may be compared with schizophrenia (28.7%) which was the leading morbidity in the year 2000 (chart 4).

HIV/AIDS Prevention Strategy and Policy in Kenya

Kenya made strong efforts to control and prevent further spread of HIV infections in the year 1997 through Sessional Paper No. 4. This led to the creation of the National AIDS Control Council (NACC) out of the National AIDS & Sexually Transmitted Infections Control programme (NASCOP). NACC was assigned the responsibility of dealing with policy issues while NASCOP dealt with operational issues and laboratory quality control. Since then, the HIV prevalence rate has dramatically fallen from above 20.0% then to 6.7% in the year 2003¹. The Kenyan prevalence rates were based on sentinel studies of antenatal sites distributed across the whole country. The policy has seen a large growth in the numbers of preventive measures including setting up of VCT centres country-wide and widespread availability of condoms across the country.

However, as at the beginning of the year 2004, Kenya had no policy at all on efforts to control the spread of HIV infections among injecting drug users, although this could only be thinly discerned from the blood safety component of the sessional paper No. 4, of 1997. By extension, it could be concluded that no effort or mechanism was put in place to curb HIV spread through injecting drug users, in the absence of an operational framework. This was against a backdrop of rapidly increasing contribution of IDUs to the new cases of HIV in the country. In the year 2001, it was estimated that Nairobi alone had 10,000 heroin users, of whom about 5,000 were IDUs².

CHART 5: PROJECTED HIV/AIDS CASES IN KENYA: 1990-2010



Source: MOH 2003

Though much effort has been put in to control HIV spread in Kenya, leading to a one digit prevalence rate as at late 2003, data from the Ministry of Health projects an increase in the prevalence rate of HIV/AIDS at least up to the year 2005 (chart 5). Both these two problems – increase in drugs of abuse and increase in HIV/AIDS cases exist side-by-side in Kenya and are linked by the common denominator of youthful victims.

BACKGROUND

Drugs of Abuse and HIV/AIDS: is there any linkage?

In 1999, out of 134 countries in which drug injecting had been confirmed, 114 of them reported a relationship with HIV/AIDS⁶. In 1995, it was estimated that 5-10% of all HIV/AIDS cases worldwide were due to injecting drugs of abuse through the use and sharing of contaminated needles and syringes⁷. A multi-centre seroprevalence study in Canada at needle exchange sites found an overall HIV prevalence of 6.9% among IDUs in 1997-98. Needle sharing occurred among 36% – 46% of the participants⁸⁻⁹. A follow-up study in two years showed a 2-3% increase in HIV incidence¹⁰⁻¹⁷.

The number of new HIV cases among intravenous drug users in the United States rose in 2000, halting five years of steady decline in overall HIV seroprevalence¹⁸. People who injected drugs and their sex partners in the year 2000 represented about one-third of all those who had been infected with HIV in the United States of America (USA) since 1981³. Therefore, for these populations, prevention strategies emphasized preventing drug abuse and treating drug abusers and decreasing needle-sharing⁴⁻⁵.

Locally, Ndetei *et al* (1997) found a wide range of drugs of abuse including narcotics but none was injecting drug of abuse at that time on the Kenyan market. He established that most substance abuses were in combinations and the most vulnerable age group was the 16-20 years one¹⁹.

Rationale for the Study in Kenya

From the above worldwide literature, there was strong evidence for the linkage between drug abuse/injecting drug abuse and HIV/AIDS. So far, there is no locally available or published data for Kenya on this linkage.

Kenya has a well developed policy on HIV/AIDS, Voluntary Counseling and Testing (VCT) and provision of ARV drugs (the last just in the process of being started). This policy aims to provide services (treatment and preventive) from national to grass root levels. In practice these services are inadequate, in both central and outreach outlets.

On the other hand, Kenya does not have a policy or a clear-cut operational framework on injecting drugs of abuse nor a policy on injecting drugs of abuse and HIV/AIDS, as also confirmed by NASCOP (verbal communication with the Deputy Director NASCOP, March 2004). This can be largely attributed to lack of data for this linkage in the Kenyan situation.

OBJECTIVES OF THE STUDY

Broad Objective

To obtain evidence-based data on linkages between drug abuse and HIV/AIDS in Kenya.

Specific Objectives:

1. To collect available information on injecting drug of abuse and HIV/AIDS in the country.
2. To collect available information on non-injecting drug abuse and HIV/AIDS in the country.
3. To establish the linkage (if any) between drug abuse and HIV/AIDS through specific case studies and exemplary cases in the country.
4. To identify gaps and challenges in service provision, research and policy on the above linkages.
5. To develop the key findings of the study in Kenya

METHODOLOGY

Study definition:

Descriptive and cross-sectional study of a Rapid Situation Analysis (RSA).

Study period:

The field work was carried over a twelve week period between September and December 2003 while the study activities went on up to April 2004.

Study sites:

Nairobi

Nairobi is the Capital city of Kenya (both political and commercial) with an estimated population of three million people (according to the last census of 1999), nearly a third of whom live in slums. It is a transit and communication centre between the Indian subcontinent and Europe and North America and Central and West Africa through The Jomo Kenyatta International Airport which is a major regional hub of business and communication. It is a cosmopolitan city in which all the forty two ethnic groups live in large proportional numbers. It is also the United Nations headquarters for the United Nations Environmental Programme (UNEP) and Habitat while it is home to several United nations Agencies such as World Health Organisation (WHO), UNODC and the United Nations Joint programme on HIV/AIDS (UNAIDS). Nairobi is also a city on the Cape Town – Cairo and the East Coast to Central Africa Highways. It is served by nineteen public health institutions and numerous private health institutions and has the highest concentration of drug treatment and rehabilitation centres and medical and paramedical professionals in the related fields.

Mombasa

This is the only major commercial shipping port along the East African coastline, serving many neighbouring countries including Northern Tanzania, Uganda, Southern Sudan, Rwanda, Burundi and Eastern Congo. It recently acquired the status of a free trade zone which has reinforced its use as a point of entry or exit for controlled substances. Over the

years, the town has also grown on tourism industry, part of which may have been sex tourism, though not much research has been done to quantify the magnitude of sex tourism. It has been observed that whenever war ships dock at the Mombasa port, many commercial sex workers from as far as the Democratic Republic of Congo flock the town. It has a mixture of Christian and Muslim religions and a strong international composition of its residents and visitors. It is easily accessible to Asia and Europe by sea while its expansive coastline is not easy to patrol in monitoring the illicit drug trade.

Malindi

The town is about 100 kilometers North of Mombasa and is similar to Mombasa as a tourist destination. It receives many holiday seekers mainly from Europe. It has strong Italian historical links and it is predominantly a Muslim society with a strong Arabic historical influence.

Nakuru

This town is located along the major trans-Africa highway, the Northern Corridor, linking Kenya to East and Central Africa. It is a convergence centre for Northern and South West Kenya in addition to Eastern and Central Africa. It is the administrative capital of the Rift Valley Province, a rich agricultural province. Its inhabitants are predominantly Christian faithful of different Kenyan ethnicity.

