



सत्यमेव जयते

Ministry of Health and Family Welfare  
Government of India



# National Strategic Plan for HIV/AIDS and STI 2017 – 2024

*“Paving Way for an AIDS Free India”*

December 1, 2017

**National AIDS Control Organisation  
Ministry of Health and Family Welfare  
Government of India**





NATIONAL STRATEGIC PLAN FOR HIV/AIDS AND STI  
2017 – 24

# Paving the Way for an AIDS Free India

**DECEMBER 1, 2017**



National AIDS Control Organisation  
Ministry of Health & Family Welfare  
Government of India

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स्वास्थ्य एवं परिवार कल्याण मंत्री  
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### Message

India has come a long way in addressing the AIDS epidemic. Strong political will along with concerted and collective efforts with the participation of those living with HIV or affected populations and civil society Organisations, have contributed to achievements in pushing back the epidemic.

There has been a 64% decline in the estimated number of annual new HIV infections in the country from 2000 to 2010, while the trend has largely flat-lined between 2010 and 2015. Nevertheless, the number of people living with HIV who are receiving antiretroviral therapy free of cost through the government programme has increased substantially. Consequently, AIDS-related deaths have declined. This trend will be further strengthened as we have now adopted the 'Test and Treat' policy which will extend treatment to everyone tested positive for HIV, irrespective of their CD4 count.

India is committed to 'Ending the AIDS' epidemic as a public health threat by 2030 in line with Sustainable Development Goals (SDG). The Government of India has reaffirmed this commitment at the United Nations General Assembly in June 2016 during the High level Meeting (HLM) on AIDS, as well as at other platforms such as BRICS. Achieving this goal will entail us to adopt the 'Fast-Track' targets, including the 90-90-90 targets, by 2020. However, it requires sustained commitment and action to address the scale of challenges ahead.

The Government of India will also accord priority attention to eliminating mother to child transmission of HIV and Syphilis by 2020. Through the *Pradhan Mantri Surakshit Matritva Abhiyan*, there is a nationwide drive, across public and private sectors, to offer all pregnant women with comprehensive antenatal care, including HIV testing.

In a historic move, the Parliament of India has unanimously adopted the HIV and AIDS (Prevention and Control) Bill, 2017, which provides the legal framework for the Government's commitments, including in eliminating stigma and discrimination against people affected by HIV. This aspect is particularly important in line with the Government's motto, 'Sabka saath sabka vikaas'.

Against this backdrop, the National Strategic Plan for HIV/AIDS and STIs 2017-2024 will be implemented over the next seven years and will herald the country to the midpoint of the 2030 goals. The next seven years are, therefore, critical. Investments made now will result in substantive gains towards 2030. I am fully confident that all States and Union Territories will ensure efficient implementation of the National Strategic Plan for HIV/AIDS and STIs 2017-2024.

  
(Jagat Prakash Nadda)

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### Message

The Ministry of Health and Family Welfare remains unwavering in its commitment to secure health for all. Towards this end, tangible initiatives have been taken by the National AIDS Control Organisation (NACO) to prevent HIV infections, provide treatment and care, and thereby ensure the right to health.

As part of these initiatives, particular attention should be given to those populations who are at risk and impacted the most, such as those who are socio-economically marginalised, including women, young girls and children. There is also an urgent need to overcome social injustices which increase the risk and vulnerability of these populations.

Securing the goal of an 'AIDS free India'—as enshrined in the National Strategic Plan for HIV/AIDS and STIs 2017-2024 – will involve progress across the spectrum of sexual and reproductive health rights. The rights of all people, including those living with HIV and key populations, need to be safeguarded. In this regard, a historic milestone was reached by the enactment of the 'HIV and AIDS (Prevention and Control) Bill' in April 2017. It signaled to the world, India's commitment to ensure treatment for people living with HIV and to eliminate stigma and discrimination.

As we move forward, we will continue to ensure that the poorest sections of society and the marginalised have access to healthcare and social protection. There is a need to ensure that all people living with HIV, and those at risk, receive a comprehensive package of life-saving services for HIV prevention, testing, treatment and care. This should also address co-morbidities such as Tuberculosis, viral hepatitis and cervical cancer.

The next few years are critical as we lay the foundation to achieving a set of ambitious goals. We need to make this a reality in every village, block, district and state. Let us move aggressively forward in our roll-out of this National Strategic Plan for HIV/AIDS and STIs 2017-2024.

(Anupriya Patel)

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HEALTH & FAMILY WELFARE  
GOVERNMENT OF INDIA

प्रीति सूदन  
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Secretary



### Message

While the Ministry of Health and Family Welfare is truly proud of what has been accomplished so far by the national response to HIV/AIDS in India, there is no room for complacency. The work done by the National AIDS Control Organization together with partners stands out as a public health best practice that should be followed in other health programmes.

This new National Strategic Plan for HIV/AIDS and STIs 2017-2024, which was developed by the National AIDS Control Organization with a wide range of stakeholders involved in the national response, spells out the objectives and targets that we have jointly committed to achieve. The plan describes the strategies and activities that will need to be implemented on the ground across India's 36 States and Union Territories with the help of AIDS Control Societies, District AIDS Prevention and Control Units, Regional Institutes, communities, development partners and the private sector. We must urgently scale up our efforts to avert new HIV infections and provide care and treatment to people living with HIV to materialise our commitment of ending AIDS in India by 2030.

A central goal of the plan is to step up efforts to reduce new HIV infections in India at a much faster rate. This will require adoption of new locally relevant modus operandi, because declines in incidence have been stalling in recent years. We need to develop innovative approaches that can help more effectively target and tailor interventions where maximum yield and impact can be achieved to stop HIV transmission. Improved outreach and service delivery models are required to prevent HIV infections in locations and population groups that are most affected by the epidemic, including key populations and young people. This will require further strengthening the generation and use of strategic information, which has been the cornerstone of India's successful response to the epidemic so far.

Union Health Minister at the BRICS meeting in Tianjin, China, in July 2017, has recommitted to invest in improving surveillance capacity and health-care services to address HIV as well as tuberculosis and malaria. The strengthening of health systems is central to that perspective and integration of HIV into wider health systems by taking AIDS out of isolation is a must. These two are important aims that need to be pursued with greater determination if we want to eliminate AIDS as a health threat in India by 2030. These important strategies, together with those aimed at scaling up HIV prevention, care and treatment, are outlined in this new strategic plan will help India meeting its commitment to the 2016 United Nations Political Declaration on Ending AIDS as a public health threat.

(Preeti Sudan)

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## Foreword

Since the first HIV/AIDS case reported in 1986 in India, the Ministry of Health and Family Welfare, Government of India, has made significant progress in containing the spread of the disease with evidence based policy, strategic directions, funding to establish services for HIV prevention, treatment and care continuum for people living with and affected by AIDS including key affected groups such as Sex Workers, Injection Drug Users, Men who have Sex with Men, Transgender and bridge populations who are at risk of acquiring HIV infection. The National AIDS Control Organisation (NACO) provided commendable leadership that led to 'game changing' milestones that include averting new infections among key affected populations by more than 60% and public health sector initiating free therapy with over one million persons who are currently living with HIV on Antiretroviral treatment (ART) in the country. This exceptional response by NACO would not have been possible to achieve without meaningful engagement and partnership with a range of stakeholders between government, civil society organisations, people living with and affected by HIV, researchers and development partners and the private sector.

The National Strategic Plan for HIV/AIDS and STIs 2017-2024 has been designed keeping global and national commitments made by the Ministry of Health and Family Welfare at various platforms in the past. The new HIV estimates from different sources like HIV Sentinel Surveillance (HSS), Integrated Biological Behavioural Surveillance (IBBS) and programme data will inform the strategies and operational guidelines for NACP-V moving forward in view of Ending AIDS by 2030.

