



Profile of HIV seropositive patients attending Integrated Counseling & Testing Centre (ICTC): an experience from a medical college in West Bengal, India

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ABSTRACT

Objectives Voluntary counseling and testing is one of the cost-effective ways of reducing HIV transmission in resource-poor countries like India. The present study aimed at determining the socio-demographic profile of HIV seropositive clients of an Integrated Counseling and Testing Centre (ICTC), association, if any, between sex and sociodemographic characteristics, their referral pattern, HIV status of the spouses/partners and trend, if any, in number of seropositives for HIV/AIDS over the years.

Methods The descriptive record based study was conducted among the registered HIV seropositive clients at ICTC of Calcutta National Medical College & Hospital, a Government run Medical College in West Bengal, India. Data were collected for a period of five years (2007-08 to 2011-12) from the relevant registers using proforma based on Operational Guidelines for ICTC of National AIDS Control Organization (NACO). Data were analyzed using SPSS (Version 19.0) and Chi-square tests were conducted at 5% level of significance.

Results Among 461 HIV seropositive clients, 62.7% were males and 83.9% belonged to 15-49 year age group. Daily wage laborers (65.1%) and Housewives constituted majority (47.5%) of males and females respectively. Significant association between male and female with educational status (d.f =2, p=0.036) and current marital status (d.f=2, p= 0.00) was observed. About 6% provided history of transfusion of blood and blood products. Only 6% attended ICTC voluntarily. About 4% were referred from Directly Observed Treatment, Short course (DOTS) Centre for tuberculosis. Only 27.7% of spouses/partners of the eligible seropositives could be tested and most of them (65.8%) were seropositives.

Conclusion Immediate attention should be paid towards implementation of blood safety; increase in voluntary attendance at ICTC and spouse/partner testing.

Keywords: Blood safety, HIV seropositives, ICTC, Partner testing

INTRODUCTION

India has the third largest number of people living with HIV/AIDS. As per 2011 estimates, **2.09 million** people are currently living with HIV/AIDS in India of whom 39% are females and 7% are children with an adult prevalence of 0.27%.¹

Though India is a low HIV prevalence country, certain states and districts show higher HIV prevalence among high risk groups and general population.² Voluntary counseling and testing could be considered one of the cost-effective ways of reducing HIV transmission in resource-poor countries like India.³ Voluntary Counseling and Testing Centres (VCTC) and facilities providing Prevention of Parent to Child Transmission of HIV/AIDS (PPTCT) services were remodelled as a hub or 'Integrated Counseling and Testing Centre' (ICTC) under the National AIDS Control Programme-Phase III (NACP-III) to provide services to all clients under one roof. ICTC is a place where a person is counselled and tested for HIV **with** his/her own freewill or as advised by a medical provider. The main functions of an ICTC are conducting HIV serological diagnostic tests, providing basic information on the modes of HIV transmission, promoting behavioral change to reduce vulnerability and link people with other HIV prevention, care and treatment services.⁴ Now the ICTC programme includes another component, namely HIV-TB collaborative activities.¹ ICTCs are often the first interface of citizens with the entire range of preventive, care and treatment services provided under the umbrella of the NACP. The introduction of Anti-Retroviral Therapy (ART) services to people living with HIV/AIDS in 2004, gave a major boost to counseling and testing services in the country. As a consequence, the number of ICTCs as well as uptake of clients who are counselled and tested in these centres has seen a dramatic scale up in recent years.⁴ One of the landmarks was the establishment of the Integrated Counseling and Testing Centre (ICTC) in every Medical College, District Hospital and down below up to the Block Primary Health Centre (BPHC) level.⁴ Moreover, data generated by ICTC may provide important clues to understand the epidemiology of the disease and implementation of NACP in a particular part of the country.⁵ There are now more than 12,500 ICTCs in

the country and most of them are located in government hospitals.¹

The present study was conducted on the profile of the HIV seropositive clients in the ICTC of a medical college and hospital in Kolkata, West Bengal with the following objectives:

1. To determine the socio-demographic profile of seropositive clients attending ICTC for the period of 2007-08 to 2011-12.
2. To determine association, if any, between sex and sociodemographic characteristics
3. To identify the referral pattern of the HIV seropositive clients in and out of the ICTC for the abovementioned period
4. To identify the HIV status of the spouses/partners of the study population
5. To determine trend, if any, in number of HIV seropositive clients in both sexes over the years.