Kisumu

This is a major port city on Lake Victoria, linking Kenya, Uganda and Tanzania. The town brings Central Africa into close proximity to East Africa and by extension, Kenya. The residents are mainly Christians of Luo-descent but the city also has a sizeable number of Kenyans of Indian origin and it has interstate ethnic overlaps. The waters of Lake Victoria provide an opportunity for illicit trade among the residents of East Africa.

Study population:

The study population included active and former drug abusers who were either HIV positive or negative, to be found in the rehabilitation and treatment centres, streets, hospitals or in the drug abuse dens within the geographical study area. The second key group of the study population included people living with HIV/AIDS with or without history of drug abuse. These two categories of the study population provided the required primary data. The UN agencies, government agencies, drug rehabilitation and treatment centres, hospitals, community-based organisations, non-governmental organisations and research institutions provided secondary and quantitative data. This was done by accessing records at the various institutions. Health personnel, opinion leaders, counselors, social workers, People Living with HIV/AIDS (PLWHA), rehabilitated former drug abusers, policy makers, religious leaders; drug abuse and HIV/AIDS activists provided qualitative data.

Rationale for selecting the study areas

The study sites selected in Kenya were the main commercial and urban centres. This was consistent with other worldwide findings in which the highest levels of drug of abuse were found in the major urban centres^{14, 17}. Some of the common characteristics of the urban centres included being well connected to each other by air, road and partly sea for

some, their cosmopolitan nature and their high level contacts with other continents through tourism among others. The regional distribution of the study areas brought in a balanced ethnic distribution, cultural mixture, international relationships and national representation.

Sampling:

The sampling procedures included purposive sampling, snowballing, quota and open street sampling. The sampling borrowed heavily from the lessons learnt by UNODC worldwide on the methods of sampling and data collection and other studies successfully carried out by the UNODC.

Sample size:

It had been planned to recruit 250 participants per study site, so that the total sample size would have come to 1250. This did not materialise due to variable numbers of PLWHA & drug abusers per region. This was avoided so that no region would have exceeded the other on the basis of reaching saturation point while others would be much lower. Subsequently, the target was simply reaching the 250 without recapturing participants and to maximize the funds available without compromising the quality of data. Again, due to logistical problems and the complexity involved in dealing with PLWHA & drug abusers, the total number of participants recruited was 1420 distributed as follows:

	Urban Centres	Numbers	%
1	Nairobi	364	25.6
2	Mombasa	350	24.6
3	Malindi	183	12.9
4	Nakuru	246	17.3
5	Kisumu	277	19.6
6	Total	1420	100.0

The Instruments

Structured, semi-structured and open-ended questionnaires and one to one interviews were used in this study. The questionnaires were developed in order to clearly identify and capture the interface between HIV/AIDS and drug abuse, particularly injecting drug use. It was formulated in simple language to an extent where it could even be self administered, particularly by the institutional managers and opinion leaders on their own. All the HIV/AIDS cases and drug abusers required close supervision and assistance during the collection of data.

Procedure

The protocol was first tested in the field at all the study sites before the commencement of the study. During this period, inputs from the field staff were incorporated. It also entailed mobilisation of the available resources to the study sites as an act of preparedness. Would-be study co-researchers, assistants were all trained theoretically and practically about every questionnaire and operations of the study. This training was a follow up of the first one conducted by the NPSI in Nairobi for the all researchers, co-researchers field teams and research assistants. The co-researchers were the managers of the drug rehabilitation and treatment centres together with the managers of the institutions catering for the PLWHA at all study sites. They were also trained in field approaches based on the experiences of UNODC in dealing with the risks associated with environments of drug abuse. More important were trainings in the methodologies of RSAs which had a lot of lessons learnt from UNODC's previous experiences.

The study was carried out in two phases namely, collection of secondary data in phase one and collection of primary data in phase two. Phase two built up upon the information gathered in phase one which included the previous INRA reports in the year 2001/2. The instrument was developed in such a way that lessons learnt from the INRA and UNODC were incorporated; such as the modes of data storage in different institutions so that the instrument would be as familiar as possible. Triangulation was emphasised in both secondary and primary data collection and provision made for it in the instruments. The skills and experience of researchers were put to maximum use during collection of primary and secondary data. The roles of the field guides and co-researchers were to identify the respondents and institutions, translate languages where necessary and secure conducive environments for the interviews. Those who were recruited to participate in the study were those who fulfilled the study inclusion criteria while the researchers observed the ethical requirements.

Each questionnaire was completed within one hour and thereafter, secured in a water proof bag and delivered to NPSI office by the research assistants. Each focus group was composed of 5-8 persons with a one-hour discussion and presentation of outcomes. The composition of the participants was determined by the target group so that at any one time, was made up of people with common characteristics or goal. The focus groups consisted of drug abusers and former drug abusers, PLHWA and commercial sex workers with or without history of drug abuse and drug abusers undergoing rehabilitation at various institutions. Efforts were made to ensure that participants hailed from cognitive and social distribution maps. Key informants were considered to be preferably working

for or in conjunction with the drug abusers and or PLWHA, researchers in the related field programmes and similar and related workers. They were considered if they understood the issues of drug abuse, commercial sex, HIV-risky behaviour and drug abuse risky behaviour. Others included managers of institutions dealing with drug abuse and PLWHA & drug abusers, former and rehabilitated drug abusers and former commercial sex workers. They had to be adequately literate and of sound mind. Key informants underwent in-depth interviews as well as filling in structured and semi-structured questionnaires while the interview was carried out on one to one basis confidentially. Vital information came from researchers through field notes during observation periods in the early stages of the study.

Ethical Considerations

Cognisance was taken of the fact that this study was investigating very sensitive issues that would elicit hostility, insecurity or concealment of the real data sought after from the participants. Subsequently, confidentiality and privacy had to be ensured for the study subjects to safeguard the interest of respondents. This also involved concealment of the identity of the respondents. Any respondent who felt uncomfortable to partake to part or the whole of the study was granted permission to withdraw without any penalty or loss of benefits. All respondents gave informed consents prior to participating in the study.

Study Limitations

A few respondents had language problems, especially, the drug abusers who had slurred speech. Also, translation from English to Kiswahili was not perfect to the letter. Some study participants demanded payments to participate in the study. However, help was sought from the field guides.

Due to the nature of the questions, and in spite of acceptance by the respondents, one could only probe to the extent the respondents allowed. The respondents also complained of research fatigue with little benefit from previous research interviews.

Data analysis

Analysis of qualitative data was done manually while quantitative data was analysed using SPSS version 11.0.

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FINDINGS

SOCIODEMOGRAPHIC CHARACTERISTICS

NATIONAL PROFILE

The mean ages varied from 25.25 to 33.75. There were more males than females except in Malindi. There was a wide variety of ethnic groups ranging from 14 in Kisumu to 42 in Mombasa. The three main religious groups were Catholic, Protestants and Muslim, but the proportions varied from site to site with a predominance of Muslim only in Mombasa. The pattern of marital status was similar in all the sites with single status being the commonest followed by married status, divorced/separated status and widowed status. However there were variations within the general trends with Kisumu having the highest level of being widowed and the least level of single status. There was general similarity in level of education and employment status. In all the above, there were variations within the general trends from site to site as detailed below.