While significant progress has been made in reversal of the epidemic, challenges may still come in our way and I am sure, joint efforts with renewed commitments and passion, we can collectively achieve common programmatic goals and target that we have set for ourselves to reach by 2024 as envisaged in the National Strategic Plan. I am hopeful that stakeholders involved in this process of designing an evidence based strategic plan. I am hopeful that stakeholders involved in this process of designing an evidence based strategic document will subscribe and recommit to work to reach the sustainable development goals of ending HIV/AIDS as a public health threat by 2030.

(Sanjeeva Kumar)



सत्यमेव जयते

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### Message

Three decades of joint work by Government of India and partners to respond to HIV/AIDS in India have produced remarkable results. Since 2000 there has been a 66% reduction in New infections; and a 54% decrease in AIDS-related deaths since 2007. Despite these successes, a lot of the work remains to be done to end AIDS in India. We should not let the success of NACP adversely affect the programme.

We have reached a critical junction which requires bold efforts of attain 90-90-90 targets by 2020. Not only intensified prevention efforts are needed to accelerate stagnating reductions in new HIV infections, we also need to ensure that at least ninety percent of People Living with HIV know their status, ninety percent of them are enrolled in treatment so that viral load suppression can be achieved, and the HIV virus is prevented from spreading. Unless we manage to further curb new HIV infections and avert AIDS-related deaths at much higher rates, we will not be able to end the epidemic by 2030, which is our final goal.

To meet the END AIDS targets by 2030, we must start thinking 'out of the box' and foster innovations which are cost effective and scalable, because a 'business as usual' approach is not going to work. Human behaviour is at the forefront of this epidemic. Evidence shows us that India's epidemic has grown much more complex as HIV risk and vulnerabilities are rapidly changing. Hence, our response needs to be much more strategically tailored to meet the needs arising in different geographical areas and population groups. While focusing on the visible populations, we also need to bring into the fold those who are hard-to-reach and invisible. In this context, a decentralised and bottom-up programming approach is needed more than ever to address the varying drivers of the epidemic and halt the spread to HIV. Differentiated prevention and care and treatment models need to be developed based on a sound analysis of the situation in each local context. Synergised and concerted efforts are the need of the hour.

The National Strategic Plan for HIV/AIDS and STIs 2017-2024 provides a solid framework to tailor the response to local needs based on context-specific evidence to realise an AIDS free India. It reaffirms our vision to realise the 'Three Zeros' - zero new infections, zero AIDS-related deaths and zero discrimination. This plan shall guide our joint efforts in the next seven years to fast-track the response to AIDS in India. It needs to be used as a framework at every level to accelerate efforts to end AIDS and help us realise our planned outcomes. The National AIDS Control Organization remains committed to assist all stakeholders with the implementation of this Plan to garner optimal outcomes in each specific setting. We count on you all to join our efforts under this Plan which will pave the way to realize our vision of an AIDS-free India. We need to be the harbingers in achieving the global targets and goals.

  
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अपनी एचआईवी अवस्था जानें, निकटतम सरकारी अस्पताल में मुफ्त सलाह व जांच पाएं  
Know Your HIV status, go to the nearest Government Hospital for free Voluntary Counselling and Testing



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## PREFACE

"Paving the Way for an AIDS free India" is National AIDS Control Programme's (NACP) National Strategic Plan for HIV/AIDS and STIs 2017-2024. The process began with the Mid-Term Appraisal (MTA) of NACP-IV in 2016 and ended with a series of consultations in 2017. This plan sets NACP on an ambitious trajectory for ending AIDS by 2030.

The National Strategic Plan (NSP) has taken into account the gains made by India through evidence based programming over the last two decades, the new HIV and other inclusive laws and policies that have come into effect. The NSP recognises the need for diversified approach, stepping up prevention, reaching the unreached and emerging at-risk populations including workplaces and prisons. The new policies of community based testing (CBT) and 'Test and Treat' have been interwoven to give impetus for achieving prevention and treatment targets.

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I sincerely hope that with all your support, NACO will continue to uphold its commitment to end AIDS epidemic by 2030.

**(Dr. Kuldeep Singh Sachdeva)**

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# ACRONYMS AND ABBREVIATIONS

<b>AAP</b>	Annual Action Plan
<b>ACSM</b>	Advocacy, Communication and Social Mobilisation
<b>AEF</b>	AIDS Effectiveness Framework
<b>AEP</b>	Adolescent Education Programme
<b>AIC</b>	Air borne Infection Control
<b>AIDS</b>	Acquired Immune Deficiency Syndrome
<b>ANC</b>	Antenatal Care
<b>ANHI</b>	Annual New HIV Infections
<b>ANM</b>	Auxiliary Nurse Midwife
<b>ARD</b>	AIDS Related Deaths
<b>ARSH</b>	Adolescent Reproductive and Sexual Health
<b>ART</b>	Antiretroviral Therapy
<b>ARTC</b>	Antiretroviral Therapy Centre
<b>ARV</b>	Antiretroviral
<b>BCC</b>	Behaviour Change Communication
<b>BCSU</b>	Blood Component Separation Unit
<b>BMGF</b>	Bill and Melinda Gates Foundation
<b>BP</b>	Bridge Population
<b>BSS</b>	Behaviour Surveillance Survey
<b>BSD</b>	Basic Services Division
<b>BTS</b>	Blood Transfusion Services
<b>CABA</b>	Children Affected by AIDS
<b>CBNAAT</b>	Cartridge Based Nucleic Acid Amplification Test
<b>CBO</b>	Community Based Organisation
<b>CDSCO</b>	Central Drugs Standard Control Organisation
<b>CHC</b>	Community Health Centre
<b>CLHIV</b>	Children Living with HIV
<b>CMIS</b>	Computerized Management Information System
<b>CPMFS</b>	Computerized Project Financial Management System



<b>CoE</b>	Centre of Excellence
<b>CSC</b>	Community Support Centre
<b>CSIR</b>	Council of Scientific and Industrial Research
<b>CSO</b>	Civil Society Organisation
<b>CSR</b>	Corporate Social Responsibility
<b>CSS</b>	Central Sector Scheme
<b>CST</b>	Care, Support and Treatment
<b>DADU</b>	Data Analysis and Dissemination Unit
<b>DAPCU</b>	District AIDS Prevention and Control Unit
<b>DBS</b>	Dried Blood Spot
<b>DBT</b>	Department of Bio-technology
<b>DGHS</b>	Directorate General of Health Services
<b>DIC</b>	Drop-in Centre
<b>DLBB</b>	District Level Blood Bank
<b>DSRC</b>	Designated STI/RTI Clinics
<b>DST</b>	Departments of Science and technology
<b>DTHO</b>	District Tuberculosis and HIV Officer
<b>DTO</b>	District Tuberculosis Officer
<b>ECS</b>	Electronic Clearance Service
<b>ELISA</b>	Enzyme Linked Immunosorbent Assay
<b>EQAS</b>	External Quality Assurance System
<b>FBO</b>	Faith Based Organisation
<b>FEFO</b>	First Expiry First Out
<b>FIDU</b>	Female Injecting Drug User
<b>FMI</b>	Financial Management Indicators
<b>FSW</b>	Female Sex Worker
<b>GAM</b>	Global AIDS Monitoring
<b>GARPR</b>	Global AIDS Response and Progress Reporting
<b>GIPA</b>	Greater Involvement of People Living with HIV
<b>HBV</b>	Hepatitis B Virus
<b>HCV</b>	Hepatitis C Virus