MATERIALS AND METHODS

The descriptive record based study was conducted at ICTC of Calcutta National Medical College & Hospital, a Government run Medical College at Kolkata. Kolkata is the capital of the state of West Bengal, India. The duration of the study was two months (August 2012 to October 2012). Necessary clearance from the Institutional Ethics Committee was obtained before conducting the study.

In Calcutta National Medical College & Hospital, ICTC started its functions from 2007-08. Only those clients who were registered as seropositive for HIV in the ICTC register from 2007-08 to 2011-12 and not all the attendees were considered in current study. All data pertaining to the abovementioned period were collected from Patient Information Details (PID) register and other relevant registers with the help of a structured proforma prepared from Operational Guidelines for ICTC by NACO⁶ maintaining strict anonymity of the clients. All records were cross-checked and validated from different registers. The study variables included in the proforma were age, sex, occupation, education, marital status, place of residence, types of high risk behavior, whether attended on his/her freewill with no history of referral from anywhere or referred by other health personnel

or related institutions, places from where clients were referred, places to which they were referred, whether partners of the clients were serologically tested for HIV and if tested, the HIV status of spouse/partners, whether counseling and demonstration for promotion of condom were done and whether condom was distributed.

Data were analyzed using the Statistical Package for Social Sciences (SPSS) Version 19.0 and were expressed in simple proportions. Chi-square tests were performed where applicable at 5% level of significance.

RESULTS

There were total 461 seropositive clients in the period of 5 years (2007-08 to 2011-12) among which 62.7% (289/461) were males and 37.3% (172/461) were females. There was no transgender client among seropositives.

About 84% of the total seropositives belonged to 15-49 year age group with mean age of 29 years (SD± 23.7 years). It was observed that proportion of female seropositives was higher (15.2% vs. 8%) in below 15 years age group, lower (1.7% vs. 7.6%) in above 49 years age group and almost equal to males in 15-49 year age group (83.1% vs. 84.4%). No significant association between age group and sex of the clients was observed ($p=0.715$). (Table 1).

Table 1 Socio Demographic Profile of HIV Seropositive Clients

Socio Demographic Profile	Male (%) N=289	Females (%) N=172	Total N=461
Age Group (Years)			
<15	23 (8.0)	26 (15.2)	49 (10.6)
15-49	244 (84.4)	143 (83.1)	387 (83.9)
>49	22 (7.6)	3 (1.7)	25 (5.5)
$(\chi^2 = 0.133, d.f=1, p=0.715)$			
Occupation			
Daily-wage Labourers	188 (65.1)	39 (22.7)	227 (49.3)
Salaried	39 (13.5)	6 (3.5)	45 (9.8)
Business	41 (14.2)	0	41 (8.8)
Housewife	NA	81 (47.5)	81 (17.7)
Student	19 (6.6)	9 (5.2)	28 (6.0)
† Others	2(0.6)	37 (9.9)	39 (8.4)
Educational Status			
Illiterate	127 (44.0)	89 (51.7)	216 (46.9)
Primary completed	109 (37.7)	66 (38.4)	175 (38.0)
Secondary completed	34 (11.8)	13 (7.7)	47 (10.2)
Higher secondary passed	15 (5.2)	2 (1.1)	17 (3.7)
‡Others	4 (1.3)	2 (1.1)	6 (1.2)
$(\chi^2 = 6.674, d.f.=2, p=0.036)$			
Marital Status			
Currently married	208 (72.0)	113 (65.7)	321 (69.6)
Single	49 (17.0)	9 (5.2)	58 (12.6)
Divorced/separated	13 (4.5)	11 (6.4)	24 (5.2)
Widowed/widow	9 (3.1)	15 (8.7)	24 (5.2)
Not recorded	10 (3.4)	24 (14.0)	34 (7.4)

$(\chi^2 = 27.701, d.f=2, p=0.000)$

* NA= Not applicable

†Others include unemployed persons, skilled labors

‡ Others include non formal literates, graduates

Among men, 65.1% were daily wage labors followed by businessmen (14.2%) and salaried persons (13.5%). Students constituted 6.6% of the total male population. Housewives constituted majority (47.5%) of the females followed by daily wage labors (22.7%) whereas 5.2% were students among females. Most of the males were illiterates (44.0%) followed by primary level of education (37.7%) whereas 5.2% passed Higher Secondary. More than half of the females were illiterate (51.7%) followed by primary level of education (38.4%) and only one of them attended college. Significant association between educational status and sex was observed ($p=0.036$). (Table 1) About 72% of the males and about 66% of

females were currently married and overall 12.6% were single, 5.2% were divorced and marital status of 7.4% clients could not be revealed. Significant association between marital status and sex was observed ($p=0.000$). (Table 1) Most of the seropositive clients (73.5%) were from urban areas (Not shown in table).