REGIONAL VARIATIONS

Mombasa:

Out of the 350 study participants, 221(63.1%) were males and 129(36.9%) were females, with a mean age of 28.48 (range 15-63) and a mode of 23. Of the respondents: 21.4% were Catholics, 17.1% Protestants, 56.6% Muslims and the remainder (4.9%) being others. Forty two (42) tribes/ethnic groups from all over the country were represented but the majorities were Bajoni (a coastal tribe) at 20.6%, Arab (another coastal tribe) at 14.6% and Luo who were 9.7%. Those married were 20.6%, 60.0% single, 13.7% divorced/separated, 15% widowed and 1.1% did not belong to any of the above. Four percent (4%) did not have any formal education, 55.4% had primary education (up to eight years of formal education), 28.6% had secondary school education, 9.1% post-secondary school college education and 2.6% had university education. Those who lived with both parents were 12.9% while 19.1% lived with one parent, 12.3% with a sibling, 17.1% with a friend and 36.9% with others other than the above.

Nairobi

Out of 364, 265 (72.8%) were males and 99 (27.2%) were females, with a mean age of 27.93 (range 16-53) and a mode of 23. Catholics constituted 32.4%, 44.2% were Protestants, 19.5% were Muslims and the remainder belonged to other religions. Thirty five (35) tribes/ethnic groups were represented but the majorities were Kikuyus at 33.8%, Luos at 12.1% and Luhyas at 11.5%. Thirty three percent (33.0%) were married, 56.0% single, 8.0% divorced/separated, 2.2% widowed and 0.5% did not belong to any of the above. A proportion of 2.2% did not have any formal education. 37.6% had primary education (up to eight years of formal education), 41.8% had secondary school education, 11.8% post-secondary school college education and 6.0% had university education. Further, 21.2% lived with both parents, 15.9% with one parent, 8.2% with a sibling, 15.9% with a friend and 37.6% with others other than the above. Those employed were

37.6% while 34.0% were unemployed, 11.5% were students, 3.3% were housewives and 11.0% belonged to the 'other not specified' category.

Nakuru

Out of 246, 172(69.9%) were males and 74(30.1%) were females, with a mean age of 25.25 (range 12-73) and a mode of 23. In terms of religion, 29.3% were Catholics, 58.5% Protestants, 6.9% Muslims and the remainder being others. A total of 22 tribes/ethnic groups from all over the country were represented but the majorities were Kikuyu (40.7%), Luos (17.5%) and Luhya (10.6%). Those married were 23.6% whereas 64.6% were single, 3.7% divorced/separated, 2.0% widowed and the rest did not belong to any of the above. It was revealed that 4.9% did not have any formal education, 22.0% had primary education (up to eight years of formal education), 39.0% had secondary school education, 30.5% post-secondary school college education and 3.7% university education. In addition, 25.2% lived with parents, 19.1% with one parent, 6.9% with a sibling, 11.4% with a friend and 35.0% with others other than the above. It was also observed that 44.3% were employed, 30.1% were unemployed, 15.6% were students, 3.3% were housewives while the rest did not belong to any of the above.

Kisumu

Out of 277, 175(63.2%) were males and 102(36.8%) were females, with a mean age of 33.75 (range 14-82) and a mode of 23. Catholics were 41.5%, 51.5% were Protestants, 3.3% were Muslims and the remainder were others. Fourteen tribes/ethnic groups were represented, majority being Luos (80.9%), Kikuyus (7.6%) and Luhyas (4.3%). With respect to relationships, 31.9% were married, 38.5% single, 11.1% divorced/separated, 17.0% widowed and 1.5% did not belong to any of the above. It was observed that 6.1% did not have any formal education, 33.6% had primary education (up to eight years of formal education), 36.5% had secondary school education, 18.1% post-secondary school college education and 4.3% university education. A proportion of 16.1% lived with parents, 13.1% with one parent, 9.7% with a sibling, 4.1% with a friend and 56.9% with others other than the above. In this study, 46.5% were employed, 25.5% unemployed, 11.4% students, 5.9% housewives, and the rest (10.7%) did not belong to any of the above.

Malindi

Out of 183, 59(32.2%) were males and 124(67.8%) were females, with a mean age of 31.86 (range 10-54) and a mode of 33. Forty one percent were Catholics, 29.0% Protestants, 27.3% Muslims and the remainder were others. Twenty six tribes/ethnic groups were represented, majority being Luos (20.2%), Giriama (16.9%) and Bajoni (13.1%). Additionally, 20.8% were married, 54.6% single, 11.5% divorced/separated, 11.5% widowed and 0.5% did not belong to any of the above. It was revealed that 11.5% did not have any formal education, 51.4% had primary education (upto eight years of formal education), 30.6% had secondary school education, 3.8% post-secondary school college education and 1.1% university education. Those who lived with both parents were 12.6% while 23.5% lived with one parent, 13.7% with a sibling, 20.2% with a friend and 29.0% with others other than the above. In terms of employment, 16.9% were

employed, 53.0% unemployed, 1.6% students, 23.0% housewives and the rest (3.8%) did not specify.

PATTERNS OF DRUG USE:

TABLE 1: MOST FREQUENTLY USED DRUG BY REGION (%)

		Nairobi	Mombasa	Malindi	Nakuru	Kisumu
1	Alcohol	36.8	29.4	6.6	54.1	54.5
2	Nicotine	16.5	21.4	21.9	16.7	10.8
3	Cannabis Sativa	12.1	10.6	3.3	15.0	7.9
4	Catha Edulis	4.9	5.4	0.0	3.3	0.4
5	Cocaine	8.2	1.4	0.0	1.2	0.4
6	Heroin	6.0	22.3	9.8	1.2	0.7
7	Sedatives	1.6	0.6		0.4	0.7
8	Pethidine	0.5	0.0		2.0	0.4
9	Kuber	0.0	0.0			0.4
10	Morphine	5.5	0.0			0.4
11	Inhalants (Glue)	0.3	0.0			1.4
12	Phencyclidine	0.5	0.6			
13	Pills / Piriton	0.5	0.0			
14	Amphetamines	1.6	0.0			

Alcohol was the most commonly abused drug in Kenya with a national abuser rate of 36.3% followed by nicotine at 17.5%; third was *Cannabis sativa* at 9.9%. Heroin was fourth at 8.0% while *Catha edulis* was fifth at 2.8% while sixth position was taken up by cocaine with a prevalence rate of 2.2% (table 1).

TABLE 2: EVER USED DRUGS IN LIFE (%)

	Mombasa n=350	Malindi n=183	Nairobi n=364	Nakuru n=246	Kisumu n=277
Ever used drugs	92.0	49.2	95.3	93.1	76.2
Today	68.9	37.7	53.6	37.4	31.0
Past 30 days	10.0	2.2	21.2	25.2	19.5
More than 30 days	0.9	0.5	8.8	6.9	5.1
Less than 12 months	5.1	1.1	4.9	8.5	7.6
More than 12 months	7.7	4.9	8.5	14.0	14.1
Not specified	7.4	53.6	3.0	7.3	22.7

With the exception of Malindi, the majority of whom did not respond to this question, over 90.0% of the people had a history of ever using drugs of abuse and the majority were active users on daily basis (average daily prevalence rate of 46.0%), monthly prevalence rate of 45.6% and annual prevalence rate of 5.4% (table 2). Mombasa recorded the highest daily prevalence rate (68.9%), followed by Nairobi at 53.6% while other study centres ranged between 31.0% and 37.7%.

