

## Rapid assessment of drug use and sexual HIV risk patterns among vulnerable drug-using populations in Cape Town, Durban and Pretoria, South Africa

Charles Parry, Petal Petersen, Tara Carney, Sarah Dewing, Richard Needle

### Abstract

This exploratory study examines the links between drug use and high-risk sexual practices and HIV in vulnerable drug-using populations in South Africa, including commercial sex workers (CSWs), men who have sex with men (MSM), injecting drug users (IDUs) and non-injecting drug users who are not CSWs or MSM (NIDUs). A rapid assessment ethnographic study was undertaken using observation, mapping, key informant interviews and focus groups in known 'hotspots' for drug use and sexual risk in Cape Town, Durban and Pretoria. Key informant (KI) and focus group interviews involved drug users and service providers. Purposeful snowball sampling and street intercepts were used to recruit drug users. Outcome measures included drug-related sexual HIV risk behaviour, and risk behaviour related to injection drug use, as well as issues related to service use. HIV testing of drug-using KIs was conducted using the SmartCheck Rapid HIV-1 Antibody Test. Non-injection drug use (mainly cannabis, methaqualone, crack cocaine and crystal methamphetamine) and injection drug use (mainly heroin) was occurring in these cities. Drug users report selling sex for money to buy drugs, and CSWs used drugs before, during and after sex. Most (70%) of the drug-using KIs offered HIV testing accepted and 28% were positive, with rates highest among CSWs and MSM. IDUs reported engaging in needle sharing and needle disposal practices that put them and others at risk for contracting HIV. There was a widespread lack of awareness about where to access HIV treatment and preventive services, and numerous barriers to accessing appropriate HIV and drug-intervention services were reported. Multiple risk behaviours of vulnerable populations and lack of access to HIV prevention services could accelerate the diffusion of HIV. Targeted interventions could play an important role in limiting the spread of HIV in and through these under-reached and vulnerable populations.

**Keywords:** Drug use, sexual risk behaviour, HIV/AIDS, South Africa.

### Résumé

Cette étude exploratoire aborde les liens entre la consommation de drogues et les habitudes sexuelles à haut risque et le VIH parmi des populations vulnérables de consommateurs en Afrique du Sud. Ajouté à ceci sont des travailleurs du sexe (CSW), les hommes qui ont des rapports sexuels avec d'autres hommes (HSH), les consommateurs de drogues injectables (CDI) et les consommateurs de drogues non-injectables qui ne sont ni CSW ni HSH (CDNI). Une étude d'évaluation ethnographique rapide a été faite au Cap, à Durban et à Pretoria sur la consommation de drogues et le risque sexuel, à travers l'observation, la cartographie, les entretiens avec les informateurs principaux et des groupes de foyer des 'quartiers chauds'. Les entretiens avec les informateurs principaux et de groupes de foyer visaient les consommateurs de drogues et des prestataires de services. L'échantillonnage boule de neige et interception des gens dans la rue ont été utilisés pour recruter les consommateurs de drogues. La mesure de résultats avait, entre autres, le comportement sexuel à risque de VIH lié à la consommation de drogues injectables, ainsi que les questions liées à l'utilisation des services. Le dépistage de VIH auprès des informateurs principaux qui étaient eux-mêmes consommateurs de drogues a été fait par le biais du *SmartCheck Rapid HIV-1 Antibody Test*. La consommation de drogues non-injectables (notamment le cannabis, le méthaqualone, la cocaïne et le méthamphétamine en cristaux et les drogues injectables (soit l'héroïne) a lieu dans ces villes. Les consommateurs de drogues signalent qu'ils vendent le sexe pour obtenir l'argent pour acheter de la drogue. Les travailleurs du sexe prennent le drogue avant, durant et après les rapports sexuels. La plupart (70%) des informateurs prenant la drogue ont accepté le dépistage offert. Il se trouve que 28% d'entre eux sont séropositifs. Le taux le plus élevé est chez les travailleurs du sexe et les HSH. Les CDI ont avoué se partager les aiguilles et aux habitudes de jeter ces aiguilles qui mettent les usagers et les autres personnes à risque d'infection par le VIH. Il y a un manque étendu de prise de conscience des lieux où l'on peut avoir accès au traitement du VIH et

**Charles Parry** is the Director of the Alcohol and Drug Abuse Research Unit (ADARU) at the South African Medical Research Council (MRC). He is also an (Extraordinary) Professor in the Department of Psychiatry at Stellenbosch University.

