Evolution and Evaluation Of Indian Health Policies with Reference To HIV/AIDS

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ABSTRACT
India's response to HIV/AIDS over the last two decades has constantly evolved and been proved effective in terms of reduction of the prevalence rate and deaths caused due to the epidemic. This paper outlines the prevention strategies and measures undertaken at a central as well as state level for testing, treatment and combating the spread of the virus. It further assess the National Health Policies and National AIDS Control and Prevention Plans with reference to HIV/AIDS specific interventions to gauge a clear understanding of adopted strategies and its overall impact from early 1990s to present. The paper also illustrates specific evidences from the states of Maharashtra, Manipur, Uttar Pradesh, Andhra Pradesh and Gujarat to build up a reference on how policies have been evolved and decentralised to ensure timely treatment and reach to all key and high-risk population based on state specific need. It advocates for continuance of such successfully adopted qualitative strategies along with a massive scaling up and an effective change in socio-behavioural aspects to further reach the goals of "*Zero New Infections, Zero AIDS related deaths and Zero discrimination.*"

Keywords:
HIV/AIDS, Health Policy, NACP, India
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Introduction

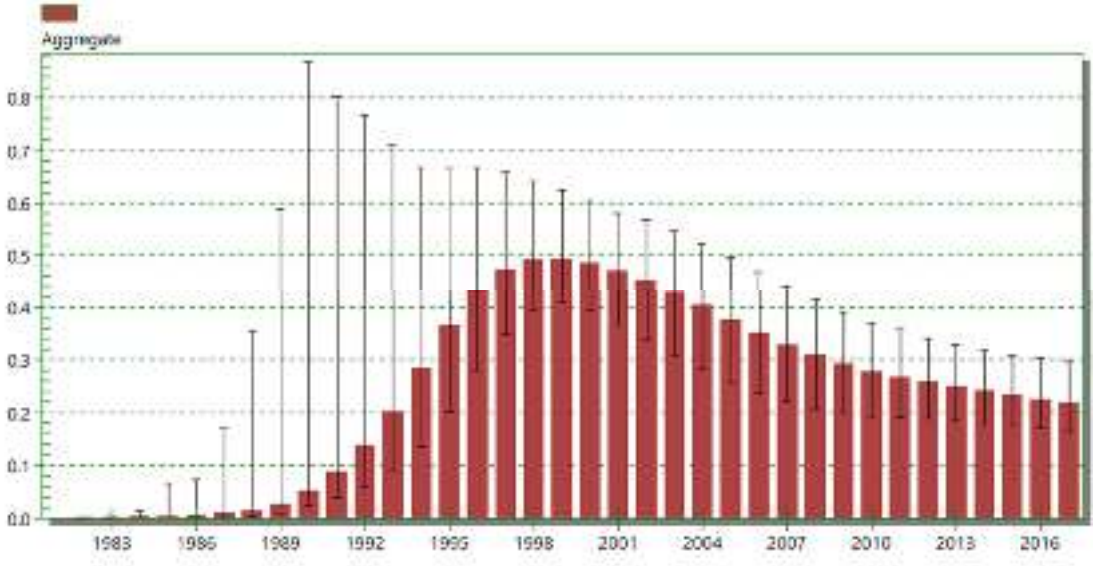
The health care requirement in India has tremendously changed over the years with rapidly changing demographics and growing economy. India has definitely shown remarkable progress in bringing down the mortality rates and increasing of life expectancy. Simultaneously, the spread of HIV and AIDS has emerged to be a serious public health challenge over the past 30 years. However, the policies and programmes in reference to HIV/AIDS have highly evolved with target specific interventions and effective provision of healthcare facilities. HIV is a retrovirus that causes the AIDS disease, which infects the human immune system by specifically lowering CD4 cells and hindering their function(Vijayan, Karthigeyan, Tripathi, S. P, & Hanna, 2017). The transmission of the virus can occur through blood and bodily fluids. The most common occurrence takes place through sexual intercourse, transfusion of blood, from mother to child during pregnancy, delivery or breastfeeding, intravenous injections and such. The HIV prevalence which remains high among "key populations" (KPs) include female sex workers, men who have sex with men, hijra/trans genders, people who inject drugs, long distance truck drivers and migrants.

Presently, India continues to be the third largest HIV epidemic at a global level, with an estimated 23.49 lakh (17.98 lakh – 30.98 lakh) PLHIV in 2019, with an adult (15–49 years) HIV prevalence of 0.22% (0.17–0.29%). India's response to the epidemic has been deemed highly successful wherein we have witnessed a steep decline of more than 80% in new HIV infections since its peak in 1995 and 71% in AIDS-related death since its peak in 2004 (Kumar P, et.al, 2020). The states of Andhra Pradesh and Telangana, Maharashtra, Gujarat, Manipur, Mizoram, West Bengal, and Rajasthan have been most vulnerable to the spread

of the epidemic. Over the years, the controlled interventions and targeted programmes have been successful in containing the overall prevalence of the epidemic. However, the epidemic has spread throughout the nation, from urban to rural areas, from men to women and to children.

