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Profile of Clients Attending Integrated Counseling & Testing Centre in Tertiary Care Hospital in Northern India

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Abstract: An integrated counseling and testing centre is a place where a person is counseled and tested for HIV, on his own free will or as advised by a medical provider. The main functions of an ICTC include: Early detection of HIV, Provision of basic information on modes of transmission and prevention of HIV/AIDS for promoting behavioral change, reducing vulnerability and link people with other HIV prevention, care & treatment services. ICTC data can guide in identifying the various risk groups for priority targeted interventions to reduce HIV transmission in the community. To estimate the prevalence, mode of transmission, risk behavior and socio-demographic characteristics of attendees who tested HIV positive at ICTC in IGMC, Shimla for the year 2016 and prevalence of TB-HIV co-infection among HIV positive cases. This study is based on the Record review of attendees at ICTC in Indira Gandhi Medical College & Hospital in Shimla from 1st January to 31st December 2016. Data was entered using Microsoft excel software and analyzed with the help of epi info v7. This study depicts the role of ICTC & its Implementation in a Medical College. Among the 9156 total attendees in a year 2016 at ICTC, 63 were HIV Positive, so the overall prevalence of HIV among attendees was 0.69%, in which 41 were males and maximum (29) were in the age group of 35-49 years. TB-HIV co-infection was present in 3 patients out of 41 who were referred to RNTCP centre. Most common (71.42%) mode of transmission was heterosexual. Govt/ Pvt services & truck driving were the common occupations among HIV Positive Patients. Present study shows that males, 35-49 years of age group, hetero-sexual mode of Transmission & Inservice (Govt/Pvt) and truck drivers by occupation were predominate among HIV Positives. So we need to focus on these groups by IEC or BCC activities to modify the risk behavior to reverse the HIV epidemic.

Keywords: ICTC, Medical College, HIV Positives, Truck drivers.

INTRODUCTION

The human immunodeficiency virus (HIV) infection /AIDS has evolved from a mysterious illness to a global pandemic. HIV which has infected tens of millions people continues to be a burden globally and has grown into a public health problem of unprecedented magnitude in the developing countries, especially in India.[1]

According to the UNAIDS and WHO reports , there are approximately 33.3 million people living with HIV/ Acquired immunodeficiency syndrome(AIDS) worldwide ,with a global prevalence of 0 .8%. It was also estimated that national adult (aged 15-49 years) prevalence in India as 0.26% amounting to 2.7 million (2.0–3.1 million) HIV positive people which accounts for 10% and 65% of the HIV burden of the world and South East Asia, respectively [1, 2].

HIV counseling and testing services were started in India in the year 1997. An integrated counseling and testing Centre is a place where a person is counseled and tested for HIV, on his own free will or as advised by a medical provider [3]. It provide key entry points for the 'continuum of care in HIV/AIDS' for all segments of the population. It is also a cost-effective intervention in preventing the spread of HIV transmission and is an integral part of HIV prevention program, which provides an opportunity to learn and accept the HIV status in a comfortable, convenient, and confidential manner [4].

The main functions of an ICTC include: Early detection of HIV; Provision of basic information on modes of transmission and prevention of HIV/AIDS for promoting behavioral change and reducing vulnerability; Link people with other HIV prevention, care and treatment services [5]. People who are found HIV-negative are supported with information and counseling to reduce risks and remain HIV-negative. People who are found HIV-positive are provided psychosocial support and linked to treatment and care [6]. As TB is the most common co-infection in people with HIV, availability of HIV counseling and testing can help patients to diagnose their status for accessing early treatment [7].

Sex workers and their clients, men who have sex with men (MSM), transgender, injecting drug users (IDUs), truckers, migrant workers, spouses and children of men who are prone to risky behavior are needs to be tested in an ICTC as HIV prevalence levels are typically higher among these subpopulations than in the general population , but now the epidemic shift from highest risk group (Commercial sex workers, homosexual men, drug user) to bridge population (client of sex worker, STD patients, partners of drug users) and then to general population [8]. Information are collected from people who are tested HIV positive at ICTC shows that predominately HIV infection are still occurring from heterosexual route of transmission followed by parent to child ,injecting drug using ,homosexual ,unknown cause and least one by blood and blood product [1, 9].