**Petal Petersen** and **Tara Carney** are employed as scientists at ADARU/MRC. Their primary role is to provide research support for substance abuse projects in the prevention area.

**Sarah Dewing** has recently completed an MA in psychological research. She works for the MRC part-time in various capacities.

**Richard Needle** is the former team leader of the Vulnerable Populations Project of the Global AIDS Program (GAP) at the Centers of Disease Control (Atlanta). He now works for the Pangaea Global AIDS Foundation.

Correspondence to: cparry@mrc.ac.za

aux services de prévention. On a signalé plusieurs obstacles à l'accès adéquat aux services d'intervention de VIH et de la drogue. Les comportements à risques multiples de populations vulnérables et le manque d'accès aux services de prévention au VIH pourraient accélérer la propagation du VIH. Les interventions ciblées pourraient jouer un rôle important à restreindre la propagation du VIH dans et à travers ces populations vulnérables et moins atteintes.

**Mots clés:** *Consommation de drogues, comportement sexuel à risque, VIH/SIDA, Afrique du Sud.*

## Introduction

South Africa is currently experiencing one of the world's most devastating HIV epidemics and is estimated to have 5.5 million people living with HIV (Department of Health, 2006). Internationally there has been increasing attention on the direct and indirect role of drug abuse in HIV transmission. This is because many countries have experienced growing HIV epidemics, primarily through the sharing of needles by injecting drug users (UNODC, 2005). Injection drug use is low in South Africa in comparison with many other countries, but with the increase over time in the use of drugs like heroin, the potential exists for this to change rapidly (Parry, Plüddemann, & Myers, 2005).

Researchers globally are now paying increasing attention to the effect of drug use on risky sexual behaviour, because of the way in which drug use can reduce inhibitions and impair judgement. While a few studies have assessed the prevalence of HIV and drug abuse in South Africa (Shisana, Rehle, Simbayi, Parker, Zuma, Bhana, *et al.*, 2005), most have not linked these health burdens in any meaningful way. Addressing this gap is critical, given the recent finding that unsafe sex/STIs contribute 32% to the total burden of death and disability in this country (Bradshaw, Norman, Lewin, Joubert, Schneider, Nannan, *et al.*, 2007).

Scant attention to date has been given to preventing HIV among drug-using populations in South Africa. In most countries the HIV prevalence among vulnerable populations, such as commercial sex workers (CSWs), men who have sex with men (MSM) and drug users, is higher than among the general population, not only because they engage in behaviours that put them at higher risk for infection, but because they are among the most marginalised and discriminated against populations and often lack access to basic health care services (UNAIDS, 2006).

Various local and regional initiatives, including the drafting of South Africa's second National Drug Master Plan (Department of Social Development, 2007), have given prominence to the need to address drug-related HIV risk behaviour. However, further clarity on the groups at particular risk for drug-related infection and the context of risk behaviour is needed

to translate this political attention into action. As a result, an International Rapid Assessment and Response Evaluation (I-RARE) was undertaken (Needle, Trotter, Singer, Bates, Page, Metzger, *et al.*, 2003; Rhodes, Fitch, Stimson, & Kumar, 2000) to better understand, assess and make recommendations on how to respond to rapidly changing drug use and sexual risk patterns that increase susceptibility to HIV, particularly among vulnerable drug-using populations.