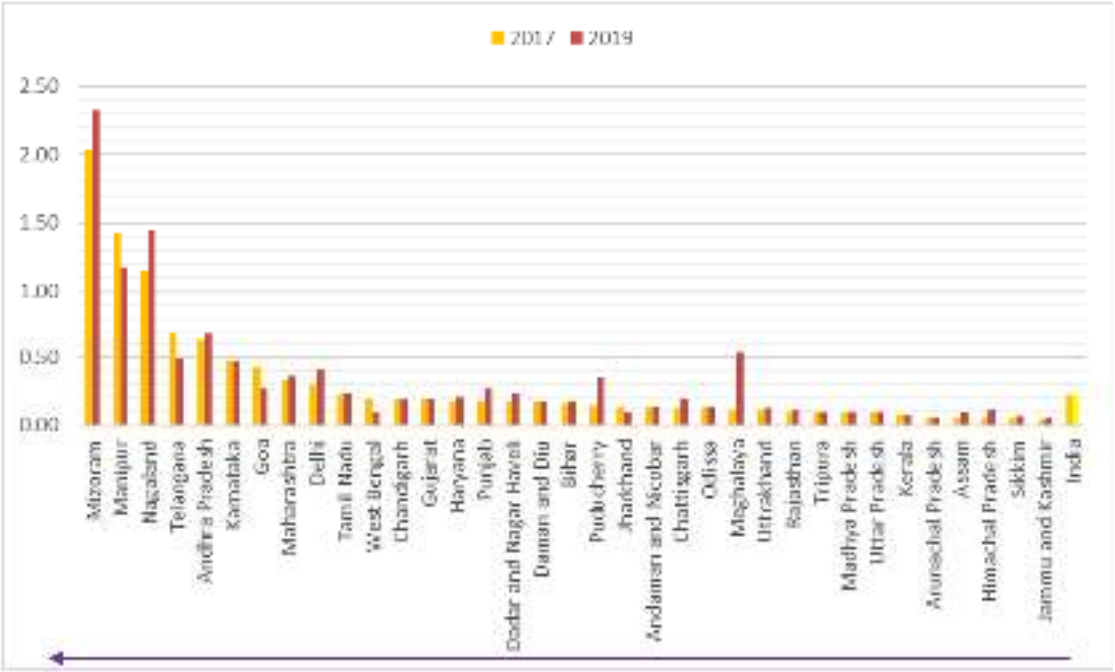
The Indian HIV estimation report 2017 states that the HIV prevalence rate among adults i.e. between the age group of 15-49 years is estimated at 0.22% (0.16% – 0.30%) in 2017. The adult HIV prevalence is estimated at 0.25%(0.18%-0.34%) among males and at 0.19% (0.14%-0.25%) among females (NACO, 2017). Looking at the prevalence rate in India since the 1990s, we had reached our peak during 1999 i.e. 0.49% (0.41% - 0.62%) and since then through targeted interventions, we have witnessed a gradual decline to 0.4% in 2004 to 0.34% in 2007, 0.28% in 2012 and 0.26% in 2015 to 0.22% in 2017 and has remained the same in 2019.

Figure 1: Adult HIV Prevalence in India (1990-2017)



Source 1: NACO Estimates from 2017(Data and Graph Retrieved from http://naco.gov.in/hiv-facts-figures)

Figure 2: Change in HIV Adult Prevalence Rate from 2017-2019 (15-49 years)



Source 2: Data retrieved from HIV Estimates Report, NACO, 2017 and 2019

In terms of state/UT wise Adult HIV Prevalence in 2017, three north-eastern states has the highest rate i.e. Mizoram have the prevalence rate of 2.04%, followed by Manipur (1.43%) and Nagaland (1.15%). Apart from that states of Telangana (0.70%), Andhra Pradesh (0.63%), Karnataka (0.47%), Goa (0.42%), Maharashtra (0.33%) and Delhi (0.30%) has higher prevalence rate than the national average of 0.22%.

The latest 2019 NACO estimates also show a high prevalence in Mizoram (2.32%), followed by Nagaland (1.45%) and Manipur (1.18%). States of Telangana (0.49%), Andhra Pradesh (0.69%), Karnataka (0.47%), Delhi (0.41%), Goa (0.27%), Maharashtra (0.36%), Punjab (0.27%), Dadra and Nagar Haveli (0.23%), Tamil Nadu (0.23%) have higher prevalence rate than the national average of 0.22%. The prevalence rate in the states of Meghalaya, Puducherry, Delhi, and Himachal Pradesh has escalated in 2019, compared to the 2017 estimates.

Policy indicators with reference to HIV/AIDS at National level

The establishment of the National AIDS Control Organisation in 1992 has led to the development of policy and legislation relating to HIV AIDS in India. This significant step has led to the formulation of outreach programmes and acknowledgement of the HIV AIDS epidemic in the nation. Thus, the earlier official response, which was characterized by conservatism and discrimination, has been replaced by an approach which emphasizes the rights and dignity of people with HIV, which seeks to communicate with those who are vulnerable to the disease rather than instruct them and to support rather than punish them.(Asthana, 1996). This overall national approach to the risks of HIV/AIDS is based on the global strategy proposed by the World Health Organisation. The National AIDS Control Programme (NACP) was launched in 1992 to primarily offer services of Prevention and Care and Treatment. This fully centrally sponsored programme has played a massive role in reducing the number of new HIV infections within the age group of 15-49 over the past two decades.

