

# Characteristics of Clients Tested for Human Immunodeficiency Virus Infection at the Voluntary Counselling and Testing Center in Zagreb, Croatia

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## ABSTRACT

*The objective of this study was to present some epidemiological characteristics of persons tested for HIV/AIDS at the Voluntary Counselling and Testing Centre (VCT) Zagreb that was founded in November 2004. The majority of clients tested were between 25 and 29 years old and had a secondary level education. 78% of the clients tested reported one risky behaviour in the past, the majority of which was attributed to risky heterosexual behaviour (having unprotected sexual intercourse). 35% of the clients reported having never or only occasionally used condom with a non-regular partner. 30% of the clients with a history of injecting drug use reported that they never »shared« injecting equipment. The results presented in this paper could be a useful tool for public health officers when targeting interventions for HIV prevention.*

**Key words:** Voluntary Counselling and Testing Centre, HIV testing, risky behaviour, condom use, sharing of injecting equipment, HIV prevention

## Introduction

According to the Croatian HIV/AIDS Registry data, the annual incidence rate of AIDS in Croatia is 4 per 1,000,000 inhabitants; which classifies Croatia as one of the countries with the lowest incidence rate<sup>1</sup>.

The first case of HIV infection was reported in 1985 and by the end of 2005, a total of 553 cumulative cases were registered also including 129 AIDS cases<sup>1</sup>.

The majority of cases were registered among most at risk populations, and the most affected were men who have sex with men (MSM) (homosexual and bisexual men), that accounted for 40% of HIV infected persons, and highly promiscuous heterosexual men (27%) infected abroad.

During the year 2004, a total of 175 728 persons were tested for HIV and 105 HIV positive test results were obtained<sup>2</sup>. In the year 2005, among 37 710 blood donor candidates, anti HIV 1/2 were identified in two persons<sup>3</sup>.

By introducing second generation surveillance<sup>4,5</sup> for HIV/AIDS based on the country level of HIV epidemics, WHO and UNAIDS started to collect data on the behaviours and changes in behaviour that may influence the course of the HIV epidemic.

Since Croatia has a low level HIV epidemic, the second-generation surveillance system should be focused on most-at-risk population groups. Faced with the lack of systematic behavioural studies conducted at most at risk populations, valuable information can be gained from voluntary counselling and testing (VCT) services<sup>6,7</sup>. Until the end of 2004, testing on HIV/AIDS was performed confidentially (expenses covered by health insurance) or anonymously (expenses covered by oneself) without any counselling prior to testing. There was no possibility for free of charge and anonymous HIV/AIDS testing. At the end of 2004 voluntary counselling and testing sites (VCT)<sup>5,6</sup> were introduced as a part of the Project »Scaling up the HIV/AIDS Response in Croatia« organized by the Ministry of Health and Social Welfare as a principal recipient of funds provided by the Global Fund<sup>8</sup>.

Ten VCT sites were established throughout Croatia, in which people who are at risk, or perceive that they are at risk, are encouraged to come to get tested anonymously and free of charge. Every test is preceded by a pre-test counselling, and followed by a post-test counsel-

ling. During a counselling session some information on risky behaviour in which clients were engaged in the past are collected in order to find out more about the clients who seek testing and prevention counselling for HIV and to notice patterns of risky behaviour in most-at-risk groups. This data can help us plan and develop prevention activities in order to maintain current epidemiological situation, considered favourable by most experts.

## Methods

We conducted a descriptive study of some demographic and epidemiological characteristics of people tested for HIV/AIDS in Voluntary and Counselling Centre (VCT)<sup>6,7</sup> Zagreb during 14 months (from the beginning of November 2004 to the end of December 2005).

VCT Zagreb is the first of ten VCT sites across Croatia, providing counselling and testing services for the population of Zagreb (accounts for 1/4 of the total population of Croatia) and its surrounding area. All of the persons tested were above the age of 18.

