

## PREVALANCE OF HIV IN MEN WHO HAVE SEX WITH MEN IN NAGPUR, CENTRAL INDIA

DILIP S. GEDAM<sup>a1</sup>, GIRISH AMBADE<sup>b</sup> AND MONU SINGH<sup>c</sup>

<sup>ac</sup>Department of Microbiology, IGGMC, Nagpur, Maharastra, India

<sup>b</sup>Senior Medical Officer ART, IGGMC, Nagpur, Maharastra, India

### ABSTRACT

This study was conducted in mobile ICTC in the department of microbiology with NGO SARATHI trust under TARANG project from April 2012 to March 2014 over a period of 2 years. A total 1296 samples were tested from 769 individuals in the year April 2012-march 2013. While a total 1100 samples were tested from 870 individuals in the year April 2013-march 2014. The seropositivity of HIV in MSMs in the 2012-2013 was 1.30%. The seropositivity of HIV in MSMs in the year 2013-2014 was 0.22%. Majority of kothis (receptive partners) were infected).

**KEYWORDS :** HIV, MSMs, High Risk Groups

Homosexuality is rarely discussed publically as it is considered a taboo by both Indian civil society and the government (Garg et al 2012). MSMs (Male having sex with male) are one of the risk group targeted by National AIDS control organization (NACO) to reduce HIV transmission. NACO estimates that India is home to 2.5 million MSMs of which 100000 are at high risk of contracting HIV due to multipartner and commercial sexual practices. Already, 15% of this community is infected with this disease (Garg et al 2012). Indian MSMs include self-identified gay men (western acculturated), kothis (men who tend to be receptive male partner in anal and oral sex and typically have more effeminate mannerisms), panthis (men who tend to be the insertive male partner in anal and oral sex) and double deckers (men who are both receptive and insertive partners). While MSM may self-identify as kothis, the term panthi and double decker are generally given by kothis to their male partner based on their sexual roles (Asthana S, Oostvogels R 2012, Thomas et al 2011). According to IPC 377 sexual relation between two men is a criminal offence. This led many MSM to marry women and have children (Thomas et al 2011). Many MSM engage in unprotected anal and vaginal sex with male and female sexual partners (Setia et al 2008). MSM in India may play a 'bridging' role in the spread of HIV into general public.

So we conducted the study to see the seroprevalence of HIV in MSMs in Nagpur district and impact of targeted intervention among them.

### MATERIALS AND METHODS

This study was conducted in mobile ICTC in the department of microbiology with NGO SARATHI trust under TARANG project from April 2012 to March 2014 over a period of 2 years. Mobile van counselor with NGO counselor visited the places where MSMs usually gather in evening evening time (4 pm to 9 pm). Mobile van and NGO counselor interact with MSMs and history of age at first sexual interaction, sexual habits and customs, condom use and awareness about STI and HIV were recorded during intervention and HIV testing were offered after pre-test counseling. Most of the MSMs were intervened by the counselors at their usual place to meet. After counseling blood samples were collected and processed according to NACO guidelines for HIV testing. High risk behavior reduction counseling and condom promotion was done. Those who detected positive were linked to ART for care support and treatment after post test counselling. The data was pooled and analysed accordingly. Some individual MSM undergone through multiple testing. This is a cross sectional study.

### RESULTS

A total 1296 samples were tested from 769 individuals in the year April 2012-march 2013.

While a total 1100 samples were tested from 870 individuals in the year April 2013-march 2014 (Table 1). A total 1296 blood samples were screened from 769 individuals. The seropositivity of HIV in MSMs in the

---

<sup>1</sup>Corresponding author

**Table 1 : Age Wise Distribution of MSM**

Age in year	Kothi	Panthi	Double Decker
17-25	369	280	150
26-35	270	129	101
36-45	98	88	68
>45	82	43	33
<b>Total</b>	<b>799</b>	<b>500</b>	<b>340</b>

**Table 2 : HIV Testing in Individuals and HIV Seropositivity in 2012-2013(N=769)**

MSM	Once	twice	>twice	<b>Total</b>	Seropositivity (%)
Kothi	386	234	9	629	7(0.91%)
Panthi	227	160	11	398	2(0.26%)
Double decker	156	110	3	269	1(0.13%)
<b>Total</b>	<b>769</b>	<b>504</b>	<b>23</b>	<b>1296</b>	<b>10(1.30%)</b>

**Table 3 : HIV Testing in Individuals and HIV Seropositivity in 2013-2014(N=870)**

MSM	Once	Twice	> twice	Total	Seropositivity (%)
Kothi	413	130	2	545	2(0.22%)
Panthi	273	65	1	339	0
Double decker	184	32	0	216	0
<b>Total</b>	<b>870</b>	<b>227</b>	<b>3</b>	<b>1100</b>	<b>2(0.22%)</b>

**Table 4 : Shows Prevalence of HIV in MSM in Four Regions of India**

Sr no	Region	Author/ SACS	Year	Prevalence (%)
1	South	Subramanium <i>et al</i>	2013	9.7 % - 10.9 %
2	North	Garg <i>et al</i>	2012	4 %
3	East	Ghosh <i>et al</i>	2012	5.6 %
4	West	MSACS	2011	12 %

2012-2013 was 1.30%.Kothis showed the highest seropositivity for HIV (0.91%),followed by panthis (0.26%) and double decker (0.13%)(Table 2).