In addition to this, the Ministry of Labour and Employment has formulated the national policy on HIV/AIDS and the World of Work back in 2009. The policy is necessarily built on the fundamental right to work. It aims to guide the national response to HIV/AIDS in reducing and managing the impact of the epidemic in the world of work.(2009) With 93% of the nation's working population engaged in the informal sector, it is extremely crucial to ensure safety and social security net for them against any sort of discrimination. India has also ratified the International Labour Organisation (ILO) Convention No. 111 on discrimination which made the formulation of guidelines for non-discrimination with workers based on their HIV status essential. The policy highlights the role of employers, workers, civil societies, trade unions in combating and preventing HIV/AIDS; at the workplace at both central and state levels.

The former National Health Policy of 2002 aimed to achieve a zero level growth of HIV/AIDS in India by 2007. It policy laid our priority on public health-related information and the IEC (Information, Education and Communication) for disseminating the prevention and curable measures and to bring an overall change. Even though we have seen a drastic decrease in the number of new HIV/AIDS cases, we still have 2.1 million people living with HIV inthe nation[1]. Overall the spread of the disease has almost slowed more than half.

The National Health Policy 2017 highlights the need to control HIV and AIDS along with a focus on current prevention mechanisms. It recommends focussed interventions on the high-risk communities[2]and prioritized regions. It also talks about the need to support care and treatment for people living with HIV/AIDS through inclusion of 1st, 2nd and 3rd line antiretroviral HIV drugs (ARV), Hep-C and other alternative expensive

[1] UNAIDS Data 2018, retrieved from Global Information and Education on HIV and AIDS

[2] High risk communities referred as Transgender, Men who have sex with men, Female Sex Workers etc. in the policy document.

drugs into the essential medical list. (National Health Policy, 2017) . The policy simply addresses the areas of immediate focus in reference to the disease but fails to present an action plan to achieve the targets of 90:90:90. (It means that 90% of all people living with HIV know their HIV status; 90% of all people diagnosed with HIV infection will receive sustained antiretroviral therapy and 90% of all people receiving antiretroviral therapy will have viral suppression.) By 2017, only 79% of PLWHAs[3] are aware of their status, of which only 56% were receiving sustained antiretroviral therapy.

In adherence to such indicators mentioned in the policy, it is visible that the government has initiated to take active steps to make health care accessible, affordable and accountable for all. However, the policy fails to address the "how" to achieve these targets.

The National AIDS Control Programme

The National AIDS Control Programme (NACP) was initiated in 1992, six years after the first HIV infection was detected in 1986 among female sex workers in Chennai, Tamil Nadu. NACP provides technical, behavioural and collaborative competences in the prevention and control of HIV/AIDS in India. Over the years, Scaling up of the ART has been the core priority under NACP. People infected with HIV are now directly put on ART as soon as they are detected as positive. The movement which started with raising awareness related to the disease has now adopted rigorous intervention techniques to combat the spread and provide quality treatment, comprehensive care and support to the PLHIVs.

NACP 1 (1992-1999) started with the core objective of slowing down the rate of new infections and containing the spread of the virus so that the morbidity, mortality and impact of AIDS in the country is reduced to a greater extent. It was during this period that the National AIDS Control Organization (NACO) was set up to overlook the implementation of the plan. The initial interventions during this period were laid upon generating awareness, setting up of surveillance system for monitoring HIV epidemic, measures to ensure access sound treatment for high-risk groups.

NACP 2 (1999 – 2006) started with a central focus on reducing the spread of HIV infections in India and to also increase India's capacity to respond to HIV/AIDS on a long-term basis. It was during this time that the targeted interventions for high risk groups in high prevalence states were undertaken in a decentralised manner. This also led to setting up of AIDS control societies in various states across the country.

NACP 3 (2007-2012) targeted massive scaling up of quality assurance mechanisms along with an achievement of 50% reduction in new infections. Prevention and Care, Support and Treatment (CST) for PHLIVs became the focal point in halting and reversing the epidemic in this five years.

NACP 4 (2012-2017) launched with a sole aim to accelerate the process of reversal and further strengthen the epidemic response in India through a cautious and well-defined integration process with the continuation of objectives defined in the previous plan. The key strategies developed during this plan were to intensify and consolidate prevention services, with a focus on High Risk Groups and vulnerable population along with balancing the growing treatment needs and quality assurance. Targeted-intervention services include needle/syringe exchange programmes and oral-substitution therapy for PWID, condom promotion and distribution, and linkage to HIV and sexually transmitted infections (STI) testing and treatment services. Furthermore, many new HIV prevention initiatives such as interventions for migrant workers and focused strategies for transgender people have been initiated under NACP 4 (Tanwar et.al, 2016). this clearly indicates how the Indian HIV programme has evolved over the years with decentralizing its approach and collaborating with people living with and affected by HIV, NGOs,

[3] PLWHAs: Abbreviation for People Living With HIV-AIDs. (In reference to the PLWHA movement started in South Africa

development and private partners, and civil society organisations.

NACP 5 (2017-2024) envisions to pave a way for "AIDS free" India to achieve the 2030 SDG targets with the provision of more effective, sustained and comprehensive coverage of AIDS related services. The three goals of *zero new infections, zero AIDS related deaths and zero discrimination* continues to form the basis of core strategy. The fast track approach devised under this plan priorities the HIV prevention in "at risk groups" and "key population", expansion of quality-assured HIV testing with universal access to comprehensive HIV care, Elimination of mother to child transmission of HIV and syphilis and restructuring of strategic information system in a more efficient and patient centric manner. Along with the targets devised in the National Health Policy (2017), the plan has devised fast track targets to eliminate mother to child transmission of HIV and Syphilis along with the elimination of stigma and discrimination.