The study was based on questionnaires filled out by trained counsellors during the counselling sessions. The questionnaire was designed with reference to guidelines provided by WHO and UNAIDS<sup>6,7</sup> and approved by the Croatian Ministry of Health and Social Welfare. The questionnaire was divided into 2 sections: the obligatory and the non-obligatory section. The obligatory section contained demographic characteristics: sex, year of birth, educational level, occupation, marital status and reason for performing the HIV test (usually defined as risky behaviour in the past six months). The non obligatory section contained some behavioural data about the forms of risky behaviour in the past: injecting drug use (IDU), sex worker (SW) / client of (SW), men who have unprotected sex with other men (MSM) as well as having unprotected sex with many partners /high risk heterosexual behaviour; and also the patterns of risky sexual and other behaviour: number of regular and non-regular partners within the last 12 months and frequency of condom use with the above-mentioned usually and during the last sexual intercourse, frequency of buying and selling sex; frequency of sharing injecting equipment for IDUs. It also contained some data from personal medical history (history of sexually transmitted infections (STI), history of being a voluntary blood donor, history of testing for HIV/AIDS before).

The data was analysed descriptively; for particular questions tabulation and calculation of proportion (percentage) was made.

## Results

Among 743 clients tested, men (480) accounted for 65% of the tests performed, women (263) accounted for 35%. Men and women from age groups 25 to 29 and 20 to 24 had the largest proportion of tests performed. The majority of clients were residents of a town (83%), 7% of small town, 4% of rural area and for 6% we do not have data.

According to educational background, 57% of the clients had completed secondary education, 26% university education, 7% elementary education, 1% does not have any school qualification at all, and for 9% of the clients we do not have data.

577 (78%) clients reported one risk behaviour in the past, 113 (15%) clients reported a combination of two risk behaviours, 21 (3%) clients reported three or more risk behaviours, and 32 (4%) clients did not disclose engaging in any risk behaviour but still wanted to be tested. Among those clients who reported one risk behaviour in the past, risky heterosexual behaviour (having unprotected sexual intercourse) was the reason with the highest proportion among the tests conducted, 62%.

Among those who reported two risky behaviours in the past – risky heterosexual behaviour and injecting drug using (IDU) combined together, this particular combination of risk behaviours had the highest proportion among tests made, 32%; followed by frequent change of partners combined with risky heterosexual behaviour; 22%.

611 (82%; 367 M, 244 F) clients defined their sexual orientation as heterosexual, 58 (8%, 55 M, 3 F) clients as homosexual and 42 (6%) as bisexual (33 M, 9 F); 32 (4%, 25 M; 7F) did not want to disclose their sexual orientation.

Within the last 12 months 220 (30%) clients reported one sexual partner, 130 (17%) clients reported two sexual partners, 279 (38%) clients reported three or more than three sexual partners, for 114 (15%) there was no data. Out of those clients who reported having more than one partner in the last 12 months, 39% of those having two partners and 41% of those with three or more partners reported never or only occasionally using condom with a non-regular partner.

TABLE 1  
CONDOM USE WITH A REGULAR PARTNER ACCORDING TO SEXUAL PREFERENCE OF MALE AND FEMALE CLIENTS TESTED IN VCT ZAGREB

Sexual preference	Male		Female		Total	
Heterosexual	231	83%	150	94%	381	87%
Homosexual	26	9%	1	1%	27	6%
Bisexual	16	6%	7	4%	23	5%
No answer	4	1%	1	1%	5	1%
Total	277	100%	159	100%	436	100%

**TABLE 2**  
 CONDOM USE WITH A NON-REGULAR PARTNER ACCORDING TO SEXUAL PREFERENCE OF MALE AND FEMALE CLIENTS TESTED IN VCT ZAGREB

Sexual preference	Male		Female		Total	
Heterosexual	152	86%	79	94%	231	89%
Homosexual	11	6%	1	1%	12	5%
Bisexual	11	6%	4	5%	15	6%
No answer	3	2%	0	0%	3	1%
Total	177	100%	84	100%	261	100%

**TABLE 3**  
 FREQUENCY OF CONDOM USE WITH A NON-REGULAR PARTNER, AMONG MALE AND FEMALE SEX WORKERS

Frequency of usage	Always	Most of times	Sometimes	Never	Non applicable	Total
Male	–	1	3	2	2	8
Female	9	2	–	–	–	11
Total	9	3	3	2	2	19

76 clients reported having sex with one non-regular partner in the period of one-year (within the last 12 months), 49 clients with two non-regular sexual partners, 83 clients with three or more than three, 535 clients did not have sex with a non-regular partner.