<b>HCTS</b>	HIV Counselling and Testing Services
<b>HIV</b>	Human Immunodeficiency Virus
<b>HMIS</b>	Health Management Information System
<b>HRG</b>	High Risk Group
<b>HR</b>	Human Resource
<b>HSS</b>	HIV Sentinel Surveillance
<b>HTS</b>	HIV Testing Services
<b>IBBS</b>	Integrated Biological and Behavioural Surveillance
<b>ICMR</b>	Indian Council of Medical Research
<b>ICTC</b>	Integrated Counselling and Testing Centre
<b>IDA</b>	International Development Assistance
<b>IDU</b>	Injecting Drug User
<b>IEC</b>	Information, Education and Communication
<b>IH</b>	Immuno-Haematology
<b>IMS</b>	Inventory Management System
<b>IPV</b>	Intimate Partner Violence
<b>IS</b>	Institutional Strengthening
<b>IT</b>	Information Technology
<b>KP</b>	Key Population
<b>KPI</b>	Key Performance Indicators
<b>LAC</b>	Link ART Centres
<b>LFA</b>	Legislative Forum on AIDS
<b>LFU</b>	Loss to Follow Up
<b>LWS</b>	Link Worker Scheme
<b>MARP</b>	Most at Risk Population
<b>MDG</b>	Millennium Development Goal
<b>MCTS</b>	Mother Child Tracking System
<b>MDACS</b>	Mumbai District AIDS Control Society
<b>MES</b>	Monitoring and Evaluation System
<b>MoHFW</b>	Ministry of Health and Family Welfare
<b>MoRD</b>	Ministry of Rural Development

<b>MoSJE</b>	Ministry of Social Justice and Empowerment
<b>MoU</b>	Memorandum of Understanding
<b>MSDS</b>	Migrant Service Delivery System
<b>MSM</b>	Men Who Have Sex with Men
<b>MTA</b>	Mid-Term Appraisal
<b>MTCT</b>	Mother to Child Transmission
<b>NABL</b>	National Accreditation Board for Testing and Calibration Laboratories
<b>NAC</b>	National AIDS Committee
<b>NACB</b>	National AIDS Control Board
<b>NACO</b>	National AIDS Control Organisation
<b>NACP</b>	National AIDS Control Programme
<b>NACSP</b>	National AIDS Control Support Project
<b>NARI</b>	National AIDS Research Institute
<b>NBC</b>	National Blood Cell
<b>NBTC</b>	National Blood Transfusion Council
<b>NCA</b>	National Council on AIDS
<b>NDPS</b>	Narcotics Drugs and Psychotropic Substances (Amendment) Act
<b>NDAP</b>	National Data Analysis Plan
<b>NERO</b>	North East Regional Office
<b>NFHS</b>	National Family Health Survey
<b>NGO</b>	Non-Governmental Organisation
<b>NHM</b>	National Health Mission
<b>NHRP</b>	National HIV/AIDS Research Plan
<b>NHSRC</b>	National Health Systems Research Centre
<b>NIB</b>	National Institute of Biologicals
<b>NIIHAR</b>	Network of Indian Institutions for HIV/AIDS Research
<b>NRFS</b>	NACO Research Fellowship Scheme
<b>NRL</b>	National Reference Laboratory
<b>NSEP</b>	Needle Syringe Exchange Programme
<b>NSP</b>	National Strategic Plan
<b>NSSO</b>	National Sample Survey Organisation



<b>NTSU</b>	National Technical Support Unit
<b>NYKS</b>	Nehru Yuva Kendra Sangathan
<b>OI</b>	Opportunistic Infections
<b>OST</b>	Opioid Substitution Therapy
<b>PCR</b>	Polymerase Chain Reaction
<b>PHC</b>	Primary Health Centre
<b>PLHIV</b>	People Living with HIV
<b>PoC</b>	Point of Care
<b>PPTCT</b>	Prevention of Parent to Child Transmission
<b>PSCM</b>	Procurement and Supply Chain Management
<b>PSU</b>	Primary Sampling Units
<b>PT</b>	Panel Testing
<b>PWID</b>	People Who Inject Drugs
<b>QMS</b>	Quality Management System
<b>QSE</b>	Quality System Essentials
<b>RBTC</b>	Regional Blood Transfusion Centre
<b>RC</b>	Regional Coordinator
<b>RMNCH+A</b>	Reproductive, Maternal, Newborn, Child and Adolescent Health
<b>RNTCP</b>	Revised National Tuberculosis Control Programme
<b>RPR</b>	Rapid Plasma Reagin
<b>RRC</b>	Red Ribbon Club
<b>RSTRRL</b>	Regional STI Training Referral and Research Laboratories
<b>RTI</b>	Reproductive Tract Infections
<b>SACEP</b>	State AIDS Control Evaluation Protocol
<b>SACS</b>	State AIDS Control Society
<b>SBTC</b>	State Blood Transfusion Council
<b>SCs</b>	Sub-Centres
<b>SCA</b>	State Council on AIDS
<b>SDG</b>	Sustainable Development Goal
<b>SIMS</b>	Strategic Information Management System
<b>SIMU</b>	Strategic Information Management Unit

<b>SME</b>	Small and Medium Enterprises
<b>SoE</b>	Statement of Expenditures
<b>SRL</b>	State Reference Laboratory
<b>STD</b>	Sexually Transmitted Disease
<b>STI</b>	Sexually Transmitted Infection
<b>STRC</b>	State Training Resource Centre
<b>TAT</b>	Turn Around Time
<b>TG</b>	Transgender
<b>TI</b>	Targeted Intervention
<b>TRG</b>	Technical Resource Group
<b>TSC</b>	Technical Sub Committee
<b>TSG</b>	Technical Support Group
<b>TSU</b>	Technical Support Unit
<b>TTI</b>	Transfusion Transmissible Infection
<b>UNAIDS</b>	Joint United Nations Programme on HIV/AIDS
<b>UNDP</b>	United Nations Development Programme
<b>UNGASS</b>	United Nations General Assembly Special Session
<b>UNICEF</b>	United Nations Children's Fund
<b>USAID</b>	United States Agency for International Development
<b>UT</b>	Union Territory
<b>VL</b>	Viral Load
<b>VBD</b>	Voluntary Blood Donation
<b>VHS</b>	Voluntary Health Services
<b>VNRBD</b>	Voluntary Non-Remunerated Blood Donation
<b>WCD</b>	Women and Child Development
<b>WHO</b>	World Health Organization



# EXECUTIVE SUMMARY

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The Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) were first reported in India in 1986. Since then, the Ministry of Health and Family Welfare, Government of India, has led the HIV/AIDS response, inclusive of advocacy, policy, strategic guidance, funding, and service provision for HIV prevention, treatment and care for both, people at risk of or living with HIV. Three decades on, the national response resulted in significant achievements of 66% reduction in new infections since 2000 and 54% reduction in AIDS-related deaths since 2007. The history of the HIV response in India is based on an exceptional dialogue and collaboration between government, communities, people living with and affected by HIV, civil society organisations (CSOs), academics and researchers, development partners, private sector, and parliamentarians.

In June 2016, the Minister of Health and Family Welfare reiterated the country's commitment at the United Nations' *High-Level Meeting on AIDS* towards the goal of '*ending the AIDS epidemic as a public health threat by 2030*', inclusive of the *Joint United Nations Programme on HIV/AIDS* (UNAIDS) Fast Track targets for 2020 as well as in line with the *Sustainable Development Goals* (SDGs) for 2030.

Having already succeeded in achieving the targets of the *Millennium Development Goals* (MDGs) by 2015 (over 50% reduction in annual new HIV infections and AIDS-related deaths), the *National AIDS Control Organization* (NACO) is now building on lessons learnt to revise the national approach to reach '*the last mile*' – in order to ensure a more effective, sustained and comprehensive coverage of AIDS-related services.

This approach has been articulated in the *National Health Policy* and the implementation framework thereof adopted in 2017 and will be implemented by the NACO through a seven-year *National Strategic Plan on HIV/AIDS and STI, 2017-24*. This *National Strategic Plan* (NSP) will herald the country to the midpoint of the 2030 goals. The next seven years are, therefore, critical and investments made now will result in substantive gains towards '*Ending of AIDS*'.

The vision of the NACO is that of '*Paving the way for an AIDS free India*' through '*attaining universal coverage of HIV prevention, treatment to care continuum of services that are effective, inclusive, equitable and adapted to needs*'. The goals remain those of the '*Three Zeros*' - i.e. *zero new infections, zero AIDS-related deaths and zero discrimination* which form the basis of this strategic plan.