Table 1 represents the comprehensive summary of plan and objectives adopted under NACP over the years.

Table -1: Summary of objectives and strategies devised under NACP

	Time Period	**Core Objective**	**Actions and adopted strategies**
NACP 1	1992-1999	Slow down the rate of new infections Decrease the morbidity and mortality associated with HIV infection	India reached its peak during this period with high prevalence rate. Services such as education campaigns, protection of the blood supply, condom promotion, and a system to monitor the prevalence of HIV, treatment for sexually transmitted diseases and limited treatment for AIDS-related conditions
NACP 2	1999-2006	Decentralisation in states To increase India's capacity to respond to HIV/AIDS on a long-term basis.	Adoption of AIDS Prevention and Control Policy (2002) All states set up their respective AIDS control societies. Inter-sectoral collaboration Launch of National Anti-Retroviral Treatment (ART) programme
NACP 3	2007-2012	Massive scale up with quality assurance mechanisms. To halt and reverse the epidemic by end of project period Setting up of District AIDS prevention and Control Unit	The HIV adult prevalence rate reduced from 0.34% to 0.28% during this period. Strategic Information Management and Institutional Strengthening took place
NACP 4	2012-2017	Reduce new infections by 50% (2007 Baseline of NACP III) Comprehensive care, support and treatment to all persons living with HIV/AIDS	New infections have been reduced by 12% by 2017 Constant efforts for care, support and treatment is provided however, its access in rural and remote areas is lagging
NACP 5	2017-2024	Three goals of zero new infections, zero AIDS related deaths and zero discrimination	In progress

Key activities to improve HIV awareness, testing and prevention amongst high risk and key populations adopted at all levels are as mentioned below.

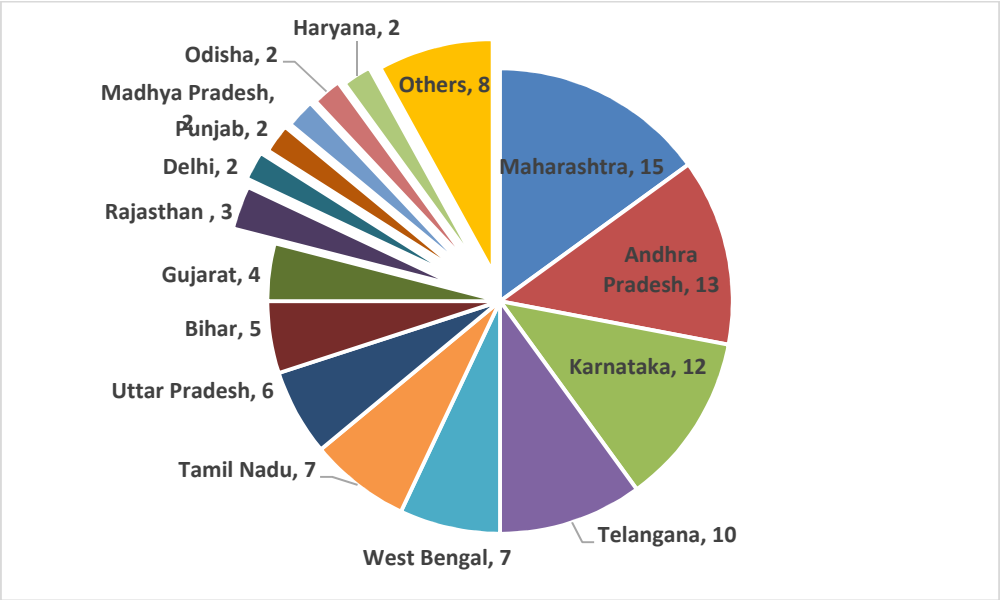
- The national guidelines have been updated as per the World Health Organisation's guidelines which further recommended community based testing for High Risk Groups using lay providers.
- Demand promotion strategies using mid-media are being implemented, for example, National Folk Media Campaign Red Ribbon Express and buses in convergence with national health mission. (Tanwar et.al, 2016)
- Formation of Red Ribbon Clubs in college, national coverage and campaigns led by celebrities and sports players.
- The Indian constitution also guarantees that Right to Informed Consent, Confidentiality and Right against discrimination in the context of HIV.
- "Test and Treat" policy which puts the person affected with virus immediately on ART irrespective of their CD count or clinical stage. The aim is to improve longevity and quality of life for those infected, and also save them from many opportunistic infections, especially tuberculosis.
- In the year 2017, NACO has launched the "Mission *Sampark*" to contact and bring back PLHIV back into the ART. It is to make serious efforts into bringing back the people infected with virus and ensuring that they have access to the required treatment facilities.