Heterosexual route was the commonest (53.8%) route of transmission followed by both blood transfusion and parent to child transmission (both 6.1%). Transmission route could not be specified in about 28% of seropositive clients (Table 2).

Table 2 Distribution of study population according to different routes for HIV transmission (N=461)

Routes of Transmission	Frequency (%)
Heterosexual	248 (53.8)
Homosexual	6 (1.3)
History of blood transfusion	28 (6.1)
Parent to child	28 (6.1)
Injecting drug user	15(3.3)
History of use of infected syringe and needle	3 (0.7)
Not specified	131 (28.4)
Not recorded	2 (0.43)

Most of the seropositive clients were referred from Government health facilities (48.4%) whereas 11% were referred from Non Governmental Organizations (NGOs) (Not shown in table). Only 3.7% and 1.4% of seropositives were referred from DOTS clinic and STI clinic respectively. Only 28 (6.1%) seropositive clients attended ICTC voluntarily. It was observed that almost all (99%) were referred to ART centre, about 94% were referred to STI clinics and about 93% were referred to DOTS clinic from ICTC. About 86% were

referred to NGOs providing care, support and treatment. Condom counseling was conducted in all eligible clients and condom was distributed in 99.5% of them.

433 clients had a spouse or partner. Spouses/partners of only 27.7% of the eligible seropositives (120/433) could be tested. Majority of the tested spouses/partners (65.8%) were found to be HIV positive (79/120).

Table 3 Distribution of Eligible study population according to testing of partners and results of partner testing (N=433)

Spouse/Partner tested	Number	Percentage
No	313	72.3
Yes	120	27.7
HIV Positive ($n_1=120$)	79	65.8
HIV Negative ($n_2=120$)	41	34.2

An overall increasing trend was observed in both sexes the highest being in 2009-10 (119) with the greatest dip in 2008-09 (56). Proportion of males was

always higher than that of females throughout the period with highest proportion in 2009-10 (66.4%) and lowest in 2008-09 (57.1%). (Figure 1).

