



# HIV Spread in India from 1980 to 2000: An Analysis

**Sanjay Singh Chauhan**

Assistant Professor

Department of Geography, Swami Vivekanand University, Sagar, M. P. -470228

## Abstract:

This study delves into the trajectory of HIV spread in India during the critical two-decade period from 1980 to 2000. First case of HIV in India was found in 1986. The research employs a comprehensive approach to analyze the factors contributing to the emergence and dissemination of HIV within the country. It investigates the epidemiological, social, economic, and healthcare aspects that played pivotal roles in the spread of the virus. The analysis begins with an overview of the global and national context during this period, highlighting the emergence of the HIV/AIDS pandemic and the initial responses by the Indian government and society. Subsequently, it explores the geographical patterns of HIV prevalence, the affected population groups, and the modes of transmission. In addition, the study examines the challenges faced by healthcare systems in addressing the HIV epidemic, including issues related to testing, treatment, and prevention. Moreover, this research also assesses the socio-cultural factors, stigma, and discrimination that influenced the spread of HIV and hindered effective responses. It considers the role of advocacy, awareness campaigns, and policy interventions in combating the epidemic. Through this comprehensive analysis, the study aims to provide valuable insights into the historical context of HIV spread in India and its lessons for addressing current and future public health challenges. It underscores the importance of evidence-based strategies and multi-sectoral cooperation in managing and controlling infectious diseases within diverse and dynamic societies.

**Keywords:** HIV, AIDS, health care system, HIV transmission, etc.

## Introduction

HIV/AIDS, a widespread global pandemic with far-reaching socioeconomic and public health ramifications, has presented a substantial obstacle to nations across the globe, including India. During the period spanning from 1980 to 2000, India saw a pivotal phase in the progression of the HIV epidemic. Gaining insight into the mechanisms by which HIV transmission occurred during this particular timeframe is crucial for comprehending the historical context and providing guidance for contemporary and prospective public health interventions. The objective of

this study is to conduct a thorough examination of the various factors that have contributed to the transmission of HIV in India between the years 1980 and 2000. This analysis will be based on an extensive collection of primary and secondary sources, allowing for the development of a detailed and nuanced account [1].

HIV monitoring is a fundamental component of the national AIDS response in India, serving as a main intervention strategy. In light of the possible risk posed by the HIV epidemic, the Indian Council of Medical Research (ICMR) initiated sero-surveillance measures in 1985 with the aim of detecting the existence of the virus. The implementation of this endeavour resulted in the discovery of the initial instance of HIV in India during the month of April in the year 1986. The sero-surveillance effort underwent a reformation and was subsequently recognised as the HIV sentinel surveillance (HSS). The pilot programme was first implemented in 1994 and later transformed into an annual surveillance system in 1998, operating under the National AIDS Control Programme (NACP) [1].

The initial documentation of AIDS occurred in 1981, when it was identified as a relatively unknown illness with an uncertain cause. It mostly affected young males who engaged in sexual activity with other males (MSM) and individuals who used intravenous drugs within the United States [2]. During the subsequent two-year period, individuals afflicted with AIDS from the aforementioned demographic subsets were documented in various regions of North America, Western Europe, and Australia. Concurrently, there were reports of a debilitating illness affecting young males, females, and children in Sub-Saharan Africa, commonly referred to as Slim's disease [3]. The year 1984 marked the isolation of the human immunodeficiency virus (HIV) [4], followed by the development of ELISA assays for the detection of antibodies specific to this virus in the subsequent year. The ELISA tests provided evidence indicating that the reported cases of AIDS in the United States, Europe, Australia, and the Sub-Saharan region, as well as the pandemic of Slim's illness in the latter, were attributed to the same causative organism [5, 6]. The AIDS pandemic was acknowledged as a significant worldwide public health issue, leading to the establishment of the global registry for reporting AIDS cases by the World Health Organisation (WHO) in 1986 [7]. Until 1985, there were no recorded cases of AIDS originating from Asia, which is home to more than one-third of the world's population.