By 2020, the focus of the national programme will be on achieving the following fast track targets:

- (i) *75% reduction in new HIV infections,*
- (ii) *90-90-90: 90% of those who are HIV positive in the country know their status, 90% of those who know their status are on treatment and 90% of those who are on treatment experience effective viral load suppression,*
- (iii) *Elimination of mother-to-child transmission of HIV and Syphilis, and*
- (iv) *Elimination of stigma and discrimination*

By 2024, the further achievements envisaged are:

- (i) 80% reduction in new HIV infections,
- (ii) Ensuring that 95% of those who are HIV positive in the country know their status, 95% of those who know their status are on treatment and 95% of those who are on treatment experience effective viral load suppression

To this effect, two key achievements in early 2017 to 'Ending of AIDS by 2030' include the enactment of the 'HIV/AIDS Bill' as a law protecting the rights of people living with and affected by HIV as well as the announcement and implementation of the 'Test and Treat' policy in line with global guidelines.

## Background


With an HIV prevalence of 0.26% in the adult population, India has an estimated 2.1 million People living with HIV (2015). Bio-behavioural surveys confirm that HIV prevalence is high or 'concentrated' among 'key populations' (KPs) who have unprotected sexual contacts with multiple partners or who engage in injecting drug use. These populations include female sex workers (FSW), men who have sex with men (MSM), hijra/transgender (TG), people who inject drugs (PWID), long-distance truck drivers and migrants. The national averages of the key population varies between 2.2 and 9.9 HIV prevalence in 2014-15. The occurrence of HIV infections also varies across the State/UTs as well as the urban-rural divide. In addition, young women at childbearing age are also at higher risk of infection and the source of onward transmission to their infants, during birth, labour and through breast feeding.

Underlying the above are social, economic and access to health care determinants that interact with drivers of the epidemic and account for greater risks and vulnerabilities, including economic status and the search for livelihood, limited education and information, gender status and identities, social marginalisation, and discrimination and violence. In addition, aspects of changing generational attitudes and practices, premarital sex, travel, information technology (IT), mobile phones and social media, all have consequences on exposure to risk and the capacity to protect oneself.

Although there was a 66% decline in new infections from 2000 to 2015, this trend has largely flat-lined between 2010 and 2015. In other words, the NACO must accelerate the HIV response so as not to roll back earlier gains and ensure a substantive decline in new infections to END AIDS. There has also been a fall in estimated number of AIDS-related deaths by 54% largely due to increasing coverage of ART, and this together with reductions in new HIV infections, has contributed to stabilising the number of people living with HIV. With slowing declines in new infections, as witnessed in the past few years, one can expect to see an increase in the number of people living with HIV, unless the response is adequately fast-tracked and, both, new infections and AIDS-related deaths are averted at higher rates.

In addition to HIV, there are various co-infections and co-morbidities, including other Sexually Transmitted Infections (STIs), Reproductive Tract Infections (RTIs), Tuberculosis (TB), Hepatitis B and C, and cervical cancer, that will be addressed in the implementation of the NSP. Responding to these related epidemics and health consequences requires a greater convergence and integration of the NACO and its State/UT and district-level units with the *National Health Mission* (NHM) and specific communicable diseases programmes.

A focus on consolidation of convergence with reproductive health, maternal and child health, and adolescent health departments will be fundamental to this NSP. Equally, issues related to disease



surveillance, information management systems, operational research and procurement will be further aligned across the health system and with relevant departments. Mainstreaming of the HIV response in relevant ministries for enhanced social protection and entitlements to address specific vulnerabilities are also included in this NSP.

The critical interventions and supportive components of the *National AIDS Control Programme* (NACP) include: targeted interventions among the key populations, STI/RTI management, prevention of parent-to-child transmission (PPTCT), HIV testing and counselling, comprehensive care, support and treatment, laboratory services, safe blood transfusion, advocacy, communication and social mobilisation (ACSM), monitoring, evaluation and surveillance, research, and finance, procurement and human resource management.

## Strategic Priorities

Based on evidence from surveillance, programme monitoring and feedback from the concerned populations, the national response will accelerate HIV prevention in key and at-risk populations to reduce HIV infection. This includes a differential approach and upgrading of the package of services to make it more relevant to specific populations and local settings. The package includes a combination of interventions as well as a greater focus on the quality of services. The proposed strategies in this NSP are scaling-up targeted interventions, and designing appropriate response mechanism to address other 'at risk' populations, outreach through social networks, community-based Screening, and specific points of integration with sexual and reproductive health. Community ownership and engagement will be stepped up during this period. This NSP will also focus on further data analysis and triangulation of evidence to draw epidemiological and programmatic conclusions. With regards to young people, NSP proposes a multi-pronged approach through communication, sexual and reproductive health education and greater convergence with the NHM adolescent programme.

This NSP envisages close linked interventions within the continuum of prevention-testing-treatment-care to include expanding quality assured HIV testing with universal access to comprehensive HIV care. With regard to testing, or the first '90', this NSP will focus on differential strategies for diverse key and at-risk populations and geographies. It will be achieved through a mix-model, including facility-based testing, mobile centres, community-based testing for key and at-risk populations and introduction of self-testing. The strategy will be inclusive of public and private health care, and seek greater convergence with the NHM and other sectors with regard to wider public health and social aspects.

With the adoption of *'Test and Treat'*, a substantial expansion of first, second and third line treatment and viral load testing scale-up will be planned, respectively for the second and third '90'. However, this scale up will require ensuring an improved cascade, linkages and reduction in loss to follow-up. The NSP recognises the role of communities in terms of peer outreach and counselling to improve the linkage and retention. Notable innovations like introduction of reduced frequency of drug dispensing as well as the utilisation of Care and Support Centres (CSC) in the dispensing of medicines are envisaged in this NSP. In terms of logistics, procurement and supply chain management (PSCM) as well as human resources, a greater integration within the health care system is proposed in the NSP. Hepatitis B and C as well as other related co-infections will also be treated at ART centres.

The elimination of mother-to-child transmission of HIV and Syphilis has to be achieved by 2020 as per national and global commitments. Since 2013-14, exceptional progress has been made in policy, strategy