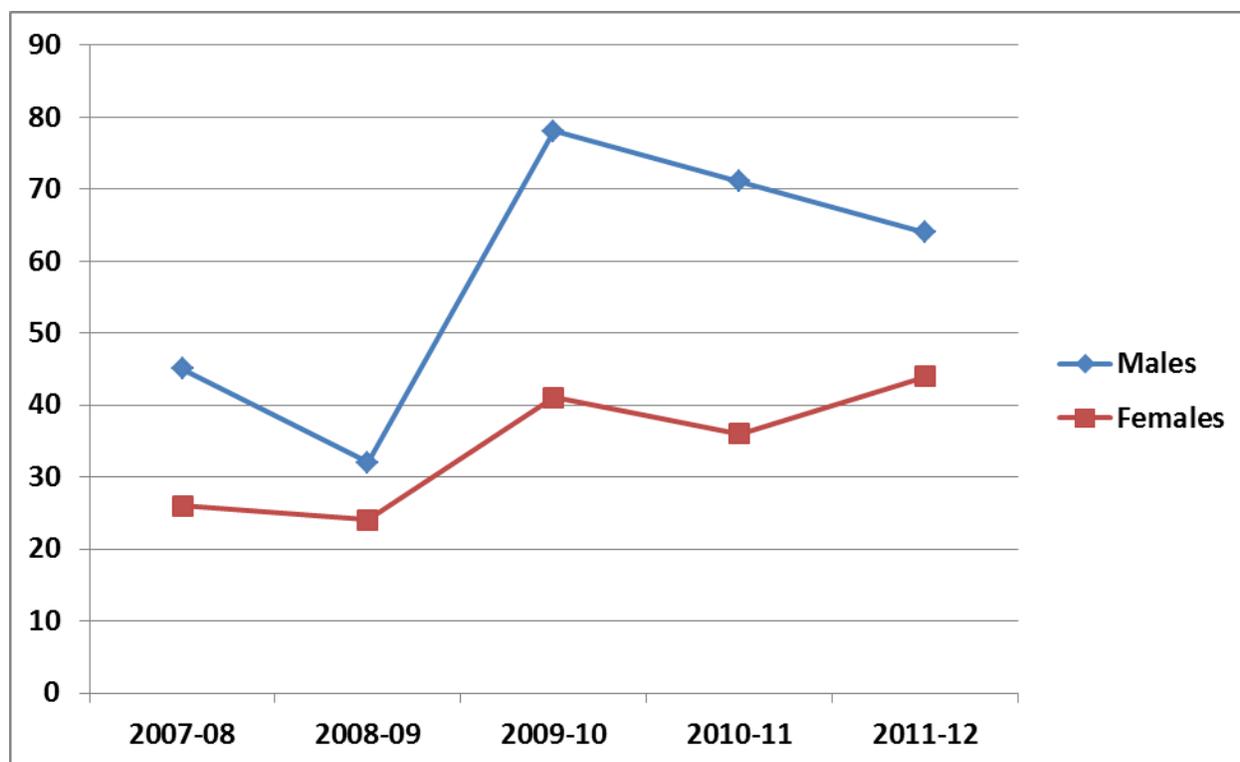


Figure 1 Number of male and female seropositives from 2007-08 to 2011-12 (N=461)

DISCUSSION

HIV counseling and testing services are a key entry point to prevention, treatment and care of people infected with HIV. ⁴ Under NACP-III, the target was to counsel and test 22 million clients annually by the year 2012. ⁴ During 2011-12, 71% of the annual target of clients received counseling and testing services. ¹

More than 60% of the seropositive clients were males in the present study. Gupta M reported similar proportion (64.7%) of male seropositives in a district hospital in Udupi, Karnataka, India. ⁷ Similar findings were reported by Vyas N among all ICTC attendees (65.1%) in six years at ICTC clinic of Sawai Man Singh Medical College, Jaipur, India. ⁸ Jayarama S observed 65% males among seropositives in ICTC of Kasturba Medical College Hospital, Mangalore, Karnataka, India. ⁵

Such findings are expected because Indian societies are almost universally male dominated and naturally women are even more disinclined than men to get tested for intense fear of stigmatization and social discrimination. About 70% of the seropositive clients were currently married in the present study. Similar observations were reported by both Jayarama S and Gupta M. ^{5, 7} Vyas N et al reported higher rate of married clients (93% men and 82.5% women) probably due to local custom of early marriage. ⁸ According to Joardar GK, 51.3% of males and 88.2% of the female HIV positives were married in ICTC of North Bengal Medical College, another Government run Medical College in the state of West Bengal (August 2002 -December 2003). ⁹ On the contrary, more divorcees and widows were observed among HIV positives in a study conducted in ICTC of a district hospital in Thailand. ¹⁰ This difference can be explained by difference in socio cultural setting.

About half of the seropositives were daily-wage earners, followed by housewives and salaried persons indicating poor attendance of high risk groups (HRGs) in ICTC in comparison to general population. Joardar GK reported that among the male seropositives, 31.6% were involved in business and 30.3% in unskilled work as occupation.⁹ On the other hand, majority of seropositive males were drivers belonging to high risk group in the study conducted by Vyas N. However, among females, majority was housewives that conform to the result of the present study.⁸ Housewives constituted the majority among females in other studies also.^{7,11} A considerable proportion of students in both sexes (Male: 6.6%, Female: 5.2%) among seropositives in the present study indicates practice of high risk behavior due to improper social support and lack of information, education and communication (IEC) regarding high risk behavior and STI/RTI including HIV/AIDS among students most of whom were adolescents.

Present study found that about 84% of the seropositives belonged to the economically productive age-group of 15-49 years which is alarming indeed. Other Indian studies also reported similar results.^{5,7-9} In a study conducted in an ICTC of Zagreb, Croatia, a majority of the seropositive clients were aged between 25-29 years.¹² Thailand study showed that majority of male and female seropositives belonged to 20-49 years and less than 16 years respectively.¹⁰

Nearly 47% of the seropositives were illiterate in the present study. The Karnataka study by Gupta M study reported literacy rate of 71.5% and 85.7% among males and females respectively.⁷ A Difference in cultural settings where most of the clients **in the** present study belonged to a poor minority community is the probable cause. Joardar GK reported illiteracy of 29% and 53% among male and female seropositives respectively in North Bengal districts.⁹ Lack of access to IEC materials, poverty and migration to other parts of the country for employment are some of the probable reasons for such association.

