

**A STUDY ON THE MODES OF TRANSMISSION OF HIV FROM JANUARY 2009 TO DECEMBER 2012 AT JAWAHARLAL NEHRU HOSPITAL, JNIMS, MANIPUR**T. Ginzaniang<sup>1</sup>, M. Bobi Singh<sup>2</sup>, Ksh. Achouba Singh<sup>3</sup>**HOW TO CITE THIS ARTICLE:**

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**ABSTRACT:** Recognized as an emerging disease in the early 1980s. HIV has rapidly established itself throughout the world. HIV has evolved from a mysterious illness to global pandemic which has infected tens of millions in less than 20 years. With time, there has been a changing trend in the various mode of spread of HIV. The present hospital based cross sectional study was undertaken to highlight the change in the route of HIV transmission. A total of 2188 HIV patients admitted in Jawaharlal Nehru Hospital or attending ART center were included in this study. Detail history including route of transmission of the disease was taken and data thus collected were recorded by using standard proforma. Out of 2188 patients, 53.11% were male and 45.70% were female. Heterosexual route was the most common risk factor for HIV transmission (54.75%).

**KEYWORDS:** HIV, ART, Heterosexual.

**INTRODUCTION:** HIV, the virus that causes, acquired immunodeficiency syndrome, (AIDS), has become one of the world's most serious health and development challenges. According to the latest estimates from The Joint United Nations Programmes on HIV/AIDS (UNAIDS), globally there were 35.3 million people living with HIV (PLHIV) and 1.6 million people died of AIDS in 2012.<sup>[1,2]</sup> In India, the first case of HIV was detected in 1986 and since then HIV infection has been reported in all States and Union Territories. According to the HIV Estimations 2012 the estimated number of people living with HIV (PLHIV) in India was 20.9 lakh in 2011 with an adult (15-49 age-group) HIV prevalence of 0.27%.<sup>[3]</sup> Manipur despite its mere population of 2,721,756 as per 2011 census belongs to high prevalence state with HIV. The first HIV positive case in Manipur was reported in February 1990 from the blood samples of October 1989 among a cluster of Injecting Drug Users (IDUs).<sup>[4]</sup>

Since then the number has been increasing to such an extent that at present HIV infection has crossed 5 percent mark in high risk group and 1% or more in antenatal women putting it into the High prevalence states. Until 2013 there were 43,369 persons living with HIV/AIDS (PLHIV) in Manipur.<sup>[4]</sup> Many factors account for this high prevalence. The geographical proximity of Manipur to Burma (Myanmar) and consequently the Golden Triangle drug trail has made it a major transit route for drug smuggling, with drugs easily available and thus sharing needle among IDUs was the most common route in the early part of HIV epidemic in Manipur. However, the route of transmission of HIV/AIDS in the state is no longer confined to injecting drug users (IDUs) as seen earlier., HIV prevalence rate among the IDUs shows a declining trend from 1998 onwards and an increasing trend in heterosexual route of transmission.<sup>[4]</sup> The epidemic shifts from drug users to bridge population (Clients of sex workers, STD patients and life partners of drug users and their children) then to general population.

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**MATERIALS AND METHODS:** A total of 2188 HIV/AIDS both previously and newly diagnosed patients, who were either admitted in Jawaharlal Nehru hospital, JNIMS, Manipur or attending ART center of this hospital, between January 2009 to December 2012 were included in this study. Minimum age limit of patient was 15 and maximum age limit was 55. Detail history of the patients including history of exposure to various risk factors of HIV was taken. The data thus obtained were analyzed using standard protocol.

**RESULTS:** Out of 2188 patients studied, 1162(53.11%) were male and 1000(45.70%) were female. Transgender constituted 26(1.19%). Over the 4 years there was progressive raise in female population from 42.10% in 2009 to 49.11% in 2012.

Year	Male (%)	Female (%)	Transgender (%)	Total
2009	334(56.71%)	248(42.10%)	7(1.19%)	589
2010	305(53.32%)	259(45.28%)	8(1.40%)	572
2011	298(51.83%)	271(47.13%)	6(1.04%)	575
2012	225(49.78%)	222(49.11%)	5(1.11%)	452
Total	1162(53.11%)	1000(45.70%)	26(1.19%)	2188

Table 1: Gender distribution of HIV

The most commonly affected population was between the ages of 25-35. (47.07%) followed by age group between 35-45 (39.94%). This study also showed a gradual raise in the number of HIV among 25 -35 years of age group which is the most reproductive period i.e., from 37.18% in 2009 to 43.14% in 2012.