SDG Goal No. 3

### Vision

Paving the way for an AIDS Free India

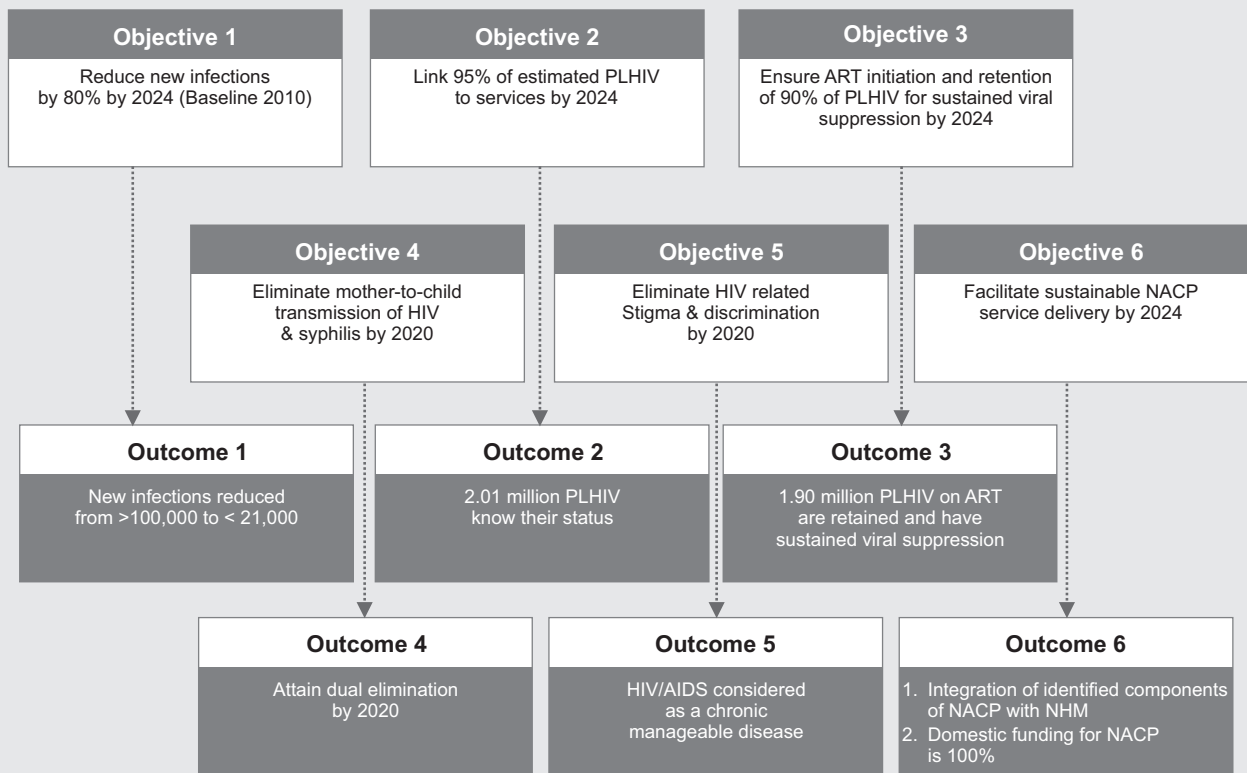
### Mission

Attain universal coverage of HIV prevention, treatment to care continuum of services that are effective, inclusive, equitable and adapted to needs

### Goal

Achieving zero new infections, zero AIDS related deaths and zero discrimination

Fast Track Targets



- Priority 1:** Accelerating HIV prevention in 'at risk group' and key population
- Priority 2:** Expanding quality assured HIV testing with universal access to comprehensive HIV care
- Priority 3:** Elimination of mother to child transmission of HIV and syphilis
- Priority 4:** Addressing the critical enablers in HIV programming
- Priority 5:** Restructuring the strategic information system to be efficient and patient-centric



Fast-Track Approach



and implementation on this. Nevertheless, this NSP will accelerate the objective of reaching elimination of mother-to-child transmission by 2020 across all the State/UTs. Implementation of testing and referral to treatment for pregnant women will be pursued in a coordinated manner in the public and private sectors through antenatal care centres (ANC). Further convergence points will be systematically promoted through other health campaigns to ensure coverage.

The NSP recognises and re-emphasises the sustenance and enhancements of ‘critical enablers’ comprising governance, laboratory services, human resources, supply chain, community engagement, discrimination-free environment, social protection and partnerships. It envisages continuation and augmentation of IT enabled, patient centric and contemporary monitoring, evaluation and surveillance framework for not only describing the epidemic and its drivers, but also to tailor responses. Capacity building of front line workers and managers on Monitoring and Evaluation, and Surveillance (MES) functions as well as IT capacity enhancement, in terms of man as well as systems, will be focussed on through the NSP to maximize efficient resource utilisation. This NSP also reaffirms the priority of translational research with a vision to enhance knowledge and evidence base for the HIV response for an accelerated progress towards achieving Ending of AIDS by 2030.

For all the above priorities, the NACO will ensure that other sectors, civil society and communities participate in the design, implementation as well as in monitoring of programmes. Both people living with and affected by HIV or those at-risk will contribute at various points in the delivery of the continuum of services. Most notably, it is envisaged that the members of the key populations will provide leadership, undertake outreach as well as other functions as part of the ‘Targeted Interventions’ service provision. People living with HIV will ensure various advocacy roles as well as lead in their contribution to CSCs. This NSP anticipates the functionality and linkages in the delivery of services through engagement of the community in various functions – outreach, peer education, counselling, referral, home visits, social work, advocacy, etc.

**The broad strategies for prevention, testing and treatment are summarised in the figure below.**

PREVENT	TEST	TREAT
<ul style="list-style-type: none"> <li>• Increased coverage for improved prevention, testing and care linkages</li> <li>• Systematic evidence generation to reach 'at risk' population</li> <li>• Retain KP with adequate and appropriate services</li> </ul>	<ul style="list-style-type: none"> <li>• Geo-prioritise differential approach</li> <li>• Use graded approach to increase HIV testing</li> <li>• Pilot and scale up newer modalities of testing (e.g. CBT, Self Testing, etc.)</li> <li>• Active use of IEC to increase demand for HIV testing</li> </ul>	<ul style="list-style-type: none"> <li>• Accelerate uptake of ART</li> <li>• Improve ART retention by engaging community/NGOs/private sector.</li> <li>• Ensure supportive environment for achieving universal access to ART</li> <li>• Address co-morbidities of HIV infection to lower mortality and morbidity</li> </ul>

This NSP will ensure sustainability through greater integration with the NHM and hence, efficient resource utilisation. It will result in a more efficient use of resources existent under health, including human resources, infrastructure, service centres, supply-chain and information systems. HIV integration with health services will facilitate people living with HIV, key and at-risk populations expanded access to health care. At the same time, greater convergence is foreseen with other Ministries and Departments based on 'shared responsibility' principle. This will enable reaching out to those who are unreached, and create conditions for an enabling environment. This NSP also focusses on collaboration with private sector in an efficient manner. The strategic design and operational mechanics for integration at the State/UT level in a phased approach - in the medium and long term – will be developed and a monitoring plan implemented.

Lastly, this NSP focusses on innovation in service design, delivery and finances for ensuring progress towards the 'last mile'. Innovation is understood not only in terms of local adaptation of programme design and implementation, but also in financing, optimal ways of collaboration with the private sector, use of newer communication mediums, such as social media platforms, to reach out to a wider population in a less resource intensive way, innovation for easing social protection uptake, and following-up with those in need across the continuum of care.

## Budget

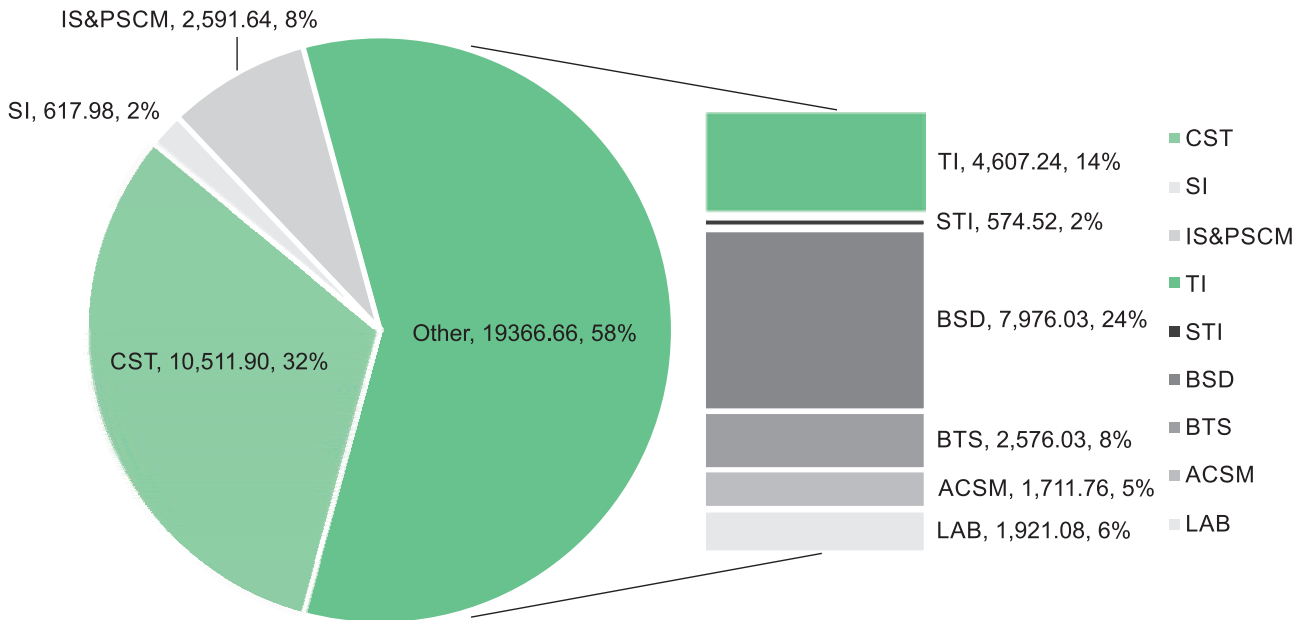
As outlined in this NSP, an accelerated approach is proposed to achieve the global targets for 2020 and 2030. This approach, will involve a paradigm shift through innovations and policy changes, including the adoption of Test and Treat for all people living with HIV. To this effect, costing of the NSP was done using a bottom-up costing mechanism, wherein the actual costs of resources plus the performance were factored in. The unit costs were calculated and worked backwards using the targets set by the NSP. The budget required is summarised in the table.