TABLE 3: METHODS/ROUTES OF USE OF DRUGS (%)

	Mombasa n=314	Malindi n=75	Nairobi n=340	Nakuru N=222	Kisumu n=209
Swallow	33.4	16.0	47.4	59.5	72.2
Smoke	43.9	62.7	30.6	32.4	23.9
Snort/Sniff	5.7	0.0	5.0	5.0	1.4
Inject	12.1	21.3	15.9	0.9	1.9
Others	4.8	0.0	1.2	2.3	0.5

Oral (45.7% on average) and nasal (38.7%) were by far the most common modes of consumption of drugs, followed by parenteral administration (injectable) at 10.4% on average (table 3).

TABLE 4a: METHOD OF USE OVER TIME (%)**SWALLOW:**

	Mombasa	Malindi	Nairobi	Nakuru	Kisumu
Today	56.6	83.3	47.0	30.8	41.1
Past week	17.9	0.0	26.2	28.6	23.5
Past 30 days	0.9	0.0	9.1	9.8	5.9
More than 30 days	2.8	0.0	6.1	12.8	11.8
More than 12 months	12.3	16.7	11.6	18.0	17.6

The Coastal Region of Kenya predominantly used swallowing as their preferred mode of intake of drugs of abuse with Malindi leading at 83.3% and Mombasa at 56.6% on the daily consumption of the drugs. All over the country, the drugs were consumed on daily basis with a one day average prevalence rate of 51.8% (table 4a).

TABLE 4b: METHOD OF USE OVER TIME (%)**SMOKE:**

	Mombasa	Malindi	Nairobi	Nakuru	Kisumu
Today	86.1	85.1	56.7	54.9	40.0
Past week	5.8	4.3	17.3	25.4	24.0
Past 30 days	0.7	0.0	10.6	2.8	8.0
More than 30 days	0.7	4.3	6.7	2.8	6.0
More than 12 months	6.6	6.4	8.7	14.1	22.0

The average national same day prevalence rate for smoking was 64.6%. However, smoking drugs of abuse was carried out intermittently by some consumers, but the majority smoked for up to one week on regular basis (table 4b).

**TABLE 4c: METHOD OF USE OVER TIME (%)
SNORT/SNIFF:**

	Mombasa	Malindi	Nairobi	Nakuru	Kisumu
Today	85.0	0.0	70.6	72.7	33.3
Past weeks	5.0	0.0	11.8	9.1	66.7
Past 30 days	5.0	0.0	5.9	9.1	0.0
More than 30 days	0.0	0.0	5.9	9.1	0.0
More than 12 months	5.0	0.0	5.9	0.0	0.0

Snorting and sniffing drugs of abuse was done on daily basis mainly with Mombasa (85.0%) leading followed by Nakuru (72.7%) and Nairobi (70.6%). The national average one day prevalence rate was 52.3%. The exception to this rule was Kisumu whose highest rate of consumption was on weekly basis at 66.7% (table 4c).

**TABLE 4d: METHOD OF USE OVER TIME AND CURRENT AGE (%)
INJECTION:**

	Mombasa	Malindi	Nairobi	Nakuru	Kisumu
Today	86.5	100.0	67.9	0.0	25.0
Past week	27.0	0.0	23.2	50.0	25.0
Past 30 days	0.0	0.0	8.9	0.0	25.0
More than 30 days	5.4	0.0	0.0	0.0	0.0
More than 12 months	5.4	0.0	0.0	50.0	25.0

Malindi exclusively practised injection of drugs of abuse on daily basis with a one day prevalence rate of 100.0%, followed by Mombasa with a one day prevalence rate of 86.5 % and Nairobi came third with a one day prevalence rate of 67.9%. Kisumu was the least in terms of injecting drugs with a monthly prevalence rate of 25.0%. Nakuru practised it mostly on weekly basis with a weekly prevalence rate of 50.0%.

TABLE 5: OTHER FAMILY MEMBER USING DRUGS?(%)

	Mombasa n=350	Malindi n=183	Nairobi n=364	Nakuru N=246	Kisumu n=277
Father	12.0	2.2	8.0	13.8	15.5
Mother	3.7	2.2	1.1	3.3	3.6
Brother	29.4	14.8	39.6	32.1	28.2
Sister	4.0	4.4	6.0	3.3	1.4
Other relatives	11.4	4.9	5.0	6.9	10.9
Missing	39.4	71.6	39.8	40.7	40.4

A brother followed by the father and a sister were the family members most commonly family members using drugs (table 5). Both the brother and sister were commonest in Nairobi (39.6% and 6.0% respectively) and the mother commonest in Mombasa (3.7%) and Kisumu (3.6%). Other relatives were commonest abusers in Mombasa (11.4%) and Kisumu (10.9%)

TABLE 6: SOURCE OF MONEY FOR DRUGS (%)

	Mombasa n=350	Malindi n=183	Nairobi n=364	Nakuru N=246	Kisumu n=277
Personal income	50.9	18.6	52.7	48.8	44.8
Gifts	14.6	1.1	15.4	17.1	21.7
Stealing	14.9	4.0	17.3	17.1	3.6
Begging	4.3	0	0.8	1.6	1.8
Borrowing	0.9	0	2.2	3.7	0.4
Others	2.6	5.5	3.3	1.6	1.4
Missing	12.0	6.7	8.2	10.2	26

Personal income was the commonest source of funds (43.2% on average) for the purchase of drugs followed by stealing except in Kisumu where gift was the second most common source of money for purchase of the drugs (table 6). Stealing was highest in Nairobi (17.3%) followed by Mombasa (14.9%)

TABLE 7: PATTERN OF DRUG INJECTION (%)