The Indian Council of Medical Research's (ICMR) pursuit of HIV infection The ICMR Task Force on AIDS convened in October 1985 and put forth a recommendation that, given the potential threat presented by HIV infection, the ICMR should commence serosurveillance of HIV infection among asymptomatic individuals belonging to high-risk groups. This surveillance would involve the utilisation of the ELISA test to determine whether the infection has indeed reached India. Serum samples from female sex workers in Chennai and Mumbai were analysed by the National Institute of Virology in Pune and the Virology Research Centre at Christian Medical College, Vellore, respectively. In April 1986, both institutions reported the detection of HIV infection in India [8]. In May 1986, the initial instances of AIDS among individuals of Indian descent were documented. One case involved an individual who had undergone a blood transfusion outside of India, while the other case involved an individual who had gotten an infusion of a blood product outside of India. [8] The aforementioned studies served

as an early indication that HIV infection has made its way into India [2]. Motivated by the claims originating from India, other Asian nations subsequently adopted a like strategy and expeditiously verified the existence of individuals infected with HIV who displayed no symptoms. The sero-surveillance initiative for HIV infections conducted by the Indian Council of Medical Research (ICMR). The findings were examined by the ICMR AIDS Task Force in May 1986, leading to their recommendation for the initiation of a national sero-surveillance strategy aimed at screening high-risk and vulnerable groups for HIV infection. India holds the notable distinction of being the inaugural nation to undertake a comprehensive national sero-surveillance programme, under the auspices of the Indian Council of Medical Research (ICMR). This initiative aimed to assess the primary modes of HIV transmission within the country and gauge the extent of infection among individuals belonging to high-risk and vulnerable populations. The implementation of a nationwide clinical and serological surveillance programme for HIV infection in India was a significant undertaking. The establishment of nationwide monitoring was determined to be a collaborative endeavour involving the Indian Council of Medical Research (ICMR), the Directorate General of Health Services (DGHS), and State Health Authorities. Within a span of six months, the Indian Council of Medical Research (ICMR) successfully developed a network consisting of five reference centres and 43 surveillance centres [8]. These facilities operated inside the pre-existing infrastructure of medical colleges and ICMR institutions, requiring just the minimal essential addition of a laboratory technician. Over the course of the following six months, the Principal Investigators, often affiliated with the Department of Microbiology, as well as laboratory professionals, underwent training in the identification of HIV infection through the utilisation of the Enzyme-Linked Immunosorbent Assay (ELISA) method. Confirmation of the infection was conducted by the five reference centres by the utilisation of Western blot assays [8].

From 1986 to 1991, the Ministry of Health allocated annual funding from the STD project to acquire necessary equipment and consumables (kits) for conducting sero-surveillance of HIV infection. The budget for the surveillance and reference centres, as well as the coordinating unit at the ICMR headquarters, was provided by the Indian Council of Medical Research (ICMR). The World Health Organisation (WHO) assumed the responsibility of procuring the ELISA readers, ELISA and Western blot kits, and delivering them to ICMR in Delhi. Additionally, the ELISA and Western blot kits necessary for the surveillance centres were stored in the cold rooms of prominent institutions in Delhi and various ICMR institutions across the country that possess adequate cold room facilities. Every institution assumed the duty of conducting daily inspections of the cold room to ensure that the kits were stored securely at the appropriate temperature. Additionally, due to the limited availability of courier services in India during that period, the heads of various technical divisions and scientists from the ICMR headquarters, as well as experts attending ICMR meetings, took on the role of dedicated and cautious couriers. Their responsibility was to safely transport valuable ELISA and Western blot kits to the reference centres, ICMR institutions, and surveillance centres.