436 (59%) of all clients tested (M 27, F 159) reported that they never or only occasionally used condom with a regular partner (Table 1).

261 of all (35%) clients tested (177M, 84 F) reported that they never or occasionally used condom with a non-regular partner; the men among them were mostly heterosexually oriented (86%), and about the same proportion (6%) were homosexually or bisexually oriented clients, whereas 2% of the clients did not want to disclose their sexual preference (Table 2).

Among young clients, age group 18–24 years, a total of 76 (31%) clients did not use a condom during the last sexual intercourse with a non-regular partner; and 33% did not use a condom during the last sexual intercourse regardless of the type of the relationship.

107 (14%) clients (104 M, 3 F) reported to be clients of sex workers, 52 (49%) of whom reported that they never or occasionally used condom with a non-regular sexual

partner. The majority of the above-mentioned persons have reported spending at least a month or more outside their domicile country.

19 (3%) clients reported that they received money for providing sexual services; female sex workers more often used condoms than male sex workers with a non-regular partner (Table 3).

79 (11%) of the clients tested reported a history of IDU during the last month, 610 (82%) did not, and for 54 (7%) clients we do not have data. Among those clients who reported a history of IDU in the last month; 17% often shared their »equipment« (needles, syringes etc.), 45% exceptionally, 34% never; and 4% did not reveal how often they shared »equipment« (Figure 1).

108 of the clients (15%) tested reported a history of voluntary blood donorship, among them 16% of clients with a history of IDU.

70 (9%; 49 M, 21F) clients reported having a sexually transmitted infection (STI) in the past, with no difference in clients regarding different sexual orientation (preference). 44% of clients reported having STI in the past, do not or very rarely use condom with a non-regular partner.

158 (22%) tests which were performed in the VCT centre during 2005 were done for individuals who had previously been tested, 80% for men and women heterosexually oriented and 20% among men homosexually and bisexually oriented.

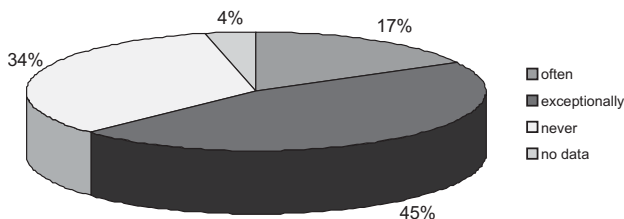


Fig. 1. Frequency of »sharing« equipment during the last 30 days among clients with a history of IDU.

## Discussion

Our study provides some information on risky behaviour of clients tested for HIV in the VCT site in Zagreb. The main finding of our analysis is insufficient use of condoms regardless of the type of sexual partner (regular

or non-regular) among all the clients tested. Slightly better, but not satisfactory results, of comparison of condom use and sexual orientation of clients tested, show that homosexually and bisexually oriented clients (predominantly men) more often use condoms than those heterosexually oriented, which could imply their better understanding of being at risk while having unprotected sex with other men.

The majority of persons tested who reported being clients of SW, have never used a condom with a non-regular partner (50%) which suggests that a lot of effort should be put into education of clients of SWs as well as SWs themselves about the importance of consistent condom use with their clients as well as with their regular partners (men and women)<sup>9</sup>.

On the contrary, even though we cannot generalize our findings to the whole population of sex workers because SW represented only 3% of all the clients tested, a high proportion of female sex workers tested have reported regular use of condoms, unlike male sex workers who never or occasionally use condoms with non-regular partners.

Male prostitution may be less frequent than female prostitution, but imposes much higher risk for HIV infection<sup>10</sup>. Prostitution in Croatia is illegal<sup>11</sup>, and sex workers have no legal rights and no access to social security benefits, so a lot of outreach work needs to be done among them<sup>12</sup>, through various non-governmental organizations for sex workers which should educate them about the importance of consistent condom use every time they have sex, and who should also perform a condom demonstration on a model, providing them with sufficient number of condoms, in order to prevent their risk of acquiring or transmitting HIV and other STIs<sup>13</sup>.