## Methods

Data were collected using rapid assessment methods, and included observation, mapping, key informant (KI) interviews and focus groups (FGs). Observations involved taking field notes recording the activities occurring in known 'hotspots' for drug taking and sexual activities in the three cities under study. These areas were identified as hotspots by previous studies conducted in these areas, in conjunction with site visits before data collection began. Mapping was used to illustrate the physical and social environment in which risk occurs, that is to identify where drug dealing, drug use (including injection drug use) and the purchase of drug paraphernalia takes place. KI and FG interviews were conducted with service providers in each site and with injecting (IDUs) and non-injecting drug users (NIDUs), some of whom may also have been CSWs and/or MSM. Participants were recruited in the Point Road area of Durban (a run-down area adjacent to the harbour); in Sea Point/Green Point (a mixed-income residential area comprising mainly high-rise buildings near the seafront) and Salt River/Woodstock (an area comprising mixed light industry and mainly run-down single-storied residential units close to the city centre) in Cape Town; and in the Sunnyside and Burger's Park area of central Pretoria (a high-rise residential inner city suburb of increasing density) as well as in Mamelodi (a high-density township of Pretoria consisting of single-storied dwelling units).

Street intercepts and snowball sampling techniques were used to identify these drug-using populations. KI interviews were conducted using a semi-structured interview guide to elicit descriptions of the context of drug use, values, beliefs, and sexual and injection-related risk practices. The availability and utilisation of risk reduction and treatment services and recommendations for introducing and improving HIV-related

**Table 1. Breakdown of interviews with drug users by site**

	Key informant interviewees	Focus group interviewees	Total
Cape Town	50	40	90
Durban	45	34	79
Pretoria	36	35	71
Total	131	109	240

services were also identified. FGs were conducted to expand on, confirm and validate risk-related themes described in earlier interviews or observations. These subsequent interviews were conducted with different informants to the KI interviews. Fieldwork was conducted over 6 weeks in October and November 2005. Ethical approval was granted by the University of Stellenbosch's Committee for Human Research.

KI interviewees were offered free voluntary counselling and testing (VCT) for HIV in the field by certified VCT nurses, using the Smart Check Rapid HIV-1 Antibody Test (finger prick), and confirmatory tests for those testing positive were performed using the Acon Rapid HIV-1/2 Antibody Test. Clinical studies by the South African National Institute of Communicable Diseases (2003) found the sensitivity and specificity of both tests to be 100% and 99.6% respectively. Referral to treatment and other services was provided as required.

Data analysis proceeded concurrently with data collection. The first phase occurred during fieldwork, and comprised an inductive cycle of exploration, confirmation and validation so that new themes that emerged from the data could be explored, confirmed and validated. The second phase started during fieldwork and continued afterwards. It included the development of concept matrices and a codebook that was used in analysing the qualitative data using AnSWR® (Strotman, McLellan, MacQueen, & Milstein, 2002).

Information was gained from drug-using participants by undertaking 131 KI interviews and 21 focus group interviews constituting 109 participants (Table 1). A participant could take part in a KI interview or a FG interview, but not both. The mean age of the KIs was 28.6 years, with ages ranging from 18 to 62 years. The majority were men (65%). The racial breakdown across the three sites represented the diversity in those areas. The employment status of interviewees varied, and included sex workers; drug dealers; persons having positions in the food, beverage and hospitality industry, and persons having casual jobs such as washing cars, car guards and gardeners. Some were unemployed. The final sample of drug users comprised 78 MSM, 115 CSWs and 96 IDUs. There were also 45 NIDUs who were not MSM or CSWs. Some drug users fitted into more than one category (Fig. 1). In addition, interviews were conducted

with 19 service providers (SPs) in 16 KI interviews and 1 FG interview. SPs provided drug, HIV/AIDS and other services, and included centre and organisation directors, counsellors, social workers, VCT nurses, a shelter manager, and a policeman who worked with a range of vulnerable populations.