A total 1100 blood samples were screened from 870 individuals. The seropositivity of HIV in MSMs in the year 2013-2014 was 0.22%. The seropositivity in kothis were 0.22%. None of the panthis and double decker were positive (Table 3).

## DISCUSSION

National AIDS control programme in India has been recognized globally as a success story. The adult HIV prevalence at national level has been continued its steady decline. Decline have been achieved among Men who have sex with Men (7.41% in 2007 to 4.43% in 2011) (Ministry of Health and family welfare 30 Nov 2012, HIV

Sentinel Surveillance 2010-2011). In a facility based survey conducted in selected areas of Delhi (2006) a HIV prevalence of 12.3% (NACO HSS 2008). Setia et al., 2008 have reported a combined estimate of HIV prevalence of 16.5% among MSM in India from 5 different studies. While Soloman et al., 2010 showed 9% HIV prevalence. In Maharashtra Mumbai plays a huge role, HIV prevalence in Mumbai city is believed to be above 12% (HSS 2010-2011). Garg et al., 2012 showed 4% prevalence of HIV among MSMs. Nair et al noticed that there are regional variations in HIV prevalence among MSM and transgender and injecting drug users. Ghosh et al., 2012 observed 5.6% prevalence of HIV in MSM who were co-infected with HSV. Maharashtra state AIDS control society in 2011 noted HIV prevalence in MSMs was 10% (HSS 2010-11, Times of India Nov 06, 2014).

In the present study prevalence of HIV is very low and showed declining trends .It was 1.30% in the year 2012-2013 and 0.22% in the year 2013-2014. Prevalence of HIV among MSMs shows regional variation (Table 4). Delhi in 2008-2009 annual report considered a high risk state with 11.7% MSM (NACO Annual Report 2008-09).

National AIDs control organization started targeted intervention programme for high risk group in 2008 because HIV epidemic in India is concentrated in high risk group. In this study counselor interact with MSMs every month through SARATHI TRUST and distributed condom and educated them about the safe sexual practices and awareness about HIV/AIDS and various STIs. In the presnt study the HIV prevalence was more in kothis (0.91% in 2012-2013 and 0.22% in 2013-2014) who were male receptive partners. The education status of MSMs in our study was 70% were graduate, 10% were secondary and higher educated, 10% were having primary education and 10% were illiterate. Out of 70% literate MSMs 15% were businessman. Eighty percent MSMs have knowledge about STD and AIDs. None of the MSM was commercial sex worker and one third MSMs were married.

## CONCLUSION

So from this study we concluded that HIV prevalence in MSMs in and around Nagpur is very low and it is declining over a period of time due to targeted intervention Programme. At national level it is observed that HIV prevalence is declining and shows regional variation. India is on track to achieve the global targets of 'Zero new infection, Zero aids related death and Zero discrimination'.

## ACKNOWLEDGEMENT

We sincerely acknowlegde SARATHI TRUST Nagpur, for their cooperation and data sharing.

## REFERENCES

Asthana S. and Oostvogels R., 2001. The social construction of male 'homosexuality' in India:implication for HIV transmission and prevention. *Soc Sci Med.*, **52**:707-21.

Garg T., Chander R., Jain A. and Barara M., 2012. Sexually transmitted diseases among men who have sex with men : A retrospect analysis from Suraksha clinic in a tertiary hospital. *Indian Journal of sexually transmitted disease and AIDS* 2012, **33**(1) : 16-19

Ghosh I., Ghosh P., Bharti A. C., Mandal R., Biswas J. and Basu P., 2012. Prevalence of human papillomavirus and co-existent sexually transmitted infections among female sex workers, men having sex with men and injectable drug abusers from eastern India. *Asian Pac J Cancer Prev.*, **13**(3):799-802.

HIV Sentinel Surveillance 2010-2011. A technical Brief. National AIDS Control Organisation, Ministry of Health and Family Welfare ,Government of India. December 2012.

Nair R., Nair S. C., Malhotra S. and Sachdeva A., 2012. Shifting trends of HIV epidemiology among most at risk groups in India. *Int J Med Sci and Public Health*, **1** (2):18-31.

National Aids control organization. Annual Report 2008-2009. Available from [http://nacoonline.org/upload\\_publication/Annual\\_Report\\_NACO\\_2008-09.pdf](http://nacoonline.org/upload_publication/Annual_Report_NACO_2008-09.pdf) (last accessed on 2010 feb 18).

National Aids control organization. HIV sentinel surveillance and HIV estimation-feb 2008.pdf (last accessed on 2008 may 05).

Press information Bureau Government of India, Ministry of Health and family welfare 30 Nov 2012, 18:40 IST.

Setia M. S., Brassard P., Jerajani H. R., Bharat S., Gogate A. and Kumta S., et al., 2008. Men who have sex with men in India: A systematic review of literature. *LGTB Health Res*, **4**:51-70.

- Soloman S., Srikrishnan A., Sifakis F., Mehta S., Vasudevan C., Balakrishnan P., Mayer K. and Celentano D, 2010. The emerging HIV epidemic among Men who have sex with Men in Tamil Nadu, India geographic diffusion and bisexual concurrency AIDS Behav, **14**(5): 1001-1010.
- Thomas B., Mimiaga M. J., Kumar S., Swaminathan S., Safren S. A. and Mayer K. H., 2011. HIV in Indian MSM: Reasons for a concentrated epidemic & strategies for prevention. Indian J Med Res., **134**(6):920-929.
- World AIDS Day: Maharashtra in bottom half of HIV report card-The times of India 6 Nov 2014, 1-2.