**Table: NSP year wise and division wise summary budget estimates (In Crores), 2017-24**

DIVISION	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Grand Total	In %
<b>TI</b>	523.25	580.69	638.93	665.04	697.84	732.52	768.96	4,607.24	14.0
<b>STI</b>	70.04	83.80	82.28	85.38	83.68	82.61	86.74	574.52	2.0
<b>BSD</b>	629.97	883.32	991.05	1,133.06	1,255.74	1,412.50	1,670.39	7,976.03	24.0
<b>BTS</b>	236.33	286.68	425.50	405.74	349.73	425.99	446.07	2,576.03	8.0
<b>ACSM</b>	226.18	204.34	243.56	229.22	265.68	252.72	290.06	1,711.76	5.0
<b>LAB</b>	212.19	180.46	244.28	282.74	314.64	333.71	353.06	1,921.08	6.0
<b>CST</b>	904.82	1,261.43	1,412.09	1,523.48	1,649.29	1,798.21	1,962.58	10,511.90	32.0
<b>MES</b>	28.01	45.12	65.86	62.77	30.58	63.85	54.40	350.60	1.0
<b>Research</b>	37.94	44.11	24.54	37.31	39.17	41.13	43.19	267.38	1.0
<b>PSM</b>	17.99	24.64	26.13	27.57	29.65	30.98	32.40	189.36	1.0
<b>IS</b>	294.98	309.10	326.45	340.28	359.78	375.16	396.53	2,402.28	7.0
<b>Grand Total</b>	<b>3,181.69</b>	<b>3,903.68</b>	<b>4,480.66</b>	<b>4,792.60</b>	<b>5,075.80</b>	<b>5,549.39</b>	<b>6,104.39</b>	<b>33,088.19</b>	<b>100.0</b>



Overall, around 59% of the proposed budget requirement is for prevention, while about one third (32%) is for care, support and treatment. The prevention budget includes 14% for TI, 2% for STI, 24% for BSD, 8% for BTS, 5% for ACSM and 6% for laboratories. Around 8% of the total budget estimates is towards the management functions (inclusive of PSCM) while the remaining 2% of the total estimates is for strategic information management. The budget distribution is summarised in the figure below.



## Conclusion

*Over the past fifteen years, India has experienced a gradual decline in estimated new HIV infections, prevalence and mortality due to AIDS-related causes. However, a comprehensive and sustained progress is now required to walk ‘the last mile’ in terms of the commitment made to ‘end the AIDS epidemic as a public health threat’ by 2030 under the SDGs. India has already met the goal set on AIDS-related MDGs from 2000 to 2015, and it has all the pre-requisites in place to reach sub-objective 3.3 including the ending of AIDS by 2030 as defined under the SDG 3. To this effect, the NACO, in the Ministry of Health and Family Welfare has developed a seven-year National Strategic Plan on HIV/AIDS and STI for India. This would result in reduction of new HIV infections and will eliminate mother-to-child transmission of HIV and Syphilis, ensuring a stigma and discrimination free environment at the same time.*

### 1.1 Background

India's response to the Acquired Immune Deficiency Syndrome (AIDS) began 30 years ago. The first Human Immunodeficiency Virus (HIV) infection was detected in the city of Chennai in 1986 while the first case of AIDS identified soon after in the city of Mumbai. Initial predictions of high number of infections, were replaced with the country becoming an example of how the epidemic can be reversed. An HIV prevention focus on Key Populations<sup>1</sup> (KPs), access to low-cost high quality antiretroviral (ARV) generic medicines, geographical prioritisation based on epidemiological evidences, community-centric approaches, a phased but rapid scale-up of interventions over time, and engagement of diverse stakeholders including civil society and people living or affected with HIV, have all been identified as essential features of the Indian response to HIV-AIDS

India is in its fourth phase of National AIDS Control Programme (NACP) presently. The NACP IV was launched in 2012 with two principal objectives: First, the programme aimed at a 50% reduction in new infections (using 2007 as the baseline) and, second, provision of comprehensive care and support to people living with HIV (PLHIV) as well as treatment services for all those that meet the eligibility criteria based on national antiretroviral therapy (ART) guidelines. A Mid-Term Assessment (MTA) of NACP IV, undertaken in 2016, has suggested some thrust areas for the remaining period.

- National AIDS Control Board and autonomous National AIDS Control Organisation (NACO) set up
- Awareness-generation on HIV/AIDS and STIs rolled out
- HIV Surveillance systems set up
- Safe blood transfusion services set up
- Focussed preventive services for key population initiated and
- Voluntary Counselling and Testing (VCTC) Services launched

#### *Box 1: Key Milestones of NACPI*


- State AIDS Control Societies set up
- PPTCT Services launched
- Free Anti-Retroviral Therapy launched in 2004
- Targeted Interventions expanded
- VCTC services expanded

#### *Box 2: Key Milestones under NACP II*

- 1821 TIs set up
- 159 blood component separation units
- 15,538 ICTCs including F-ICTC
- 355 ART centres
- 516,412 PLHIV on ART

#### *Box 3: Key Milestones under NACP III*

<sup>1</sup> Key population includes Female Sex Workers, Men who have Sex with Men, Hijra/Transgender, Injecting Drug Users, Migrants and Truckers



## Thrust areas identified during NACP-IV MTA

1. Adapt TI strategies to match changing dynamics of bridge and key populations
2. Improve yield of detection through strong linkages with other components, roll out newer strategies including community based Screening and geo-prioritisation
3. Strengthen STI programme management through involvement of apex centres, rational use of counsellors, and ensure timely and adequate supply of essential commodities. Target efforts towards elimination of parent to child transmission of HIV and Syphilis
4. Strengthen the functioning of NBTC & SBTC in all States through provision of adequate resources
5. Consider revising the current eligibility criterion for treatment initiation from CD4 of 500 and introduce 'Test and Treat' for key population and sero-discordant couples where the system is robust to deliver them.
6. Strengthen SIMS as an effective integrated tool for programme management and ensure linkages across all programme components for effective individual-level case tracking and retention.
7. Revitalise IEC strategies by shifting to interactive formats, harnessing channels for specific audience segments such as migrants & MSM, upgrading the IEC material and making it relevant to the changing context and new programme guidelines
8. Focus on institutional strengthening – filling vacancies, capacity building and strengthening supervision to reinvigorate the program
9. Streamline financial management at SACS and the peripheral units for effective transfer and utilisation of financial resources.
10. Undertake a comprehensive upliftment of procurement and supply chain functions under NACP.