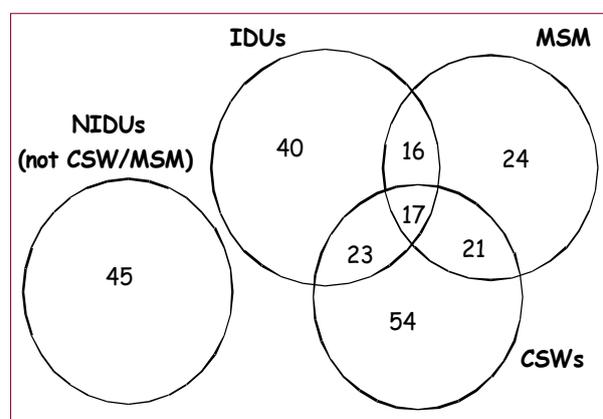


Fig. 1. Breakdown of drug-using key informant interviewees by subgroup (N=131).

## Results

### Drug use: type, effect and mode of use

The most commonly used drugs for KIs across all groups were cannabis, cocaine hydrochloride (HCL), crack cocaine and heroin. Methaqualone, otherwise known as Mandrax (a barbiturate commonly smoked with cannabis) was also widely used. There were some inter-site differences; for example, crystal methamphetamine was widely used in Cape Town while dipipanone hydrochloride (an analgesic known as Wellconal) was popular among persons who injected in Durban. Informants reported using cocaine in either form to increase energy and confidence, but reported that it also led to aggressiveness and feelings of paranoia. Drug users reported that cannabis, heroin and methaqualone were 'downers', but could also lead to laziness and aggression. With the exception of heroin, informants reported that drugs generally increased sexual desire and improved sex, but led to impotence if too much was consumed.

The majority of drugs, such as cannabis, crack cocaine, crystal methamphetamine and methaqualone were smoked. Some were also swallowed (Ecstasy) or snorted (cocaine HCL). While many interviewees smoked heroin, it was the most commonly injected drug. Most engaged in 'flushing', drawing blood back into the syringe a few times to mix the drugs with blood and then injecting the drug into the vein.

### HIV risk-related injecting behaviour

IDUs reported that they engaged in a number of high-risk injecting practices, even though the majority of them were aware that HIV could be transmitted through the sharing of needles and exchange of blood. These included:

- *Sharing*: Most IDUs stated that they did not share at present but had done in the past, while others regularly shared with their partners or friends but not strangers. Many admitted they would share a needle if they were desperate for a fix and no clean needles were available. Examples were given of current needle sharing in groups without adequate cleaning.
- *Re-use*: The re-use of needles and syringes was common, with some re-using equipment at least 2 or 3 times and up to 15 times.
- *Cleaning*: Most reported that they flushed water in and out of the syringes a few times. Some also used boiling water, or heated and burnt their needle with a lighter. They rarely soaked their equipment in antiseptic agents such as Dettol, Savlon or surgical spirits, and never used bleach as a cleaning agent.
- *Disposal*: Some IDUs said that they broke needles to prevent re-use while others wrapped them up in a cigarette box/coke tin and threw them into bins. Others disposed of equipment anywhere (e.g. on the beach, on the street) and some hid them for later use. HIV-positive interviewees seemed more 'responsible' about disposal.

### Drugs, sex and HIV risk

It was evident that a strong relationship existed between drug use and risky sexual practices. Various drugs were used before sex, but there was typically a cyclical relationship, with drugs often being used before, during and after sex. Cannabis, Ecstasy and crack cocaine were popular among all groups when drugs and sex occurred together, and in Cape Town crystal methamphetamine was also commonly used with sex. Drugs were generally used to augment the sexual experience. CSWs, for instance, often used crack cocaine to help them get the energy to do their sex work. The combination of drugs and sex also seemed to be embedded in the culture of MSM, where drugs appear to facilitate sexual

behaviours (both physiologically and psychologically). The symbiotic relationship between drugs and sex also carries a high risk for HIV transmission. Heroin was not often used with sex, especially for long-term users and several long-term injection heroin users indicated having a much greater interest in drugs than sex.