Policy indicators with reference to HIV/AIDS at State level

India's approach towards combating the disease has brought tremendous change in bringing down its adult prevalence rate (Ages 15-49) from 0.91% in 2005 to 0.20% in 2018. The National Aids Control Programme (NACP) established under the Ministry of Health and Family Welfare has led to the establishment of State AIDS Control Societies and collaboration with NGOs at the state level.The spread of the epidemic in India varies from state to state. The prevalence of HIV in the states of Maharashtra, Karnataka, Andhra Pradesh, Manipur, Mizoram and Nagaland is considered to be relatively high. States such as Gujarat, Tamil Nadu, West Bengal, Chandigarh, Kerala, Jharkhand Bihar, and Jharkhand have medium to low prevalence of the epidemic. The state control societies across the nation and other NGOs and International agencies work in conformity with the targets and guidelines of the policy devised at a national level. Majority of the states across the nation have undertaken programmes such as Targeted intervention for high risk population group, Blood safety programme, Integrated counselling and testing centres, Strategic Information Management Unit, Condom promotion and Programmes related to information, communication and education (IEC) to combat the spread of the epidemic.

Figure 3 and 4 represents the Percentage share of People living with HIV in major states in India based on the estimations from 2017 and 2019.

Figure 3: Distribution of PHLIV in states/UTs - 2017

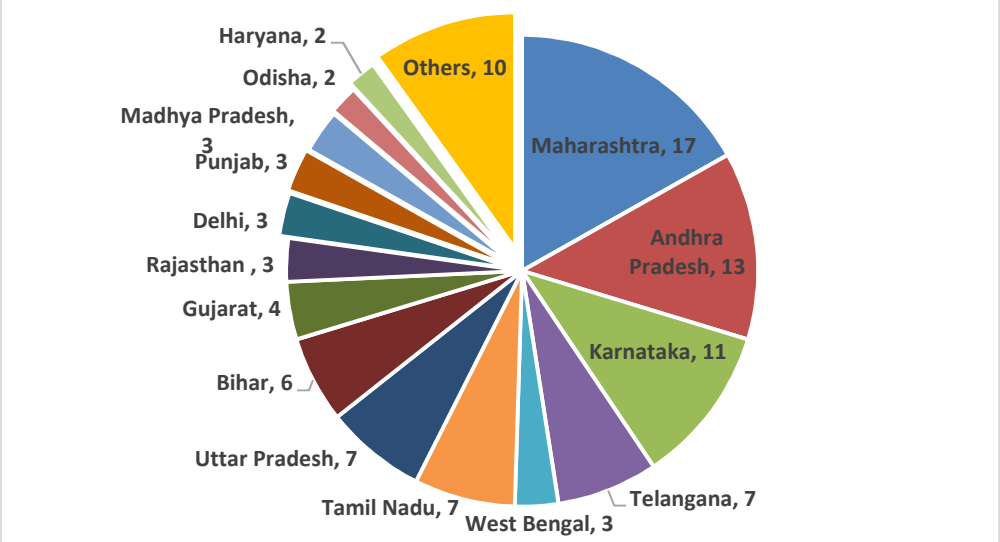


A total of 8 states of India account for 72% of annual new HIV infections: Bihar, Telangana, West Bengal, Gujarat, Maharashtra, Tamil Nadu, Karnataka, Andhra Pradesh, Uttar Pradesh and Delhi (NACO & ICMR, 2018). As per the estimation report of 2017, Maharashtra reported the highest number of people living with HIV, which is 15% (3.3 lakhs). As per the 2019 estimations, Maharashtra continues to report highest numbers with 17% of PLHIV (3.96 lakhs). The percentage share of the state of Andhra Pradesh has remained the same in the last two years i.e. 3.14 lakhs (13%).

The states which have observed a slight decline in the share of number of people living with HIV from 2017-2019 are Karnataka (2.69 lakhs), Telangana (1.58 lakhs), West Bengal (1.55 lakhs) and Bihar (1.34 lakhs) has witnessed a slight decline from 2017 to 2019.

The other 10% is accounted for by a majority of the North-western and North-eastern states of India including Delhi, Punjab, Haryana, Manipur, Mizoram, Nagaland, Assam, Chandigarh and Union Territories such as Dadar and Nagar Haveli, Daman and Diu.

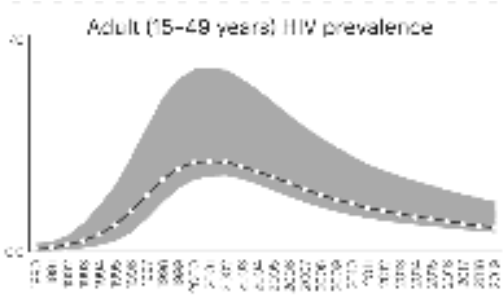
Figure 4: Distribution of PHLIV in states/UTs - 2019



Andhra Pradesh

The recent estimates by NACO in 2015, the undivided Andhra Pradesh and Telangana have the highest estimated number of people living with HIV at 3.95 lakhs. It also revealed that the annual AIDS-related deaths declined by 60%-70% compared to the baseline values of 2007.[4]The estimated adult HIV prevalence in Andhra Pradesh and Telangana has been recorded at 0.66% in 2017 and 0.69% in 2019 against the national prevalence rate of 0.22%.