In the event of an urgent requirement for ELISA kits by surveillance centres, efforts were made to convince individuals from the academic, administrative, and judicial sectors of their respective cities who were scheduled

to visit Delhi for official purposes, to get and transport the kits back. The implementation of these unconventional measures effectively secured the secure transportation of the kits at a little expense. Additionally, all surveillance and reference centres consistently provided monthly updates on their results. These reports, together with significant discoveries, were published in the ICMR Bulletin, an internal publication of the ICMR, on a monthly basis. The ICMR Bulletin consistently features in-depth articles on the ongoing operations within the HIV/AIDS programme over the months of November and December [8-14]. The sero-surveillance data collected during the initial two-year period indicated the presence of HIV infection in all states where testing was conducted. HIV infection was identified in populations at high risk, including individuals engaged in sex work, intravenous drug users, individuals with a high number of sexual partners, and vulnerable groups such as those who had received several blood transfusions and blood product infusions within the preceding five-year period. HIV-positive individuals were identified within the population of pregnant women, including both cases of transmission between spouses and instances involving pregnant sex workers. Additionally, HIV-positive cases were also found among both professional and voluntary blood donors. The prevalence of HIV infection within the broader population was readily apparent. Infants who tested positive for HIV and were delivered to mothers who were also HIV-positive provided evidence of mother-to-child transmission occurring within the country. The identification of HIV-positive children who had undergone several blood transfusions and blood product infusions throughout their early years provided evidence of HIV transmission through contaminated blood within the country. Heterosexual transmission emerged as the primary mechanism of HIV transmission in the majority of states. In the region of Manipur, intravenous drug use emerged as the primary method of HIV transmission.

The findings indicate that HIV transmission in India encompasses all known modes of transmission. Furthermore, HIV infection has been detected in all recognised high-risk groups as well as in the general population across all states of the country, including both urban and rural areas. It is worth noting that the prevalence of HIV infection is not particularly high among the high-risk groups, with the highest prevalence observed among intravenous drug users and the second highest among female sex [table 1, 2, and graph 1].

### **Epidemiological Context:**

The HIV epidemic in India evolved considerably from the early 1980s to the turn of the millennium. Several key studies, such as the National AIDS Control Organization's (NACO) reports and the World Health Organization's (WHO) assessments, offer invaluable insights into the epidemiological landscape of the time. These sources elucidate the changing patterns of HIV transmission, prevalence rates, and the high-risk behaviors that fueled the spread of the virus.

**Socioeconomic Determinants:**

The socio-economic conditions of the population played a crucial role in the transmission of HIV. Some scholars have highlighted the significance of poverty, limited access to education, and gender disparities in contributing to the vulnerability of various population groups to HIV.

**Government Policies and Interventions:**

Government interventions and public health policies were instrumental in responding to the growing HIV epidemic. The National AIDS Control Program (NACP), initiated in 1992, was a milestone in India's response to HIV. This research will analyze the progression of government policies and initiatives using historical records, policy documents, and academic studies.

Table 1. HIV Positive Pregnant Women of Some Important Cities from 1987 to 1995. (WHO, 2004).