Many interviewees reported having sexual relations with a number of partners, such as strangers, sex workers, clients, drug dealers, friends, girlfriends/boyfriends and spouses. Sexual mixing across sub-populations and into the wider community was highly prevalent. Examples of this were MSM, injection drug users who engaged in sexual risk behaviours and were at dual risk of contracting and spreading the virus, and NIDUs who engaged in sexual risk behaviours such as trading sex for money or drugs. In this way these vulnerable drug-using populations are likely to serve as 'bridge populations' facilitating the wider spread of HIV.

CSWs were generally well informed about HIV transmission, although they did not always practise safe sex. In addition to having sex with a wide variety of clients, CSWs also slept with boyfriends, girlfriends, partners, friends, roommates, other sex workers and their drug dealers. CSWs reported a variety of circumstances which placed them at high risk for contracting HIV. Some of them discussed being forced to have unprotected sex; being physically beaten; being pimped by their partners who needed the money for drugs; and most importantly, having a dealer who was often their landlord and pimp. This person typically gave them a 'wakey' (usually crack cocaine) first thing in the morning to motivate them to go out and earn money, as well as other drugs throughout the day. They reported being indebted to their pimps for drugs or rented rooms. This commonly resulted in a situation where they had to take on more and more clients to pay back the debt that they owed, and often engaged in unprotected sex as clients were willing to pay more for this service.

Interviewees generally agreed that high-risk sexual behaviour was linked to drug use and that people were less 'cautious' when on drugs. Most reported not thinking about condoms and safe sex or being happy to forgo condom use when they were high. Other ways in which drug use influenced risky sexual behaviour included having sex with strangers, participating in 'orgies' without condoms, having multiple partners, engaging in prolonged sex sessions, and having unsafe sex to acquire drugs. Several interviewees mentioned that drugs affected the kind of sex they were willing to partake in, for instance, engaging in anal sex, a practice many said they would not engage in when sober.

### Summary of HIV testing results

A total of 92 (70%) of 131 KIs agreed to be tested and received their test results (Table 2), and 37 (80%) MSM, 50 (74%) CSWs, and 15 (71%) NIDUs accepted HIV testing as part of this assessment. A smaller proportion of IDUs (63%) accepted testing. Several IDUs reported having been tested in the past and said they already knew their status. Twenty-six of the KIs (28%) were identified as being HIV positive, with sero-positivity being highest among CSW and MSM and lowest among NIDUs (who were not MSM and CSW), none of whom tested positive.

### Knowledge and views of HIV transmission and prevention

Knowledge of HIV and how it is transmitted was widespread among all participant sub-groups, but misconceptions about transmission routes and prevention strategies also existed. Unsafe sex was mentioned by almost all of the drug users as the primary means by which HIV is transmitted. Participants in all groups mentioned the main strategies of prevention, namely abstinence, monogamy, condom use and a reduction in the numbers of sex partners.

Many of the IDUs, as well as MSM, talked about the importance of not sharing needles or other drug equipment. Avoiding contact with blood was mentioned by all groups except NIDUs. Notions of hygiene and health in relation to HIV prevention were present among all groups, expressed as a general perception that personal hygiene, good nutrition and a healthy lifestyle were important in the prevention of HIV. However, other more specific practices were also utilised as prevention strategies, such as a few who mentioned eating shellfish (arikreukel) and one who reported cleaning his genitals after sex to prevent HIV transmission. Participant responses indicated considerable misunderstanding about casual transmission of HIV, as demonstrated for example by concerns about kissing, sharing toothbrushes or razors.

### Experiences and views of services

Participants in all groups said that access to services, in particular VCT, was problematic. Lack of knowledge of testing

locations was evident. Many participants identified public hospitals as testing centres, but also complained about long waits and appointments being cancelled without notice. The cost of private physicians was prohibitive to many. Many drug users brought up the issue of stigmatising behaviour by service providers.

In general, drug users had mixed experiences and views of HIV testing. Many IDUs, but fewer CSWs and MSM, had been tested in the past. A few CSWs reported being tested on a regular basis, and some MSM said they were tested as part of routine medical care. A higher number of NIDUs reported never having been tested compared to IDUs, MSM, or CSWs. Not having been tested was attributed to a number of factors, including stigma. Knowledge about ARV treatment was minimal at best among all four groups, with considerable confusion expressed about the availability of ARVs and the role of ARVs in HIV treatment.