Then by keeping in mind the objective of study like to study the Prevalence of HIV /AIDS, risk behavior, socio-demographic characteristics and TB-HIV Co-infection of attendees who tested for HIV at ICTC of Indira Gandhi Medical College, Shimla (H.P.). The data generated provides an important clue to understand the epidemiology of the disease in this hilly region. This information will also be useful in planning the local interventions for preparing the local action plan and implementing the information, education, and communication (IEC) and behavior change communication (BCC).

MATERIALS AND METHODOLOGY

This was a cross sectional study was carried out in an ICTC center, which is attached to the Microbiology department of Indira Gandhi Medical College Shimla. The present study provides an estimate of the basic Clients statistics of ICTC in Indira Gandhi Medical College& Hospital in Shimla, for the year 2016 based on the Record review of Clients either voluntarily or after being referred by various departments.

After taking the approval from ethical committees, as this institute is the tertiary hospital in this region, the information were gathered from the attendees of this center that may throw light on the epidemiology of HIV transmission in this area. Anonymous information about all the attendees of the ICTC was gathered from the records which were maintained at the ICTC, regarding the variables such as age, sex, occupation, the pattern of risky behavioral pattern and the HIV sero-status of the attendees.

Statistical Analysis

Data of the attendees were collected, compiled and expressed as frequency & percentage. Statistical test includes simple analysis, probability & chi – square test by using epi info v7 software.

RESULTS

In the present study we found that total 9156 clients were undergo HIV examination at ICTC attached with the Microbiology Department of Indira Gandhi Medical College Shimla, Out of whom 5609 (61.26%) were males and 3547 (38.74%) were females. Of the total tested 63 was HIV positive. Among the total HIV positives 41 (65%) were males & 22 (35%) were females (Table-1). So the overall HIV prevalence among all attendees was found 0.69% (figure-1).

Table-1: Month wise distribution of ICTC Attendees at IGMC, Shimla in year 2016

Mon	Client initiated						Provider initiated						Total	T+
	M	F	T	+M	+F	+T	M	F	T	+M	+F	+T		
Jan	33	16	49	1	0	1	522	375	597	2	1	3	946	4
Feb	49	33	82	0	2	2	415	291	706	3	2	5	788	5
Mar	30	24	54	1	1	2	421	217	638	3	0	3	692	5
Apr	45	31	76	3	1	4	411	303	714	3	2	5	790	9
May	24	24	48	0	1	1	473	275	748	2	1	3	796	4
Jun	37	29	66	0	1	1	452	292	754	1	0	1	810	2
July	19	32	51	2	1	3	479	308	787	5	1	6	838	9
Aug	50	35	85	0	0	0	523	315	838	7	1	8	923	8
Sep	38	29	67	0	1	1	472	252	724	3	2	5	791	6
Oct	22	30	52	1	1	2	375	190	565	2	1	3	617	5
Nov	30	46	76	0	0	0	327	181	508	0	1	1	584	1
Dec	19	17	36	0	0	0	343	202	545	2	1	3	581	3
Total	396	346	742	8	9	17	5213	3201	8414	33	13	46	9156	63

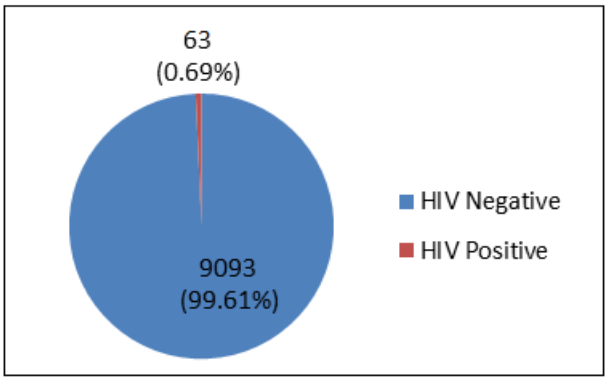

Fig-1: HIV sero-status of ICTC Attendees at IGMC, Shimla in year 2016

Total referral from ICTC to DOTS centre - RNTCP (Revised National TB Control Programme) unit is – 41 (0.44%) out of which 3 were found suffering from tuberculosis.