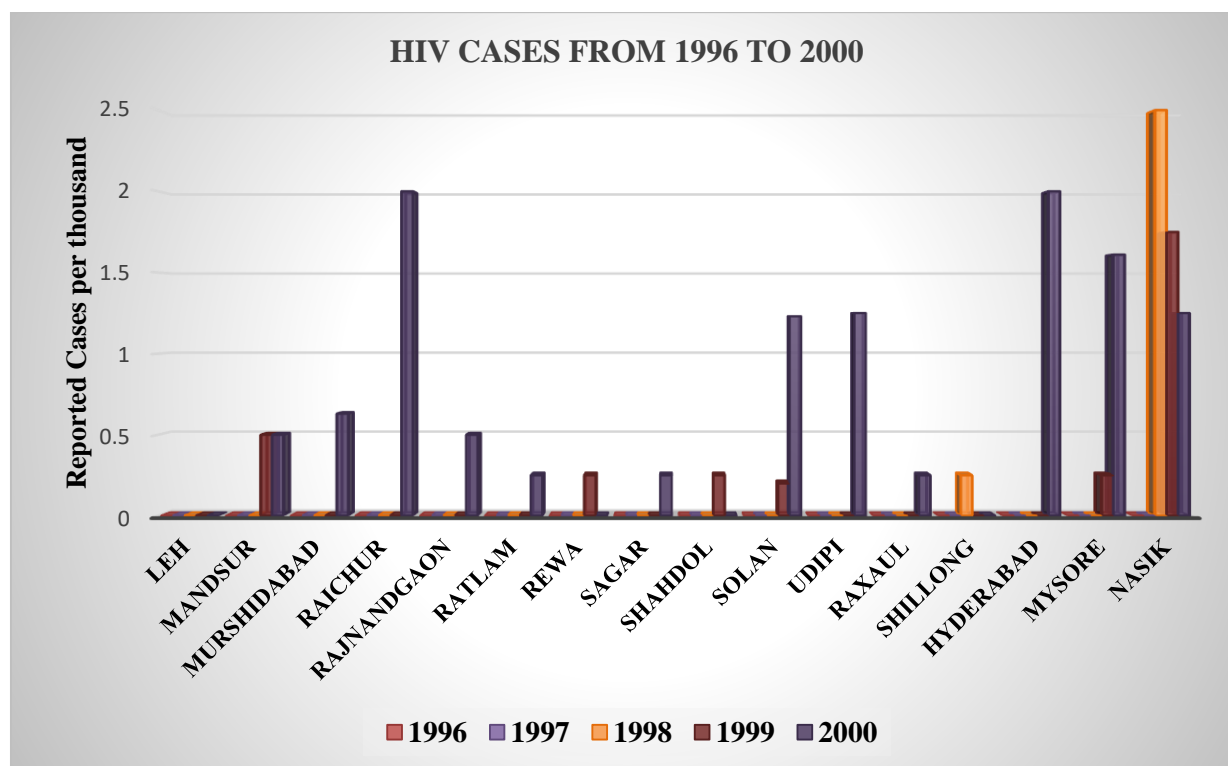
Spot Name	1987	1988	1989	1990	1991	1992	1993	1994	1995
Leh	0	0	0	0	0	0	0	0	0
Mandsur	0	0	0	0	0	0	0	0	0
Murshidabad	0	0	0	0	0	0	0	0	0
Raichur	0	0	0	0	0	0	0	0	0
Rajnandgaon	0	0	0	0	0	0	0	0	0
Ratlam	0	0	0	0	0	0	0	0	0
Rewa	0	0	0	0	0	0	0	0	0
Sagar	0	0	0	0	0	0	0	0	0
Shahdol	0	0	0	0	0	0	0	0	0
Solan	0	0	0	0	0	0	0	0	0
Udipi	0	0	0	0	0	0	0	0	0
Raxaul	0	0	0	0	0	0	0	0	0
Shillong	0	0	0	0	0	0	0	0	0
Hyderabad	0	0	0	0	0	0	0	0	0

Mysore	0	0	0	0	0	0	0	0	0
Nasik	0	0	0	0	0	0	0	0	0

Table 2. HIV Positive Pregnant Women of Some Important Cities from 1996 to 2000. (WHO, 2004).

Spot name	1996	1997	1998	1999	2000
Leh	0	0	0	0	0
Mandsur	0	0	0	0.50	0.50
Murshidabad	0	0	0	0	0.63
Raichur	0	0	0	0	2.0
Rajnandgaon	0	0	0	0	0.50
Ratlam	0	0	0	0	0.25
Rewa	0	0	0	0.25	0
Sagar	0	0	0	0	0.25
Shahdol	0	0	0	0.25	0
Solan	0	0	0	0.20	1.23
Udipi	0	0	0	0	1.25
Raxaul	0	0	0	0	0.25
Shillong	0	0	0.25	0	0
Hyderabad	0	0	0	0	2.0
Mysore	0	0	0	0.25	1.61
Nasik	0	0	2.50	1.75	1.25





Graph 1. HIV Positive Pregnant Women of Some Important Cities from 1996 to 2000.