	Mombasa	Malindi	Nairobi	Nakuru	Kisumu
i. Annual prevalence rates of IDUs					
Once a week	1.1	0.5	12.9	6.1	4.3
More than once a week	1.7	9.3	34.9	3.3	11.2
Once a day	2.9	0.5	4.4	2.0	0
More than once a day	17.1	10.4	3.8	0.4	0
Non-injectors	77.1	89.6	44.0	88.2	84.5
ii. Injecting self alone. Yes	12.9	0.5	12.9	4.9	2.2
iii. Annual use of needle after others. Yes					
Once	5.1	9.3	26.1	3.7	12.6
Up to 5 times	3.7	0	3.8	1.2	0
More than 5 times	4.3	0.5	7.1	3.7	0
iv. Use of the needle after others. Yes					
One person	4.6	0	3.0	4.1	0.7
Upto 5 people	3.7	0	3.0	0.4	0
More than 5 people	3.7	0.5	6.6	2.4	0
v. Dispensing used needle to others in 12 months. Yes					
Once	3.7	2.7	17.0	2.0	32.5
Up to 5 times	2.9	0.9	3.3	1.6	0
More than 5 times	4.3	0.5	6.6	3.7	0
vi. Cleaning needles before re-use in 12					

months. Yes					
Every time	8.9	1.6	3.8	2.0	1.1
Sometimes	9.1	0	8.8	1.6	2.9
Never	4.3	0	11.3	14.6	1.1
vii. Bleaching needle in the last 12 months. Yes					
Every time	1.7	1.6	10.2	3.7	24.2
Sometimes	2.3	5.5	23.6	2.4	15.2
Never	20.3	2.7	30.8	19.9	24.9
viii. Equipment cleaning in ways other than afore mentioned. explain:					
Boiling	4.9	0.5	3.6	4.9	0.4
Disinfectant	0.9	0	1.9	3.3	0
Direct heating	0	0	0.5	0.4	0
Other	10.6	0	0.5	0.8	0

Mombasa and Malindi had the highest rates of daily drug injection abuse, followed by Nairobi, with Nakuru and Kisumu having the lowest rates (Table 7i). Sharing of needles was common (Table 7 ii-iv) even with the majority not cleaning or bleaching the needles (Table 7 vii-viii).

TABLE 8: SEXUAL PRACTICE

	Mombasa	Malindi	Nairobi	Nakuru	Kisumu
i. Sexual relationship with your girlfriend/boyfriend. Yes	70.0	37.2	55.5	68.3	49.1
If yes, How often					
Daily	15.1	36.1	38.2	9.3	75.1
Weekly	33.4	14.8	28.6	37.0	12.3
Monthly	22.3	7.1	8.5	18.0	4.3
Yearly	5.7	22.4	4.9	12.2	1.1
ii. Sexual partners during the last 12 months					
1	26.3	35.5	40.9	36.6	20.9
2	2.6	30.1	29.9	15.9	42.6
3	14.3	15.8	11.5	13.4	30.7
4	20.3	9.8	6.6	19.5	2.2
iii. Preferred sexual orientation					
Man to woman	86.3	50.3	66.5	86.2	39.4
Man to man	4.0	18.0	18.4	1.2	31.8
Woman to woman	1.7	24.6	6.0	0	25.3
Masturbation	2.3	1.1	3.0	1.6	0.4
iv. Age of first sexual intercourse					

0-10	1.7	6.5	21.7	4.9	34.0
11-15	47.1	14.6	18.8	36.3	7.2
16-19	53.8	22.9	23.3	36.5	5.1
20-24	8.4	23.5	19.4	7.3	24.7
25-29	0	2.7	0.9	1.6	0.8
30-34	0.6	21.3	5.0	0.8	13.0
35-39	1.2	0	2.7	3.2	0
40+	0	0	0	0	0
v. Frequency of anal sex.					
Always	6.3	33.3	24.2	4.2	47.7
Sometimes	14.6	20.8	28.6	10.6	35.7
Rarely	11.1	5.5	3.3	2.8	1.7
vi. Use of condom during sex.					
Not at all	32.0	26.8	22.5	31.7	40.4
Sometimes	39.1	39.9	43.1	39.4	19.1
Always	25.7	13.1	11.0	18.7	4.0

The majority was sexually active (Table 8 i-ii). Homosexuality was found in both genders in all cohorts except in Nakuru (for woman to woman). It was highest in Kisumu (Table 8 iii). Anal sex was common. It is noteworthy that sex started as early as 10 years of age with the majority having had sex before the age of 20 (Table 8 iv). Only a minority used condoms always (Table 8 vi). Thus the high awareness on HIV/AIDS transmission was not reflected in sexual practice.

TABLE 9a: DRUG INJECTION & HIV STATUS

HIV status +ve.	Use of a needle after someone else in the last 12 months (%)			
	No time	Once	Up to 5 times	>5 times
Mombasa	47.1	35.3	17.5	0.0
Malindi	0.0	0.0	0.0	100.0
Nairobi	37.1	17.1	14.3	31.4
Nakuru	73.3	13.3	6.7	6.7
Kisumu	80.0	0.0	0.0	0.0
Average	47.5	13.1	7.7	27.6

Those who knew that they were HIV positive used needles that had just been used by somebody else. This practice was most frequent in Malindi and Nairobi but was not found in Kisumu.

TABLE 9b: DRUG INJECTION & HIV STATUS

HIV status +ve.	Others using needle before respondent in the last 12 months (%)			
	No person	One person	Up to 5 people	>5 people
Mombasa	46.7	26.7	26.7	0.0
Malindi	0.0	0.0	0.0	100.0
Nairobi	44.0	12.0	8.0	36.0
Nakuru	73.3	26.7	0.0	0.0
Kisumu	100.0	0.0	0.0	0.0
Average	52.8	13.1	6.9	27.2

Those who knew that they were HIV positive passed on the needles they had used to others to also use. This practice was commonest in Malindi, followed by Nairobi but was not found in Kisumu. Thus awareness in HIV transmission and positive in HIV status was not reflected in the practice of sharing needles, at least on the part of those who already knew their positive status. However the findings for Malindi should be seen in the light of Table 9d below.

TABLE 9c: DRUG INJECTION & HIV STATUS

HIV status +ve.	Other people using a needle after the respondent in the last 12 months (%)			
	No time	Once	Up to 5 times	>5 times
Mombasa	66.7	6.7	26.7	0.0
Malindi	0.0	0.0	0.0	100.0
Nairobi	40.0	20.0	14.3	25.7
Nakuru	66.7	20.0	13.3	0.0
Kisumu	80.0	0.0	0.0	0.0
Average	50.7	9.3	10.9	2.5

This table reflects the findings of Table 9b.

TABLE 9d: DRUG INJECTION & HIV STATUS

HIV status +ve.	Cleaning of needles before re-use in the last 12 months (%)			
	No re-use	Every time	Sometimes	Never
Mombasa	21.4	7.1	28.6	42.9
Malindi	0.0	100.0	0.0	0.0
Nairobi	18.5	18.5	29.6	33.3
Nakuru	13.3	13.3	0.0	73.3
Kisumu	100.0	0.0	0.0	0.0
Average	30.6	27.8	11.6	30.0

Malindi cohort always cleaned their needles, thus putting into practice their knowledge on the risks involved in sharing needles. In Kisumu there was no sharing of needles. In all the other cohorts, majority cleaned only sometimes or never.

TABLE 9e: DRUG INJECTION & HIV STATUS

HIV status +ve.	Bleaching needles before use in the last 12 months (%)			
	Every time	Sometimes	Never	
Mombasa	0.0	0.0	100.0	
Malindi	0.0	0.0	100.0	
Nairobi	16.2	35.1	48.6	
Nakuru	0.0	13.3	86.7	
Kisumu	20.0	0.0	80.0	
Average	7.2	9.7	83.1	

Bleaching of needles was a practice found only in upcountry cohorts.