Drug users had mixed opinions about the efficacy of drug treatment, but most held negative opinions. This assessment identified a number of barriers to treatment that were common for both HIV/AIDS and drug interventions. These included service providers' non-professionalism and negative attitudes, accessibility and availability to services, as well as certain interviewees' lack of information about drug treatment centres and AIDS treatment. Regarding drug treatment services, the issues of drug availability in treatment centres and difficulties in reintegrating into drug-using communities after treatment were highlighted.

Service providers themselves identified a lack of resources as the key reason for shortcomings in drug and HIV services, and a few acknowledged that a lack of training and technology affected the effectiveness of their services. Several stressed that collaboration between professionals and stakeholders in other sectors besides their own was lacking.

### Discussion

The rapid assessment points to the high prevalence of overlapping drug and sexual risk behaviours; the occurrence of

**Table 2. HIV status of drug-using key informants (some belong to more than one group)**

	Positive		Negative		Not-tested
	N	%	N	%	N
CSW	17	34	33	66	17
MSM	13	35	24	65	9
IDU	7	20	28	80	20
NIDU	0	0	15	100	6
Overall	26	28	66	72	39

numerous high-risk injecting behaviours among drug users, with potentially negative consequences for themselves and others; the high prevalence of HIV in some of these sub-populations; and the potential for infecting members of the broader population due to mixing and mobility patterns. The finding that drug use often facilitated risky sexual behaviour is in agreement with research conducted in South Africa and elsewhere (Morojele, Brook, & Kachienga, 2006; Semple, Patterson, & Grant, 2004). Furthermore, as found in many other African countries and elsewhere, needle sharing and the reuse of needles were also engaged in to prevent the effects of drug withdrawal (Dewing, Plüddemann, Myers, & Parry, 2006). The possibility of injection drug use playing an increasing role in HIV transmission in South Africa should not be underestimated.

The existence of numerous barriers to accessing and utilising of risk reduction, substance abuse and HIV services was also reported. However, a positive finding was that 70% of drug users agreed to be tested for HIV. The difficulties noted with regard to accessing drug and HIV services, including stigmatisation, are likewise in agreement with research conducted elsewhere (Bobrova, Rhodes, Power, Alcorn, Neifeld, Krasiukov, *et al.*, 2006; Downing, Knight, Reiss Vernon, Mulia, Ferreboeuf, *et al.*, 2001).

The study has three main limitations that should be noted. First, the findings may not be generalisable to all drug users or to particular subgroups of drug users, as the focus of the study was only on populations in selected hotspots. Second, the findings are based on small numbers of respondents in certain subgroups in some sites, and this limited the breadth of interview material obtained in these sites. Finally, there was some variation in quality of the interviews, with a more in-depth exploration being conducted in Durban. This limited the ability to provide a comprehensive comparison of themes across sites.

## Conclusions and recommendations

In August 2006, the MRC convened in Cape Town a workshop for public and private partners, researchers, stakeholders, and organisations serving the target vulnerable populations, to develop recommendations based on the findings of the rapid assessment. Among programmatic recommendations identified were the need to (i) scale up and tailor community-based outreach to drug users in high-risk areas that addresses HIV/AIDS risks and links with appropriate drug treatment and HIV/AIDS prevention, care and treatment services; (ii) coordinate drug abuse treatment and HIV services among drug using vulnerable populations by the provision of confidential, routine HIV counselling and testing in substance abuse programmes,

and adapting VCT to be more localised, mobile, population-specific and include risk reduction counselling that focuses on HIV and drug risks; and (iii) build the capacity of NGOs/CBOs with potential for addressing both drug and HIV risks. In 2007 and 2008, with further PEPFAR funding, the MRC is implementing these recommendations through embarking on large-scale intervention projects in five sites in South Africa.

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