Figure 5: Adult Prevalence Rate (1990-2019), Andhra Pradesh



Source 3: India HIV Estimates Report 2019, Ministry Of Health & Family Welfare, Government Of India

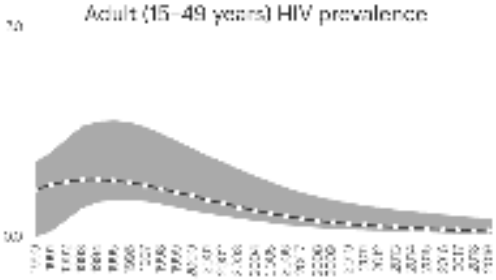
The Andhra Pradesh State Control AIDS Society (APSACS) was established in 1998 to implement the overall objectives of NACO and strengthen the state's capacity to respond to the epidemic. The broad policy is targeted towards the achievement of "Zero stigma, Zero discrimination, Zero new infections and Zero AIDS" in the state. Sustained interventions such as "Awareness Sustained and Holistic Action (AASHA) for promoting ownership of prevention activities, Adolescence Education Programme, Capacity building for women, provision of SAHARA identity cards for the provision of access to government health facilities have played a major role in bringing down the prevalence rate in the state.

In relation to the goals proposed by NACP, Phase III (2007-12), the state focussed on reversing the epidemic by reducing the number of new infections. Their community-led structural interventions for key population groups enabled them to take ownership of the HIV AIDS programme at local levels. Such community and target oriented interventions have proved to play a major role in changing behaviour and attitude of people along with the adoption of preventive and safe practices.

Maharashtra

Maharashtra was one of the state which observed fastest transmission in the early years of the spread of the virus. Maharashtra currently has the highest number of PHLIV with 3.96 lakhs(2019) which was 3.3 lakhs (2017) and 3.01 lakhs in 2015. The core reason for high rate of infections in the state is due to the higher urbanisation and migration rates. Additionally, the prevalence of HIV infections among sex workers in the state is comparatively higher along with high prevalence of STDs. In 1992, AIDS cell was established in the state under DHS (Directorate of Health Services) and then later The Maharashtra Aids Control Society (MSACS) was established in August 1998 with a responsibility of implementing the programmes related to the virus.

Figure 6: Adult Prevalence Rate (1990-2019), Maharashtra



Source 4: India HIV Estimates Report 2019, Ministry of Health & Family Welfare, Government of India

[4] Statistical estimates: (2015). *India HIV Estimates - Technical Report.* National Aids Control Organisation. National Institute of Medical Statistics.

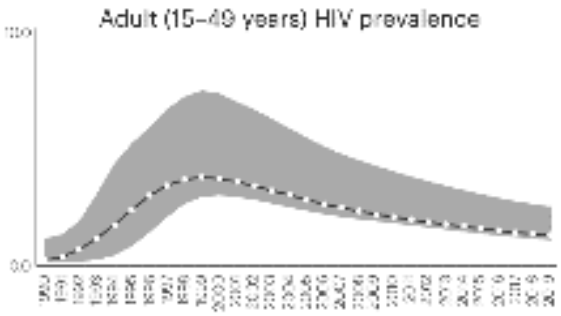
The state led interventions along with collaboration with targeted intervention programmes such as Avahan and Mukta (by Pathfinder) since early 2005 has been instrumental in controlling the spread of virus. They also provided support in community mobilisation, monitoring and evaluation, STI and medical services, Health communication and Finance. Programmes initiated by MHSACS such as the peer educator programme for behaviour change focusses on creating mass awareness in terms of use of condoms, safe sexual practices. They organise training to sensitize the community members and facilitate a discussion between various groups.

AIDS related deaths in the state has declined by 81%, from a total of 34,927 in 2007 to 6,766 in 2015. However, Out of the total deaths that occurred due to HIV/AIDS in India in 2018-2019, Maharashtra saw the highest with 1059 deaths[5]. Out of which 94% of them were reported from rural area while 6% were reported from urban areas. This indicates the disparities in access to HIV/AIDs specific public health facilities in urban and rural areas.

Manipur

Among all the states and UTs, Manipur has shown the estimated adult HIV prevalence of 1.15% which was the highest in the nation. In 2017, the estimated adult prevalence was 1.43% (1.17-1.75) which has now reduced to 1.18% (0.97-1.46). However, we have witnessed a sustained decline in this number since 2000s. The Manipur AIDS control society (MACS) was established in 1998 to implement the prevention and care and treatment programmes as per the NACP guidelines. Later, it was dissolved with the State AIDS Cell to make the processes simpler and less time consuming.

Figure 7: HIV Adult Prevalence Rate, Manipur (1990-2019)



Source 5: India HIV Estimates Report 2019, Ministry of Health & Family Welfare, Government of India

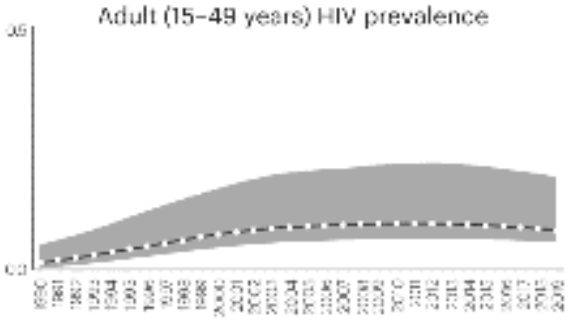
The Injecting Drug Use (IDU) has been the main risk factor for the rapid widespread of HIV infection in North east regions, especially Manipur and Nagaland. There has been evidence of transmission of HIV in and from such IDUs through sexual conduct to their spouses or partners. In the early period of 1999-2000, Rapid Intervention and Care Project (RICP)were implemented to prevent HIV transmission among IDUs by stopping the Needle/Syringe sharing. Even though, the HIV/AIDS prevalence has seen a declining trend among the IDUs, now new areas of concern, particularly MSMs and FSWs have emerged as a serious concern in the state. Today, almost 78% of the HIV cases in the state have been recorded to be transmitted through sexual conduct. The alarming situation in the state is that an increasing number of people infected belong to the younger and working age groups. Prevention and Control of AIDS in Manipur has been accorded top priority by political parties and their representatives' as well. MACS has been spearheading and strengthening local responses at grassroots levels by capacity building through Panchayati Raj Institutions. Despite the serious efforts undertaken by the concerned authorities and NGOs, the epidemic continues to spread at a sustained rate.