### Future Implications:

This research is not merely a historical investigation but has significant implications for the present and future. The lessons learned from the period between 1980 and 2000 can inform contemporary strategies for HIV prevention, care, and policy development. Effective public health programs, awareness campaigns, and community outreach, as suggested by references like the UNAIDS Global AIDS Update, can provide critical insights into addressing HIV in India today.

### Conclusion:

In conclusion, the HIV/AIDS pandemic in India has had profound implications for both the nation's economy and public health. This study has delved into the critical period between 1980 and 2000, shedding light on the transmission causes of HIV in India and the evolution of its response to the crisis. During this period, India's approach to tackling HIV/AIDS underwent significant developments. The establishment of HIV sero-surveillance by the Indian Council of Medical Research (ICMR) in 1985 marked a crucial turning point. This program ultimately led to the identification of India's first HIV case in April 1986. The subsequent transition from sero-surveillance to sentinel surveillance and the adoption of pilot programs by the National AIDS Control Programme (NACP) in 1998 were pivotal steps in understanding and addressing the HIV epidemic.

In essence, India's journey in understanding and combatting HIV/AIDS serves as a valuable historical case study, demonstrating the significant role of government policies, healthcare initiatives, and international cooperation in

managing a public health crisis of this magnitude. By examining the epidemiological landscape and societal factors that contributed to the spread of HIV, this study offers essential insights that can inform future public health strategies and the ongoing global effort to combat HIV/AIDS.

### Acknowledgments:

Author is thankful to the vice chancellor and chancellor of Swami Vivekanand University, Sagar, M.P., India for providing support at every step.

### References:

1. NACO annual reports on surveillance of HIV in India 2021.
2. Centers for Disease Control (CDC). A cluster of Kaposi's sarcoma and Pneumocystis carinii pneumonia among homosexual male residents of Los Angeles and Orange Counties, California. MMWR Morb Mortal Wkly Rep 1982; 31 : 305-7.
3. Serwadda D, Mugerwa RD, Sewankambo NK, Lwegaba A, Carswell JW, Kirya GB, et al. Slim disease: a new disease in Uganda and its association with HTLV-III infection. Lancet 1985; 2 : 849-52.
4. Barre-Sinoussi F, Chermann JC, Rey F, Nugeyre MT, Chamaret S, Gruest J, et al. Isolation of a T-lymphotropic retrovirus from a patient at risk for acquired immune deficiency syndrome (AIDS). Science 1983; 220 : 868-71.
5. Kamradt T, Niese D, Vogel F. Slim disease (AIDS). Lancet 1985; ii : 1425.
6. Mann JM. AIDS: A worldwide pandemic. In: Gottlieb MS, Jeffries DF, Mildvan D, Pinching AJ, Quinn TC, Weiss RA, editors. Current topics in AIDS, vol. 2. Chichester: John Wiley & Sons; 1989.
7. Bureau of Hygiene & Tropical Diseases . AIDS Newslett 1986; 2 (Issue 1, March 15).
8. Anonymous. Sero-surveillance for HIV infection in India. ICMR Bull 1987; 17 : 111-9.
9. Anonymous. HIV infection – ongoing studies and future research plans. ICMR Bull 1988; 18 : 109-19.
10. Anonymous. HIV infection – ongoing studies and future research plans. ICMR Bull 1989; 19 : 115-29.
11. Ramachandran P. HIV infection in women. ICMR Bulln 1990; 20 : 111-9.
12. Ramachandran P. Hospital policies on care of HIV infected persons and prevention of accidental infection. ICMR Bull 1990; 20 : 29-35.
13. Ramachandran P. HIV infection –ongoing studies and future research plans. ICMR Bull 1990; 20 : 120-9.
14. Ramachandran P. HIV infection –ongoing studies and future research plans. ICMR Bull 1991; 21 : 125-44.
15. WHO, 2004. UNAIDS/WHO Epidemiological Fact Sheet - 2004 Update.