Present researchers observed that most of the seropositive clients (73.5%) were from urban areas

because of the location of ICTC in the heart of the city. North Bengal study reported rural areas as place of residence of 71% of the seropositives.⁹ The reason for such difference is the geographic location of North Bengal Medical College that caters to three hilly districts. Again Jayarama S reported urban areas as place of residence of 45% of seropositives.⁵

Heterosexual route was the most common route of transmission (53.8%) as corroborated by other studies^{5, 7-9} though proportion was lower than national average (88.2%).¹ More than 5% of patients revealed blood and blood products as the route of transmission in the present study which was much higher than the national average of 1%.¹ North Bengal study showed even a higher figure (7.5%).⁹ However, studies from other parts of the country did not report blood and blood products as an important route^{5, 7-10} indicating that lack of blood safety was a specific area of concern in the state of West Bengal. Mother to child transmission as reported by Vyas N was 6% that was comparable to the results of the present study (7.2%) and national figure (5%).^{1, 8}

Most of the seropositive clients were referred from government health facilities (48.4%) and less than 1% was referred from private sectors. Only 6% clients attended voluntarily in a fashion similar to Chennai study (2004-05) where only 3.3% (3/89) HIV-positive patients visited voluntarily for testing¹³ indicating social stigma still entrenched in the minds of the people. On the other hand, Gupta M observed that approximately half of the seropositives (50.6%) had visited the ICTC voluntarily, while almost a similar percentage (49.4%) of them was referred to the ICTC by another doctor.⁷ Karnataka being a high prevalence state, presence of high level of awareness among general population and private practitioners is the possible reason.

Gupta M reported 11.6% of referrals from DOTS centres whereas cross-referrals from DOTS centres and NGO/CBO were found to be quite poor in the present study suggesting that TB-HIV collaboration was in a nascent stage until now.⁷

In the present study, spouse/partner testing rate was disappointing (less than one-third) especially when nearly two-third of the tested spouses of

seropositives clients came out to be HIV positive. However, it was appreciable that almost 100% of the seropositives underwent condom counseling and were provided with condoms that reduced secondary transmission.

An increasing trend was observed in the total number of seropositive clients as well as in both sexes in the present study. Jayarama S reported a gradually increasing trend of ICTC attendees in Karnataka (2001-2006) except in 2006.⁵ However, increase in awareness both among community and among health sector rather than increase in incidence is most likely to be attributed for such increasing trend of seropositivity.

However, as observed in India and in other developing countries, people often did not show willingness to undergo HIV testing out of fear of stigma and discrimination.¹⁴ Enwereji EE et al. identified stigma and discrimination as the main problems for HIV testing in their study. They also observed that PLWHAs would not disclose their sero-status to healthcare professionals for reasons of rejection, isolation and stigmatization.¹⁵

The present study was not free from limitations. First of all, it was a record based study. Therefore it is liable to all kinds of limitations of a record based study namely error in recording of data and incomplete and missing data. Secondly, qualitative research methods, like in-depth interview of clients, focus group discussion of ICTC counselors and other staffs could not be adopted due to time and resource constraint. Finally, the study was conducted in ICTC of one medical college and therefore not representative of other medical colleges situated in the same state. More in-depth studies involving ICTCs of other medical colleges and non-medical college ICTCs of longer duration are required to get a more comprehensive view of the client profile of ICTC of the state of West Bengal.

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CONCLUSION

Major areas of concern remain lack of blood safety, inadequate voluntary attendance, higher proportion of general population and considerable proportion of students among seropositives, unsatisfactory rate of spouse/partner testing and inadequate cross referral between ICTC and other facilities. Immediate attention should be paid towards implementation of blood safety in governmental and non-governmental blood banks in West Bengal. Social mobilization campaign should be intensified not only through mass media but also through interpersonal communication to increase awareness on HIV/AIDS and voluntary attendance at ICTC. Incorporation of life skills education in school curriculum and adequate counseling of adolescents in schools can address self-esteem and gender inequalities which are often underlying factors in sexual decision making. Increased collaboration between DOTS and ICTCs is important because of the extremely high crossover between TB and HIV. Enhancement of awareness on spouse/partner testing requires immediate emphasis to halt progress of the diseases among general population. TB-HIV collaboration to increase cross-referral between ICTC, DOTS clinic and STI clinic is required to be strengthened for comprehensive management.

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