[5] Data retrieved from the Government's Health Management Information System (HMIS) website.

Uttar Pradesh

Uttar Pradesh, located in central India has an estimate number of 1.34 lakh PHLIV in 2017 which decreased from 1.5 PHLIV in 2015. Though Uttar Pradesh has a lower Adult HIV prevalence rate of 0.9% (2017) against the national prevalence rate of 0.22%, it is a highly vulnerable state due to its demographics and large proportion of population living in rural areas.

Figure 8: HIV Adult Prevalence Rate, Uttar Pradesh (1990-2019)



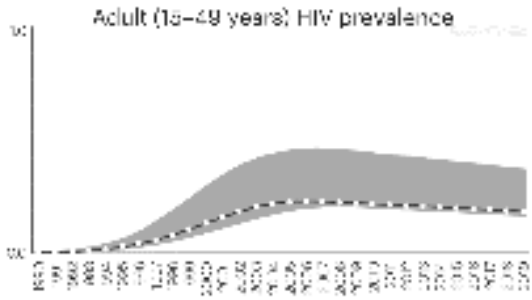
Source 6: India HIV Estimates Report 2019, Ministry of Health & Family Welfare, Government of India

The core reason for the spread of virus in the early years has been due to outmigration along with high mobile population. Poverty, low literacy levels and lack of awareness has played a significant role in the rapid spread of the virus. The Uttar Pradesh State AIDS Control Society (UPSACS) was established as a para-statal agency in 1999 to ensure effective delivery of quality health services and to collaborate with NGOs, women's self-help groups, private sectors and the community at all levels. The Link Worker Scheme (LWS) was implemented in the state to reach out to high risk groups in rural areas and to address their needs and provide proper care and support in remote villages. Community Outreach and Rapid Mapping of HIV Risk has been instrumental in this case. UPSACS organises heath camps and blood donation camps at regular intervals in various blocks. National Integrated Biological and Behavioural Surveillance (IBBS) has also been implemented to strengthen the surveillance among High Risk Groups and Bridge Population.

Gujarat

The NACO estimates of 2015 reveal that 1.66 lakh people in Gujarat live with HIV which went down to 1, 03,510 as per 2019 estimates. The state has witnessed a 35.17% decline in new HIV infections since 2010. The annual number of deaths due to HIV/AIDS has declined by 50.55% in the state. The state has remained at a moderate level of prevalence since the reporting of its first ever case in 1986. However, new infections in the state have shown a continuous increase till 2013 and then started to decline.The main reasons behind the spread of HIV in the state are the presence of the large tribal population, massive industrialization, urbanization and migration.

Figure 9: HIV Adult Prevalence Rate, Gujarat (1990-2019)



Source 7: India HIV Estimates Report 2019, Ministry of Health & Family Welfare, Government of India

The Gujarat State Control AIDS Society (GSACS) was established in 1999 during the second phase of NACP. It now works towards the accelerating the reversal of HIV epidemic in the state and provide comprehensive care, support and treatment to all PLHIV.

The decentralised module to prevent and control HIV has been implemented in Gujarat through District AIDS prevention and Control Unit (DAPCU) in 10 most affected districts. They carry out the required training and capacity building sessions at local level along with monitoring and coordination of HIV programme in the particular district. GSACS have leveraged the use of IEC in the recent years for disseminating right information and services to target population groups through the use of mass media, outdoor campaigns, a

celebration of World Aids Day andcarrying out mainstreaming training with multiple stakeholders.

Figure 10: State wise data on indicators related to HIV/AIDS (2019)

	Andhra Pradesh	Maharashtra	Manipur	Uttar Pradesh	Gujarat
Adult (15–49 yrs) HIV prevalence (%)	0.69 [0.54-0.89]	0.36 [0.25-0.53]	1.18 [0.97-1.46]	0.10 [0.07-0.13]	0.20 [0.17-0.22]
Male	0.74 [0.55-0.98]	0.38 [0.26-0.56]	1.22 [0.99-1.52]	0.12 [0.09-0.16]	0.21 [0.19-0.25]
Female	0.64 [0.51-0.82]	0.33 [0.23-0.49]	1.13 [0.93-1.40]	0.07 [0.06-0.10]	0.16 [0.27-0.41]
Number of peopple living with HIV (in thousand)	**313.73 [247.13- 404.46]**	**396.35 [288.60-577.01]**	**28.56 [23.55-35.19]**	**160.60 [120.78-213.63]**	**103.51 [93.27-119.49]**
Adults (15+)	306.53 [241.05- 395.46]	383.79 [278.09-560.00]	27.04 [22.20-33.43]	153.25 [114.97-203.68]	99.71 [89.73-115.34]
Female (15+)	143.66 [114.86-182.88]	167.78 [119.64-242.42]	12.58[10.63-15.95]	55.08 [40.88-71.50]	42.26 [37.86-48.04]
Children (Less than 15)	7.19 [5.26-9.39]	12.55 [8.94-17.44]	1.52 [1.25-1.87]	7.34 [5.39-9.97]	3.79 [3.35-4.36]
Decline in new HIV infections since 2010 (%)	64.87	38.38	29.09	46.37	35.17
Adults (15+)	60.6	35.3	19.5	45	29.5
Female (15+)	60.7	31	16.2	45.3	27.2
Children (Less than 15)	87.8	61.8	73	60.4	77.1
Decline in AIDS-related mortality since 2010 (%)	70.03	71.81	52.42	37.7	50.55
Adults (15+)	69.3	72	52.3	36.2	49.3
Female (15+)	78.3	76.7	55.3	58	56.3
Children (Less than 15)	85.5	67.7	54.1	48.9	59.8