Almost 1/3 of the young people (age group 18–19, 20–24) did not use condom during their last sexual intercourse with a non-regular partner, which is in accordance with the UNGASS Report findings<sup>14,15</sup>.

The fact that we found 18 (16%) persons with a history of IDU among persons who are/were voluntary blood donors, is not satisfactory. According to the Croatian National blood policy<sup>16</sup>, the collection of blood is done from voluntary and non-remunerated donors with a selection of blood donors without recruiting them from group with risk behaviour and all donated blood is tested for syphilis, hepatitis B and C and HIV. Some restrictions in collecting blood among employees in some work organizations in exchange for days off should be considered.

We found that almost 2/3 of clients who reported having a history of IDU during the last 30 days, shared their injecting »equipment«, suggesting a high proportion of

unsafe injecting practices. Even though the harm reduction programme is a part of the National HIV/AIDS Prevention Programme 2005–2010<sup>17</sup>, and is implemented through several organizations (governmental and non governmental) 2/3 of the IDU clients tested haven't recognized their presence and function which leads to the conclusion that the accessibility of needle exchange services should be improved.

Almost 1/10 of the clients tested reported having been diagnosed with some sexually transmitted infection in the past. This data and a low rate condom use indicates a generally low awareness of STI/HIV/ related risk behaviours<sup>18</sup>.

## Limitations

We recognize the limitations of our study. The questionnaire on risk behaviour and exposure in the past was not obligatory, so for some questions we do not have data. The question about sexual preferences is not a real indicator of behaviour of clients, but all male clients with homosexual preferences tested, have reported practicing sex with other men.

Also there is a potential bias from the side of the interviewers because out of four counsellors working in the VCT Zagreb, all attended the same education for counsellors.

We cannot rule out a recall bias among the people tested, because we do not have any official document about pre-existing medical problems, or results of HIV tests, so we rely upon their memory.

We cannot generalize our findings to the whole population of Croatia, not by age, not by sexual preference or educational background but our findings emphasize the usefulness of VCT and VCT data for planning and developing effective prevention activities. Data from VCT sites can also be an important surveillance tool to monitor trends and dynamics of HIV and HIV related risky behaviour<sup>19</sup>.

This is the first time that we actually found out some characteristics of persons tested for HIV and the kinds of risk behaviours they have engaged in, in the past. Until now we have had no knowledge about persons tested for HIV whose results were negative. These findings obtained from the VCT site can help us target key interventions for HIV prevention in most-at-risk populations through education and promotion of behavioural change for those who are uninfected to remain so by stressing out the importance of regular condom use; safer injecting practices through »needle exchange« programs and harm reduction programs for IDUs<sup>19</sup>.

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## KARAKTERISTIKE OSOBA TESTIRANIH NA HIV/AIDS U CENTRU ZA DOBROVOLJNO SAVJETOVANJE I TESTIRANJE (CST) ZAGREB

### SAŽETAK

Cilj rada je prikazati neke epidemiološke karakteristike osoba testiranih na HIV/AIDS u Centru za dobrovoljno, anonimno savjetovanje i testiranje (CST) Zagreb, osnovanog u mjesecu studenom 2004. godine. Većina testiranih korisnika je srednjoškolskog obrazovanja i pripada dobnoj razredi 25 do 29 godina. 78% testiranih korisnika navodi jedan tip izlaganja riziku u prošlosti, najčešće u vidu održavanja nezaštićenih heteroseksualnih spolnih odnosa (rizično heteroseksualno ponašanje). 35% testiranih korisnika nikada ili vrlo rijetko koristi prezervativ pri održavanju spolnih odnosa izvan trajne veze. 30% korisnika sa anamnezom intravenskog korištenja droga, nikada nije koristilo tuđi pribor za apliciranje droge. Ovim radom su se po prvi puta dobili podaci o o izlaganju rizicima osoba testiranih na HIV/AIDS. Podacima se vrlo uspješno mogu koristiti svi javnozdravstveni djelatnici prilikom planiranja i usmjeravanja ključnih intervencija u cilju sprečavanja zaražavanja HIV/AIDS-om.