Age group	2009 (n=589)	2010 (n=572)	2011 (n=575)	2012 (n=452)	Total (n=2188)
15-25	93(15.79%)	76(13.29%)	70(12.17%)	50(11.06%)	289(13.21%)
25-35	262(44.48%)	273(47.73%)	286(49.74%)	233(51.55%)	1054(48.17%)
35-45	214(36.33%)	206(36.01%)	212(36.87%)	157(34.74%)	789(36.06%)
45-55	20(3.40%)	17(2.97%)	7(1.22%)	12(2.65%)	56(2.56%)

Table 2: Age group distribution of HIV

Heterosexual route was the major mode of transmission of HIV accounting 54.75% of all cases with a gradual raise over the 4 years. IDU was the second most common route accounting up to 36.33% of all cases with a gradual decline over the 4 years.

Year	Hetero Sexual	IDU	MSM (male Having sex with male)	Blood Transfusion	Needle prick	Not disclosed/ Not known	Total
2009	284(48.22%)	250(42.44%)	7(1.19%)	4(0.68%)	2(0.34%)	42(7.13%)	589
2010	310(54.20%)	216(37.76%)	8(1.40%)	4(0.70%)	nil	34(5.94%)	572
2011	330(57.39%)	189(32.87%)	6(1.04%)	3(0.52%)	nil	47(8.18%)	575
2012	274(60.62%)	140(30.97%)	5(1.11%)	3(0.66%)	nil	30(6.64%)	452
Total	1198(54.75%)	795(36.33%)	26(1.19%)	14(0.64%)	2(0.09%)	153(7.00%)	2188

Table 3: Different routes for HIV transmission over 4 years

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**DISCUSSION:** Our study showed a higher prevalence of HIV among male gender. We found that out of 2188 patients, 53.11% were male and 45.70% were female. This spectrum of higher prevalence of HIV among male is also seen at the national level.<sup>[3]</sup> Third gender or transgender constituted 1.19% and their number remained almost static over the 4 years. We also found that the number of female patient was gradually increasing over the 4 years i.e., 42.10% in 2009 to 49.11% in 2012.

The sexually active age group of 25-35 years was most commonly affected (48.17%). This study showed a major number of HIV cases of 84.23% were confined to the age group of 25-45 years. This is consistent with the findings of other study from Manipur.<sup>[5]</sup> There was also a gradual increase of HIV among 25-35 years of age group which is consistent with findings of other study.<sup>[6]</sup>

Heterosexual contact was the commonest mode of transmission (54.75%) of all HIV cases and is consistent with other studies in India.<sup>[7,8]</sup> This study also showed an increase in heterosexual route of transmission from 48.22% in 2009 to 60.62% in 2012. IDU once a major cause of HIV in Manipur was the second most common cause of HIV comprising 36.33% of all HIV infection showing gradual decline with from 42.44% in 2009 to 30.97% in 2012. Thus from our study we found that there was a shifting trend from IDU (once the major cause of HIV) to sexual route. Indeed, NACO report 2012-13 also showed a decline in HIV among IDUs in the North Eastern states of India including Manipur.<sup>[3,9]</sup> The reason behind this is that, because the majority of the HIV-infected population in Manipur were IDUs in the earlier days, most people looked at this 'high risk' group alone with most of the interventions focused on IDUs, resulting in gradual fall of HIV among IDUs. However neglecting other source of HIV infection, has led to the rise of HIV through sexual route among the spouse of IDU users and female sex workers.

In our study 153 (7.00%) patients did not respond to the question regarding exposure to various risk behavior. This is an area of interest where we need a closer counseling of all HIV patients.

**CONCLUSION:** Manipur has seen a change in scenario of HIV in the last 10 years. The HIV/AIDS epidemic in Manipur has penetrated into the general population from the Injecting Drug Users (IDUs) through sexual route in the last decade. The situation among the women and children has become alarming day by day making them the most vulnerable group particularly the age group of 25-35 since this is the most common age group for marriage in Manipur society and most reproductive age group. Since the worst affected age group constitutes the most productive part of life, the impact of the disease on the socio-economic condition of the affected and the society is devastating. Many women unaware of their male partner's risk factors for HIV (Such as IDU or having sex with other men or female sex worker) do not use condom. Thus, we are now beginning to see waves and waves of HIV epidemic among women and general population. Thus, safe sex practice and premarital counseling and testing of HIV and antenatal screening for HIV are the need of the hour.

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