The prevalence in the various age groups was shown in table 2. The prevalence was highest (1.17%) in the age group of 35-49 years while it was lowest (0.41%) in age group (>50 year). We observe that there was significant difference in the age group wise distribution of total positive negative cases, because chi square =13.27, p=0.01, it was <0.05.

Table-2: Age-group wise HIV sero-status of ICTC Attendees at IGMC, Shimla in year 2016

Age group	Client initiated		Provider initiated		Total	HIV +	%AGE	Chi Square (df)	p- value
<14 years	24	1	188	1	212	2	0.94	13.27(4)	0.01
15-24 years	174	2	1026	4	1200	6	0.50		
25-34 years	295	4	1524	8	1819	12	0.66		
35-49 years	205	8	2274	21	2479	29	1.17		
>50 years	44	2	3402	12	3446	14	0.41		
Total	742	17	8414	46	9156	63	0.69		

We also observed that there was no significant difference in the gender wise distribution of total positive negative cases, because chi square =0.39, p=0.53, it was > 0.05 (Table-3).

Table 3: Gender wise HIV sero-status of ICTC Attendees at IGMC, Shimla in year 2016

Sex	HIV Positives	HIV Negatives	total	Chi square valve	p valve
male	41	5568	5609	0.39	0.53
female	22	3525	3547		
total	63	9093	9156		

In the present study we found that the out total 63 positive cases of HIV the most common mode of HIV transmission was heterosexual 71.42 %, followed by parent to child transmission 4.76% and least common mode of transmission by infected syringe was 1.59% of the cases. Rest 22.22% cause of transmission was unknown. There was a highly significant difference in the mode of transmission between male and female because chi-square = 38.38, p<0.0001 it was less than 0.05 as shown in Table-4.

Table-4: Mode of spread among HIV Positive Patients at IGMC, Shimla in year 2016

S. No	Mode of spread	Male	Female	Total	Percentage	Chi Square (df)	p value
1.	Commercial Partner	17	0	17	26.98	38.38 (6)	<0.0001
2.	Casual/Non-Regular/Non-Commercial	12	2	14	22.22		
3.	Regular Partner	0	14	14	22.22		
4.	Needle Syringe	1	0	1	1.59		
5.	Parent To Child	2	1	3	4.76		
6.	Unknown	9	5	14	22.22		
7.	Total	41	22	63	100		

The HIV serostatus of the attendees by their occupation shows that among the HIV Positive Patients,9.52% were Agriculturists, 25.40 were housewives, 4,76% were Skilled Worker, 30.16 were in service, 4.76% were students, 19.05% Truck /Taxi/Auto-Drivers/ Local Transport Worker and 6.35% were worked as hotel staff. There was a highly significant difference in the occupation between male and female because chi-square = 43.49, p<0.0001 it was less than 0.05 as shown in Table-5.

Table-5: Occupations of HIV Positive Patients at IGMC, Shimla in year 2016

S. No	Occupation	Male	Female	Total	Percentage	Chi Square (df)	p value
1.	Agriculturalist/Agricultural Cultivator	6	0	6	9.52	43.49(7)	<0.0001
2.	Housewife	0	16	16	25.40		
3.	Skilled Worker	3	0	3	4.76		
4.	Service(Govt/Pvt)	14	5	19	30.16		
5.	Student	3	0	3	4.76		
6.	Truck Driver/Local Transport Worker	12	0	12	19.05		
7.	Hotel Staff	3	1	4	6.35		
8.	Total	41	22	63	100.00		

DISCUSSION

ICTC services provides to those who come to the center either from referral (care providers and NGOS) or direct walk in clients. The ICTC general is an ideal point for prevention, where HIV negative individuals learn to use full array of existing services and interventions to adopt and maintain risk reduction behaviors, and HIV positive individuals use quality prevention services to adopt and sustain lifelong protective behaviors and avoid the virus transmission [5, 9].

Present study clearly indicates that males (61.26%) accessed the services more than females. This gender ratio of attendance rates is in accordance with national figures and indicates the existence of some barriers preventing the access of females even now. Stigma and discrimination may also be a barrier for them.