In addition to the above recommendations, the MTA also recommended addressing structural drivers of the epidemic that increase the risk or act as barriers for access to services, since much of the attrition along both the prevention and treatment cascade is attributable to structural factors that are amenable to enabling interventions including effective biomedical, behavioural and structural interventions. This is in alignment with the international best practices. *“The fundamental shift that needs to happen in the next phase of the response is to better contextualise it to people’s needs and contexts, optimally use innovation and address the structural drivers of this epidemic (sic.)”*. UNAIDS–Lancet Commission: *Defeating AIDS—Advancing Global Health, 2015, p 197*

India is a subcontinent with a large and growing population<sup>2</sup> and managing multiple challenges in its pathway to development including health (Table 1). India’s National Health Policy (NHP) 2017 aims to *‘attain highest possible level of health and well-being for all ages through a preventive and promotive health care’*. While extensive efforts have been made to create an enabling environment, work still needs to continue in addressing stigma and discrimination; continuing and expanding the implementation of human rights for PLHIV; decreasing gender inequality and violence against women as well as harmful norms of ‘masculinity’ and ‘femininity’. Similar efforts are required:

1. To reduce poverty and expand livelihood options to diminish poverty linked vulnerability
2. To work on reducing the age of consent in order to enhance access to risk reduction and harm reduction services

<sup>2</sup> <http://www.indiaonlinepages.com/population/india-current-population.html>.

- To change social attitudes and the criminalisation of sex work (SW), men who have sex with men (MSM) and injecting drug users (IDU)/people who inject drugs (PWID).

**Table 1: Select socio-demographic indicators, India**

Indicator	Value
Population (Est. 2017)	1.34 billion*
Adult literacy rate (2011)	74.04%**
Pop. below poverty line (2011, The World Bank, MMRP)	12.4%\$
Percentage of households where private sector is the primary source of health care (2006)	70% (Urban)^ 68% (Rural)^
Maternal Mortality (per 100,000 LBs) Ratio	167#

Source: \* [www.indiaonlinepages.com/population/india-current-population.html](http://www.indiaonlinepages.com/population/india-current-population.html); \*\*RGI Census 2011; \$ The World Bank Report 2014, MMRP; ^ NFHS 3, 2006; # SRS Bulletin 2016 (data for 2011-13)

India's AIDS control programme is at an inflection point. Need based programming and scale-up has led to a decrease in the number of new HIV infections. By 2015, an estimated 32% reduction in annual new infections was reported as compared to 2007. Similarly, the sero prevalence of syphilis has also declined from 2.7% to 0.3% among pregnant women and below 5% among HRGs as compared to 2007. STIs like Chancroid and Donovanosis were rarely reported, suggesting that they are nearing the elimination stage. There is now a window of opportunity to make a major thrust through effective and innovative approaches as well as steady financing to put the programme on the pathway to 'END AIDS by 2030'. However, without a focussed approach there is a possibility of increasing incidence of HIV cases<sup>3</sup>.

## 1.2 Changing Environment for HIV/AIDS and STI Programming

### Structural factors affecting AIDS response:

India has legislated several far-reaching laws and reforms to reduce the socioeconomic-related health risks and vulnerabilities. The Employment Guarantee Act, for example, is a major reform that has worked effectively to provide for basic employment for 100 days in a year thereby improving livelihoods and reducing migration. The Right to Information (RTI) and the Right to Education Acts have worked to increase information-sharing, transparency and to make educational opportunities more equitable and accessible. Policy changes in health approaches, such as those including health insurance, Accredited Social Health Activists (ASHAs) in rural and urban areas, assisted birth, and ambulance availability have also decreased vulnerability of the poorer people. While there has been improvement at many levels, there are several factors that are yet need to be addressed. Economic inequality, limited employment opportunities, climate change, among others have led to an increase in internal mobility and migration, increasing risks for both who move as well as those left behind. Increasing coverage of mobile phones, particularly smart phones and internet connectivity, is part of an enormously successful information, communication and lifestyle changes that also have an impact on risky behaviours<sup>4</sup>.

<sup>3</sup> <http://www.worldbank.org/en/news/feature/2012/07/10/hiv-aids-india>

<sup>4</sup> Mahapatra B, Saggurti N, Halli SS, Jain AK (2012) HIV Risk Behaviours among Female Sex Workers Using Cell Phone for Client Solicitation in India. *J AIDS Clinic Res* S1:014. doi:10.4172/2155-6113.S1-014; Rice E, Rhoades H, Winetrobe H, et al. (2012) Sexually Explicit Cell Phone Messaging Associated With Sexual Risk Among Adolescents. *Pediatrics*.

## Political and legal environment

The political environment in India is supportive to the HIV response, partly due to efforts of the community activists, civil society, United Nations and other development partners. Members of the Parliament and State Legislators have formed AIDS-focussed forums to support policy advocacy. This political support has continued to move the agenda forward and create an enabling environment for new policies and increased domestic funding. Advocacy has seen major changes in laws, including those concerning sexual harassment and domestic violence<sup>5</sup>. Such legislative changes have been occurring around violence against women especially since 2013. This has resulted in stricter laws dealing with harassment, molestation and rape, as well as increased legal protection for women in the workplace<sup>6</sup>. The changes in law have come through not only because of advocacy on health, rights and HIV but they form a part of the broader framework of laws that reduce the risk and vulnerability of women.

The law criminalising same sex partners was read down for a few years before it was reinstated by the highest court of the land. Meanwhile, the Parliament approved the Transgender Persons (Protection of Rights) Bill, 2016 which prohibits discrimination against a transgender person in areas such as education, employment and healthcare among others. It directs the Central and State/UT governments to provide welfare schemes in these areas. It also adds to their right to be recognised as a separate gender and opens pathways for 'non-discriminatory' educational and work facilities, among others.

People who inject drugs (PWID) have now benefitted from the Narcotics Drugs and Psychotropic Substances (Amendment) Act (NDPS Act) 2014. It now allows for "management" of drug dependence, legitimising opioid substitution, maintenance, and other harm reduction services in the country. Changes introduced in section 71 of the NDPS Act significantly impact the health and rights of people who regularly use drugs. People who use drugs volunteering for treatment have immunity from prosecution (section 64-A).

### 1.3 India's HIV/AIDS Prevention and Control Act, 2017

The National AIDS Prevention and Control Policy, 2002 recognised that HIV has spread to every corner of the country from urban to rural areas, from individuals practicing 'risk-behaviour' to their partners and children. It was formally adopted in 2002 under the NACP II. The main purpose of this policy was to bring in a legal sanction to prevent discrimination of PLHIV in work and social, medical and financial settings. In continuation of this policy, India initiated the drafting of an HIV-specific

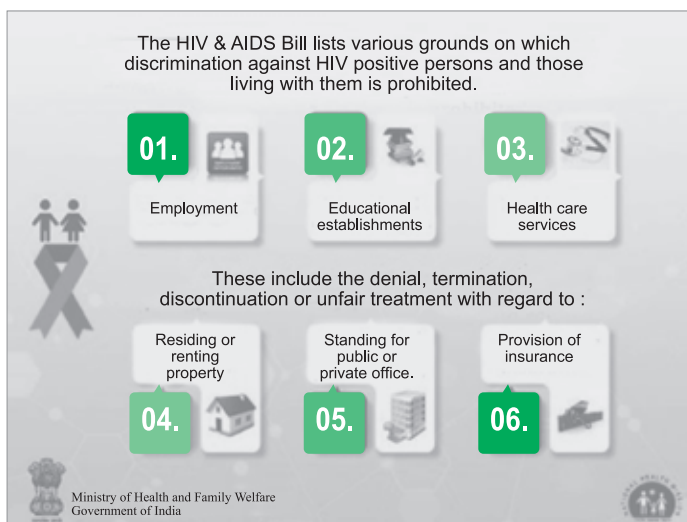


Figure 1: HIV & AIDS Act, 2017

130(4):667-673. doi:10.1542/peds.2012-0021

5 The Protection of Women from Domestic Violence Act 2005, The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013, and the Nirbhaya Act otherwise known as The Criminal Law (Amendment) Act, 2013 which provides for amendment of Indian Penal Code, Indian Evidence Act, and Code of Criminal Procedure, 1973 on laws related to sexual offences.