TABLE 9f: DRUG INJECTION & HIV STATUS

HIV status +ve.	Sharing of equipment other than needles (%)	
	Yes	No
Mombasa	10.7	14.3
Malindi	50.0	0.0
Nairobi	16.1	33.3
Nakuru	0.0	2.8
Kisumu	0.0	100.0
Average	35.4	29.5

Drug injectors who knew they were HIV positive shared equipments related to drug use other than needles in all the cohorts except in Nakuru and Kisumu.

TABLE 9g: DRUG INJECTION & HIV STATUS

HIV status +ve.	Sexual intercourse without a condom under influence of drugs. (%)		
	Not at all	Sometimes	Always
Mombasa	44.0	16.0	40.0
Malindi	0	0	0
Nairobi	56.0	36.0	8.0
Nakuru	22.2	38.9	38.9
Kisumu	50.0	33.3	16.7
Average	43.1	31.1	25.9

In spite of knowing that they were HIV positive the cohorts practised unprotected sex in the majority of the cases. There was therefore no relation between knowing they were HIV positive and the practice of safe sex.

TABLE 10: USE OF CONDOMS VS HIV STATUS (%)

	Mombasa	Malindi	Nairobi	Nakuru	Kisumu
Frequency of use a condom whenever you have sex Vs. awareness of HIV status					
Not at all	20.0	35.0	22.4	27.1	32.3
Sometimes	42.1	35.0	55.2	43.9	41.2
Always	37.9	28.8	22.4	29.0	26.5
Frequency of use of condom whenever you have sex Vs. HIV status					
Not at all	19.0	37.5	27.7	30.8	34.5
Sometimes	53.2	29.2	47.7	48.7	34.6
Always	27.8	33.2	24.6	20.5	26.9

Whether they were aware of HIV status or not, the majority did not use condoms during sex, again reflecting a gap between knowledge on HIV transmission and practice.

A SERO PREVALENCE SURVEY ON DRUG ABUSE, INJECTING DRUG ABUSE, HIV AND HEPATITIS IN MOMBASA, KENYA

METHODOLOGY

1. This study used serological testing of drug abusers in order to ascertain their HIV and Hepatitis C status. Research team was composed of the research coordinator, 5 counselors in drug abuse & HIV/AIDS and two ex-drug abusers. Research coordinators had good rapport and network with drug abusers in different locations of the city. The five counselors had been working with drug abusers for at least two years in the city, and were well known to them. The two ex-drug abusers who assisted in this study had been abstinent for the previous two years and had an extensive knowledge of the drug-using networks in Mombasa. The study was conducted over a period of one month, from 1st December, 2003 to 31st December, 2003.

2. Selection of Laboratory

Al-Farooq hospital, a reputable Medical Centre, was identified to carry out the serological testing. It is situated in a central area in Mombasa.

3. Identification & Recruitment of Drug Abusers

The members of the research team were each allocated a well-defined catchment area, within the administrative boundaries of the city, for outreach work to get in touch with the drug abusers. The latter were approached in their own hang-outs, work places and homes. This was done to inform the subjects about the study, and to enlist their participation. The snow-balling technique was used to reach the largest number of drug abusers. Each counselor explained to the drug abusers individually or groups the purpose of the study, where the sampling was to be done and its importance to them. Each session lasted 15 – 20 minutes and all their questions were answered. Other drug abusers came in on their own after hearing from their colleagues (snowball effect). The drug abusers who agreed to participate in the study were provided with "matatu fare" (common mode of transport) to travel from their abode to the Farook Hospital.

4. Pre-test counseling, test procedures and post-test counseling

(i) At Al-Farooq Hospital, the drug abusers were welcomed in the waiting room and each was allocated a number (a tag) (e.g. 1,2,3,4,5 up to 120) by the counsellors. Each subject was individually received by a counselor in a consultation room, in full confidentiality. The concept and purpose of the study were again explained to him/her, namely that their blood would be sampled for HIV & Hepatitis C. Each subject signed a consent form accepting to participate in the study. A pre-test counseling session was conducted lasting about 30 minutes. The bio-data of the subject was recorded, e.g. name, sex, age, mode of use and area of abode.

(ii) After signing the consent form, the subject was taken for bleeding in a room allocated by the hospital specifically for above study. A counselor stayed with the client during bleeding by the laboratory technician and ensured the number allocated to the client corresponded with the number of the blood sample number collected. The blood was taken and tested for HIV and Hepatitis C using the standard procedure and laboratory testing in place in Kenya at all VCT Centres. For Hepatitis C the Biorapid – HCV kit was used. This is a rapid binding immunoassay in-vitro diagnostic test procedure, with four high sensitivity recombinant antigens employed to specifically identify anti-H.C.V antibodies in human serum, plasma or whole blood. The test has three internal recombinant, both weak and strong positive controls to ensure specificity and proper functioning of the test kit. The results are read visually.

(iii) The subjects were convened again the next day, when each subject was welcomed individually in a consultation room by the research coordinator a counselor. They were then informed of the results of their blood tests. An individual post-test counseling session lasting 20-30 minutes was provided to each subject.

RESULTS

(a) LABORATORY RESULTS

Note: No. = Number

A total of 120 were recruited, 111 males and 9 females

No. of drug abusers tested	120	Percentage
HEPATITIS C +	73	60.83
HIV +	50	41.66

No. of IDU's tested	101	Percentage
HEPATITIS C +	71	70.29
HIV +	50	49.50

Of the total sample of 120, seventy three tested positive for Hepatitis C (60.83%) and 50 tested positive for HIV (41.66%). Out of that sample 101 were IDUs. All who tested positive for HIV (50) were IDUs (49.5%), and 70.29% who tested positive for Hepatitis C were IDUs.

(b) AGE DISTRIBUTION

a.

No. of drug abusers tested	120	Percentage
17 - 30	65	54.2
31 - 40	43	35.8
41 - 52	12	10

b.

No. of drug abusers tested	120	HIV +	Percentage	HCV +	Percentage
17 - 30		27	22.5	39	32.5
31 - 40		19	15.83	29	24.16
41 - 52		4	3.33	5	4.16
TOTAL		50	44.66	73	60.82

c.

No. of drug abusers tested	101	HIV +	Percentage	HCV +	Percentage
17 - 30		27	26.73	39	38.61
31 - 40		19	18.81	27	26.73
41 - 52		4	3.96	5	4.95
TOTAL		50	49.5	71	79.29

d.

No. of drug abusers tested	120	HIV +	Percentage	HCV +	Percentage
17 - 30	65	27	41.53	39	60
31 - 40	43	19	44.1	29	67.44
41 - 52	12	4	33.33	5	41.66

e.

No. of drug abusers tested	101	HIV +	Percentage	HCV +	Percentage
17 - 30	65	27	41.53	39	60
31 - 40	43	19	44.1	27	62.79
41 - 52	12	4	33.33	5	41.66

(c) GENDER

a.

No. of drug abusers tested	120	Percentage
MALE	111	92.5
FEMALE	9	7.5

b.

No. of IDU tested	101	Percentage
MALE	94	93.06
FEMALE	7	6.94

The low turnout of females to participate in the study could be attributed to the following:

1. Their low number in general.
2. Their fear of being tested, as many of them were also commercial sex workers.
3. Little attention had been paid to them as an affected group up to then.

c.