Source 8: India HIV Estimates Report 2019, Ministry of Health & Family Welfare, Government of India

Each state has adopted a decentralised strategy to combat the spread along with understanding the contextual vulnerabilities leading to high prevalence. The HIV/AIDS scenario in the heterogeneous states differ with varying culture, education levels, economic levels, gender-dynamics, geography, and occupation (Perkins, Khan , & Subramaniam, 2009). These factors are reflected in the level of awareness and acceptance which prevails among the people residing there, in turn affecting the quality of life of people with HIV and people vulnerable in contracting HIV.

Policy implications and the way ahead

The decline in the prevalence rate of HIVdefinitely reaffirms the success of central and state level interventions in responding to the HIV/AIDS epidemic. India has been successful in achieving the 6th Millennium Development Goal of halting and reversing the HIV epidemic. Between 2000 and 2015, new HIV infections dropped from 2.51 lakhs to 86 thousand, a reduction of 66% against a global average of 35%(UNAIDS, 2015). The statistical data clearly represents the success of our prevention programmes in reducing the new infections by half in the last decade. NACO has been instrumental in fighting against the virus in India which brought together guidelines, prevention plans and public health interventions for testing, treating and prevention at large scale.

Prevention of HIV/AIDS is theoretically easier than the prevention of other pathogenic and infectious diseases which spread from air or water. HIV/AIDS spreads as a result of human behaviour, human negligence and ignorance of the virus and the modes of transmission. Hence, large scale awareness generating strategies amongst the high-risk groups as well as the general population is the first step towards creating an AIDS free nation. The main challenge here is to ensure that PLHIVs are aware of their status and have access to ART to prevent morbidity, mortality and further transmission.

The decentralised approach and establishment of state aids control societies have been the forerunner in combating the epidemic at the grassroots levels. At an individual household level, HIV/AIDS is associated with income losses and increased healthcare expenditure. The study conducted by National Council of Applied Economic Research

(NACEAR) and National Aids Control Organisation (NACO) revealed that an increasing number of households with HIV infected individuals would sell their lands and borrow heavily to finance their health expenses, especially in rural areas. This possesses daunting public health as well as a developmental challenge due to its implications on the social, economic and political environment. As been reiterated multiple times in various baseline research studies and by civil societies, the stigma and discrimination against the disease prevailing since decades still continue to prevent the affected people from seeking preventive measures and related affordable care services, especially for women and children. To successfully meet the targets defined under SDG 3, ensuring a stigma and discrimination free environment is extremely crucial. It is difficult to gauge a clear understanding on the social, behavioural and psychological challenges faced by affected people, especially by women and children. In order to reach out to the target groups and make efforts towards containing the spread of the virus, individual-specific interventions are to be planned which includes vigorous condom promotion along the highways, particularly among truckers, Inclusion of sexual health and education for adolescents in school will go a long way in establishing a strong awareness campaign. Along with this, over the years we have witnessed a widespread of the virus among women in India. This has raised an alarming situation and calls for targeted intervention and separate policy for women living with HIV in India which should highlight and address the economic, societal and cultural issues faced by them on daily basis. Current times call for more centred focus on prevention of new HIV transmissions, especially among pregnant women. With proper treatment throughout pregnancy, perinatal HIV transmission can be curbed effectively. Drug menace among youth, especially in the north eastern region has posed as a huge threat and contributed to the spread of HIV, in order to tackle such issues, it is now imperative for the government to establish rehabilitation centres with dedicated programmes. Sentinel Surveillance is extremely crucial to identify the presence of HIV at all levels.

Over the years, the cases of mental health and suicides among PLHIVs have considerably increased and hence it has created an alarming implication for the government and civil society organisations to provide emotional as well financial support to the patients. The support can be provided in areas like education, health and employment besides provision of monetary, one on one counselling, normalisation of the diseases, awareness on safe practices, pension benefits and breaking of the stereotypes.

Since the affected individuals heavily depend on government and NGOs for the treatment and care facilities, the strengthening and quality of such services become the top priority. The need of the hour calls upon the government to formulate and strengthen its social protection programmes for the most vulnerable individuals and communities. The state and local governments should strengthen their initiatives for information, communication and education about the modes of transmission, its prevention and work on creating a positive attitude of people towards people living with HIV and AIDS.

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