The prevalence of HIV among ICTC clients in the present study was noted to be 0.69%, which is lower than that reported from a study conducted in by in Bangalore (1.3%) [10], Madhya Pradesh (1.65%) [12] Southern Kannada (9.6%) [9], West Bengal [11] (17.1%), Maharashtra 12.5% [13], Gujarat (4.8%) [14] New Delhi (6.3%) and West Bengal (17.1%) [15]

In the present study percentage of male attendees to ICTC for testing HIV Positive is higher (65%) compared to females. (35%) This is similar to that in the study in Udupi, Southern Karnataka with 64.7% males and 35.3% females [9].

It is believed that HIV/AIDS affects the bread winners of the society, which is also evident from the results of this study. In this study that the prevalence is catching up in 25-34 years of age group, though it is still highest in 35–49 years age indicating that AIDS still threatens the most productive segment of society in the prime of their working life. It emphasizes the need of some youth specific interventions or some college or occupation based interventions whereby these people can be prepared beforehand. Similar with the figures which were obtained from a study conducted by Gupta *et al*., [18].

With regards to occupation, in our study a majority of the male sero-positive subjects were either in service or were truck drivers whereas among the females, a majority of them were housewives which was similar to the study by Vyas N *et al*., [16] but our finding were strictly opposite to the study by kumar S *et al*., [12] which reported that the least common occupation involved was government service.

In the present study that the heterosexual behavior was noted as the most common (71.42%) mode of transmission of HIV/AIDS, which is again in conformity with the findings of the study conducted by Lal [17] and Vyas *et al*., [16]. Best antidote to the HIV/AIDS challenge remains increased awareness and adaptation of safe behavioral practices and the solution lies in planning and designing the IEC activities keeping in mind the specific situations of the area. Also in our study, a large proportion of study subjects did not disclose their risk status. This is likely to be attributed to the fear of discrimination or punishment which still prevails in the society for HIV infected individuals.

This study also shows the existence of HIV-TB collaboration, with 41 subjects (0.44%) being referred to the DOTS centers for TB testing out of which 3 were found suffering from tuberculosis.

CONCLUSION

The present study depicts that among one year data of attendees at ICTC, prevalence of HIV/AIDS is about 0.69%. So this can be definitely considered as low prevalence but still need HIV awareness campaigns to be exaggerated. Prevalence of HIV was very high among males and sexually active age group. Hence when conducting outreach sessions of HIV awareness

in the community, it should be kept in mind that 15- 49 years age group must attend the sessions.

This study shows that the most common mode of HIV transmission was heterosexual and among HIV Positives, employees (govt or private) predominate, followed by Drivers -truck, taxi, auto%, Construction & Migrant workers. Thus, IEC on HIV/AIDS & its Prevention needs to be intensified on a regular basis, including Safe sex Promotion & Implementing HIV/AIDS & TB Policy at work place. We also need increased collaboration between DOTS and ICTCs because of the extremely high crossover between TB and HIV and more cases were found co-infected.

RECOMMENDATIONS

IEC–on HIV/AIDS & its Prevention needs to be intensified among people who are having minimal awareness, People with high risk behavior like who do not practice safe sex (issues like condoms usage & its disposal) and having stigma attached to sexually transmitted diseases. A successful communication program helps to promote behavioral change, in addition to increasing knowledge regarding the disease. Such programs will be more effective if conducted in local languages and using the locally derived data. At the same time, they must keep in mind the following: social norms, cultural beliefs, and sensitivities of the community. Such intensive IEC will improve the uptake of ICTC services by the target population. ICTCs should be supported by outreach components so that all HIV positive patients can be followed up and linked to the care, support and treatment programs

Limitations

However, the Current study is subjected to certain limitations since it was conducted in tertiary care hospital, therefore, results are based on the reporting and data collection by the personnel employed in the ICTC. Information regarding socioeconomic status, educational qualification, marital status, substance abuse, family background, counseling performed and condom use are not available. All these variables could have unmasked certain behavior pattern and given new dimension to this study. This study setting being a hospital decreased its external validity. Results observed are subjected to bias arising from rate of reporting in the counseling and testing centre. A community based study though resource intensive would have been better to avoid such bias.

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Conflict of Interest: None declared

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