NO. OF IDU TESTED	101	HIV +	HEPATITIS C +
MALE	94	46	66
FEMALE	7	6	5

Out of the 7 female IDUs, six tested positive for HIV/Aids and 5 tested positive for Hepatitis C. Out of the 94 male IDUs, 46 tested positive for HIV/Aids and 66 tested positive for Hepatitis C.

Of the total sample of 120, seventy three tested positive for Hepatitis C (60.83%) and 50 tested positive for HIV (41.66%). Out of that sample 101 were IDUs. All those who tested positive for HIV (50) were IDUs (49.5%), and 70.29% who tested positive for Hepatitis C were IDUs.

FOCUS GROUP DISCUSSIONS

The study included groups of PLWHA, current and recovering drug abusers and injecting drug abusers and CSW. The sessions were conducted with members of the same programme in the same area to enhance openness during the sessions. Pre-determined guidelines were used by the group leader, who had been trained by the researcher from NPSI/AMHF. About 90-100% of the participants demonstrated high knowledge on various issues and also 100% agreement on several issues, regardless of the study areas.

The following were the highlights emerging from the Focus Group Discussion:

1. All of them showed knowledge of how HIV is transmitted – sex, blood exchange, mother-to-child and injections.
2. They also recognized the age groups that were at highest risk and in particular the youth due to their adventurous lifestyles.
3. They recognized the following also as high risk groups:
 - (i) Commercial Sex Workers
 - (ii) Male homosexuals
 - (iii) Long distance drivers
 - (iv) Uncircumcised males
4. The following were recognized as risky behaviours:
 - (i) Alcohol and substance abuse leading to risky sexual behaviour
 - (ii) Sharing of needles particularly in injecting drugs users
 - (iii) Wife inheritance
 - (iv) Unprotected sex.
5. Those mostly affected by a drug abuser:
 - (i) The abuser himself/herself
 - (ii) The immediate family
 - (iii) Friends
 - (iv) Work-mates.
6. Risky Social Groups:
 - (i) The youth and students
 - (ii) Disc jockeys
 - (iii) The jobless
 - (iv) Entertainment industry workers
 - (v) The poor
 - (vi) The male sex
7. Ways to control HIV:
 - (i) Increase awareness in individuals
 - (ii) Abstinence
 - (iii) Sexual faithfulness
 - (iv) Use of condoms
 - (v) Increased community sensitization.

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8. Other ways to prevent HIV transmission:

- (i) Commercial sex workers to undergo regular testing
- (ii) Mandatory premarital HIV testing
- (iii) Mandatory screening of all bloods for transfusion
- (iv) Proper sterilization of any surgical instruments
- (v) Stop traditional circumcision
- (vi) Stringent control of substances of abuse including heavy penalties for traffickers and peddlers and age limitation for alcohol use
- (vii) Avoid pornography
- (viii) Prevent mother-to-child infection.

9. The following were suggested as ways of reducing drug abuse:

- (i) Vocational training and stress management skills for the youth
- (ii) Increased drug rehabilitation centres and VCT facilities.

10. There was consensus in the groups that:

- (i) Drug abuse was not traditionally “African” and that it had been brought about by a breakdown of traditional controls;
- (ii) Drug use leads to disinhibited sexual behaviour.

11. CSW had their own ways of reducing the risk for HIV in spite of having unprotected sex without knowing the HIV status of their clients:

- (i) Douching with common salt or lemon juice after sex
- (ii) Washing genitalia with running tap water after sex.

12. A don't care attitude: A common statement among former CSW was “*after all, malaria kills more people in Kenya than HIV/AIDS*”.

13. Poverty and sex for a living:

CSW would negotiate sex against payments or rewards rather than their lives: *‘if you want sex with the condom, then you would pay less. But without the condom, you would pay more because of the HIV and sexually transmitted infection risks inherent’*.

Another saying would be: *‘if you want anal sex, then I would charge you more, but vaginal sex would cost you less’*.

14. The following unmet emotional problems were cited: – loneliness, stigma, widowhood and therefore don't care attitude towards others even if they knew their own positive HIV status.

15. A word of advice from the group participants “*If you have not yet tried to use drugs, do not try. If you have tried them, abstain before it is too late*”.

DISCUSSION

SOCIO-DEMOGRAPHIC CHARACTERISTICS

The socio-demographic characteristics of all the samples studied reflect the general socio-demographic characteristic of drug abusers obtained in previous studies. However, nearly all the studies done in Kenya in the past have been on schools (Ndetei, 1997; NACADA 2002, unpublished). This is the first study on the social demographic characteristics of drug abusers cohorts from urban and peri-urban areas in Kenya. The results show specific trends over and above the general trends observed in school based studies.

1. Sex and Age

Unlike in the school surveys, there was an increased female proportion. Males constituted between two-thirds and three quarters in all the centres except Malindi, a tourist resort urban area where this sex ratio was reversed. Mombasa and Kisumu had identical male sex ratios. The age structure was older than in school surveys, which is expected, with a mean range of 25-34 with Kisumu and Malindi beginning in the upper bracket.

2. Ethnic Diversity

There was a very high ethnic diversity. Mombasa was leading with 42 different though mostly coastal ethnic groups. It was followed by Nairobi. Kisumu was the least with 14 ethnically different groups. These Ethnic diversities are expected with Mombasa being the main port in a region consisting of very many small indigenous ethnic groups but also a large immigrant group from up-country.

Three different ethnic groups occupied the first three representative positions in all upcountry urban areas but one of them represented in the first three positions in all the five urban areas and in one case surpassing the local communities in one urban area (Malindi). We had no immediate explanation why the Luo ethnic group featured in all the groups outside Kisumu and in particular Mombasa and Malindi. They were either over represented in the cohorts or are proportionate to the general populations in the area with the former being the most likely.

THE DRUGS AND MODE OF USE

The types of drugs abused also reflected the same pattern in schools' earlier studies with the exception of parenteral which was an emerging factor of great magnitude. The 1967 school survey showed only 0.3% heroine use, 0.3% Mandrax/amphetamines use and 0.3% cocaine and Mandrax use, but there was no intravenous use. However those school studies were epidemiological surveys, whereas this study was a cohort study of drug and injecting drug abusers.

In this study, cocaine was found in 8.2% of the study cohorts in Nairobi, 1.4% in Mombasa, 1.2% in Nakuru and 0.4% in Kisumu and none in Malindi. Heroin was found

in 6.0% of the study cohorts in Nairobi, 22.3% in Mombasa, 9.8% in Malindi, 11.2% in Nakuru and 0.7% in Kisumu. In all of cases, cocaine and heroine were used through the intravenous route. Most of the cohorts were active and current drug users, more active currently than in the past one year and more than one year. This was largely a reflection of the fact that these were active cohorts of drug users and not those undergoing rehabilitation after treatment.

In the nuclear family the male relatives, brother and father followed by a sister and lastly the mother were also drug users. (not necessarily abusers), thus providing an ongoing model for the identified drug abusers. Hence the importance of involving the nuclear family in drug related treatment, rehabilitation and educational activities for the abusers.

Personal income was the single biggest source of financing drug use followed by gifts either from family or social contacts. Begging or borrowing accounted for the least source of financing drug use. Criminal activity in the form of stealing is equal to gifts in Nairobi and Nakuru, more than gifts in Malindi and Nairobi and only significantly less than gifts only in Kisumu. Thus drug use was associated with criminality.

SEXUAL PATTERNS/BEHAVIOUR – HOMOSEXUALITY AN EMERGING TREND IN KENYA

The pattern of sexual behaviour with early age sexual experience as found in this study had been reported in earlier studies¹. But this was the first time to document homosexuality, an emerging phenomenon on the Kenyan scene.

It is noteworthy that Kisumu had such trends as higher averages in daily sexual activity, unprotected sexual activity in spite of knowledge about the risks of unprotected sex and higher frequency of multiple partners and homosexuality, followed by Nairobi and Mombasa in male to male sex and Mombasa and Nairobi in woman to woman sex. Nakuru had the least prevalence of homosexuality. It is noteworthy that sex started as early as ten years in 34% of Kisumu cohort and 21% in Mombasa cohort.

Earlier studies on sexual patterns pooled data together and in the process obscured regional trends. This may be the explanation for the well documented regional differences in HIV prevalence statistics¹.

INJECTING DRUG USE AND HIV STATUS – AN EMERGING PHENOMENON IN KENYA

Intravenous drug use (IDU) was found in all the areas studied. This was a new phenomenon compared with previous published school surveys. Sharing of needles even in people who knew that they were HIV positive was found in all the areas. Thus positive HIV status and IDU use were a significant association in Kenya. On average 50% of the sample knew their HIV status and 50% did not. About 34-44% of IDUs who knew their status were HIV positive. The 50% who did not know their HIV status had an equal chance of being positive for HIV. This means that in Kenya at least 68-88% of IDUs are HIV positive. This is in agreement with findings from Spain (66%), Myanmar

(66%), Italy (69%), Thailand (80%) (UNDCP World Drug Report, (2000), in which reports were done six years prior to this survey. This is corroborated by the serological survey in Mombasa which showed strong association between IDU/HIV, in spite of the fact that the methodology could have included people who were highly motivated to participate in the serological survey, leading to an underestimate of the percentage of linkage (49.5%) found in that survey cohort

So far, Nakuru has the least risky sexual behaviours and like Kisumu, has very low rates of IDUs. Experience in other regions has shown that IDU is a major vector of HIV even in situations where HIV sero-prevalence is low. The major concern is that the emerging IDU trend in a situation of high HIV prevalence is a recipe for disaster. There is therefore a need for concerted effort to preempt this from happening through appropriate policy for prevention while at the same time integrating drug use and in particular IDU use as part of HIV education, prevention, treatment and overall management policy. This is a matter of utter most urgency.

CONCLUSIONS

1. IDUs is an emerging phenomenon in Kenya, and there is urgent need for intervention practice to keep it in check.
2. There is a high correlation between IDUs and HIV in Kenya: -
 - Laboratory tests on a cohort of IDUs in Mombasa found that 49.5% were HIV positive. This was a specially highly motivated cohort requested to come forward for testing and may therefore have been a cause of underestimation of the percentage of linkages.
 - An average of 68-88% of different cohorts of IDUs very active in drug abuse and injecting drug abuse were HIV positive.
3. There is an urgent need to prevent IDU from becoming a major vector of HIV.
4. This study indicates homosexuality as an emerging sexual practice in Kenya. This was particularly found amongst youth in both gender, drug users and IDUs.
5. In spite of knowledge on how HIV is transmitted, this is not reflected in both drug abuse and sexual activity pattern.
6. The research indicates that drug abuse predisposes to risky sexual behaviour. This in turn fuels more drug abuse. This was confirmed by qualitative data.

RECOMMENDATIONS

1. There is an urgent need to develop new policy on IDU and its relationship to HIV.
2. There is an urgent need to translate policy into action in a comprehensive inclusive way.
3. Urgent research is required to bridge the gap between knowledge and practice in relation to drug abuse, injecting drug use, sexual practice and HIV.
4. Timely interventions are indicated to limit the spread of HIV among drug users and Injecting Drug Users.

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ANNEXES

I. INSTITUTIONAL QUESTIONNAIRE

1. Year of establishment/registration
2. State four major activities your organization carries out on HIV/AIDS, if any:
3. Kindly list the four main objectives of your organization:
4. State four major activities your organization carries out on drugs of abuse if any:
5. For how long have you been carrying out these activities?
6. State four criteria for enrolment of your clients/patients
7. What is the average length of stay (ALS)/ follow-up of your patients/clients at your institution
8. State the four major problems you face in providing services for HIV/AIDS and/or drug abuse
9. State the four possible causes of the problems mentioned in (8) above.
10. Propose four possible solutions to the problems mentioned in (8) above.
11. Briefly outline your future plans.
12. What are your programmes for special populations
13. State four ways you use to evaluate your programmes

II. FOCUS GROUP DISCUSSION QUESTIONS

- 1) Who are most affected by HIV/AIDS?
- 2) Who are the most affected by substance use/abuse?
- 3) Suggest solutions to HIV/AIDS menace
- 4) Suggest solutions to substance use/abuse
- 5) What is the origin of substance/drug use/abuse in Kisumu?
- 6) What is the origin of HIV/AIDS in Kisumu?
- 7) How did substance use/abuse lead to HIV/AIDS in Kisumu
- 8) How HIV/AIDS led to substance use/abuse in Kisumu
- 9) Who are most affected by HIV/AIDS?

III. ORGANISATIONS & INSTITUTIONS CONTACTED

1. Asumbi Drug Treatment Centre
2. Pand-Pieri Community Counseling Programme
3. St. Stephen's Cathedral Widow
4. Kisumu Girls High School
5. Anti-Narcotics Police Unit
6. Prisons Department
7. International Coast Reproductive Health (ICRH)
8. Majengo Community Counseling and Post Test Support Centre (Mombasa)
9. Star of the Sea High School (Mombasa)
10. Likoni Hope and Care Support Group (LHCA)
11. New life SDA Church
12. University of Nairobi
13. The Catholic University of Eastern Africa
14. National AIDS & Sexually Transmitted Infections Control Programme
15. Kenya Aids NGOs Consortium
16. Presbyterian Church of East Africa
17. Family Health International, Nairobi
18. Drug Rehabilitation Centre, Mathari Hospital
19. Nairobi West Hospital
20. Avenue Hospital Nairobi
21. Chiromo Lane Medical Centre
22. Redhill Place, Limuru
23. Women Fighting Aids in Kenya (WOFAK)
24. Society for Women and Aids in Kenya
25. Nairobi Pentecostal Church & Academy
26. National Aids Control Council
27. National Campaign Against Drug Abuse (NACADA)
28. UNODC (Nairobi)
29. UNAIDS (Nairobi)
30. NASCOP
31. AMREF
32. M.O.H
33. WHO
34. NPSI – EADIS Programme