6 Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013. Available at <http://www.prsindia.org/uploads/media/Sexual%20Harassment/Sexual%20harrassment%20bill%20As%20passed%20by%20Lok%20Sabha.pdf>. Retrieved on 5 Apr 2017.



legislation in early 2000s. Following several iterations and consultative processes in 2014, an HIV & AIDS Bill was introduced in the Indian Parliament and was passed in 2017, which was subsequently assented to by the President of India. This law criminalises discrimination against people living with HIV/AIDS (Figure 1). Some of the salient features of this Act are:

- The requirement for HIV testing as a prerequisite for obtaining employment or accessing health care is prohibited
- Every HIV-infected or affected person below the age of 18 will have the right to live in a shared household, and enjoy household facilities
- Provision for appointment of an ombudsman by State/UT Governments to address grievances related to violation of the Act and penal action in case of non-compliance
- Provides an environment for enhancing access to health care services by ensuring informed consent and confidentiality for HIV-related testing, treatment, and clinical research. It also provides ground for penal action for any health care provider, except a physician or a counsellor to disclose the HIV positive status of a person to his or her partner
- Lists the various grounds on which discrimination against people living with HIV is prohibited such as: (1) employment; (2) educational establishments; (3) health care services; (4) residing or renting a property; (5) standing for public or private office; (6) provision of insurance.

### 1.3.1 Gender, violence and sexuality

A study – Masculinity, Intimate Partner Violence and Son Preference in India – by the International Center for Research on Women (ICRW) and the UN Population Fund (UNFPA) found that 52% of women surveyed had experienced violence during their lifetime, and 60% of the male respondents agreed to have acted violently against their wife or partner<sup>7</sup>. The study also found that men who exerted control through violence were diverse in age, level of education, place of residence and caste status. Besides physical violence, women, especially those who belong to the Dalit community, were often denied rights to the land, while their children, especially girls, are denied proper schooling and health facilities. Women's access to land, equal property rights for women, women's political participation, social security, disability, wage inequality and workplace harassment are issues that need to be deliberated and policy and attitudinal changes brought in.

Evidence indicates that gender norms can impact access to services. In addition, intimate partner violence (IPV) can affect decisions to seek testing, pursue ART initiation or other health-seeking behaviour. Women find it difficult to include their male partners in the Prevention of Parent-to-Child Transmission (PPTCT) services due to fear of consequences including violence<sup>8</sup>.

7 Decker MR, Seage GR, Hemenway D, et al. (2009) Intimate Partner Violence Functions as both a Risk Marker and Risk Factor for Women's HIV Infection: Findings from Indian Husband-Wife Dyads. *J Acquir Immune Defic Syndr*. 51(5):593-600. doi:10.1097/QAI.0b013e3181a255d6.

8 Shiradkar S, Mande S, Bapat G, Setia MS (2016) Is it time to bring the "Parent" into the prevention of parent to child transmission programmes in India? A study of trends over a 10-year period in a prevention of parent to child transmission clinic in India. *Indian J Sex Transm Dis*. 37(1):58-64. doi: 10.4103/0253-7184.176211.

### 1.3.2 Youth and adolescents

Adolescents constitute 22% of India's total population<sup>9</sup>. An analysis of HIV counselling and testing data under NACP for 2016 has indicated that 24% of all newly detected HIV infections were among young people in the age group of 15-24 years. While contraceptive use in this age group has shown an increase between the National Family Health Surveys (NFHS) i.e. NFHS-2 and NFHS-3 by more than 1% point per annum<sup>10</sup>, premarital sexual relations are also increasing simultaneously<sup>11</sup>. Eleven percent (11%) of women and 8% of men (15-24 years) who have ever had sexual intercourse reported an STI or STI symptom in 12 months preceding the NFHS-3 survey. Among men, self-reported prevalence of the two STI symptoms—abnormal bad smelling genital discharge and genital sore or ulcer—is higher among adolescents than among men in the 20-24 age group<sup>12</sup>.

In even younger age groups, adolescents between 10-13 years use a style of reasoning focusing on the present, without considering the consequences of risk behaviour. It is a growing and learning phase where peer pressure acts synergistically with "risk seeking behaviour" leading to casual sex, unsafe sex, experimentation with sexuality and substance use, potentially resulting in increased exposure to the risk of HIV transmission<sup>13</sup>.

A study indicates that for adolescents in general aged 10-19 years, only 36% of adolescent males and 20% adolescent females in India had comprehensive knowledge of HIV, at the time of this study<sup>14</sup> and 37% males and 22% females used condom at the last high-risk sex. More than one third of students in this study had no accurate understanding about the signs and symptoms of STIs other than HIV. About 30% of respondents considered HIV/AIDS could be cured, 49% felt that condoms should not be available to youth, 41% were confused about whether the contraceptive pill could protect against HIV infection, and 32% thought it should only be taken by married women<sup>15</sup>.

Where 'Adolescent Reproductive Sexual Health Education' (ARSHE) package has been introduced, poor knowledge of sexual health including STI and HIV had reduced significantly from 64.1% to 8.3% among girls and from 37.7% to 3.5% among boys<sup>16</sup>. With information technology changing the landscape for adolescents in India<sup>17</sup>, the enhanced need for Adolescent Education Programmes within the national programme further increases.

9 AIDS Epidemic in India. Available from: <http://www.aids-free-india.org/youth-adolescence/hiv-aids-youth-adolescents-intro.htm>. Retrieved on 5 April 2017

10 Parasuraman S, Kishor S, Singh SK, Vaidehi Y. (2009) A Profile of Youth in India. National Family Health Survey (NFHS-3), India, 2005-06. . [http://rchiips.org/nfhs/youth\\_report\\_for\\_website\\_18sep09.pdf](http://rchiips.org/nfhs/youth_report_for_website_18sep09.pdf)

11 Dave VR, Makwana NR, Yadav BS, Yadav S. (2013) . A Study on High-risk Premarital Sexual Behaviour of College Going Male Students in Jamnagar City of Gujarat, India, *Int J High Risk Behav Addict. Behaviour*2(3):112-6. doi: 10.5812/ijhrba.11855.

12 Naswa S, Marfatia YS. (2010) Adolescent HIV/AIDS: Issues and challenges. *Indian J Sex Transm Dis.* 31(1):1-10. doi: 10.4103/0253-7184.68993.

13 Adapted from Berman SM, Hein K. Adolescent and STDs. In: Holmes KK, editor. *Sexually Transmitted Diseases*. New York: McGraw Hill; 1999. p. 129-42

14 Available from: [http://www.unicef.org/infobycountry/india\\_statistics.html](http://www.unicef.org/infobycountry/india_statistics.html)

15 McManus A, Dhar L. (2008) Study of knowledge, perception and attitude of adolescent girls towards STIs/HIV, safer sex and sex education: (A cross sectional survey of urban adolescent school girls in South Delhi, India). *BMC Women's Health.* 8:12. doi:10.1186/1472-6874-8-12.

16 Nair, M.K.C., Paul, M.K., Leena, M.L. et al. (2012) *Indian J Pediatr* 79 (Suppl 1): 64. doi:10.1007/s12098-011-0433-x

17 Bhattarai S. Hypocrisy and hesitation surrounding sex education in Indian society. Available at <https://www.theodysseyonline.com/the-taboo-behind-sex-education-in-india>. Retrieved on 5 Apr 2017



### 1.3.3 Migration

The International Labour Organisation (ILO) puts the figure on internal migration at 300 million. Work/employment related male migration in India is common at a size of 46.4 million<sup>18</sup>. Presently, the NACO is targeting 8.64<sup>19</sup> million migrants with HIV preventive and linked health care services. A study by the NACO, supported by the United Nations Development Programme (UNDP) conducted in three districts with high migration, indicates that in northern Bihar, the odds of HIV infection were eight times higher among migrant men than in non-migrant men. In eastern Uttar Pradesh (UP) and Ganjam district in Orissa, migrant men were almost four times more likely to contract HIV than non-migrants. The study also shows that the odds of HIV infection among women from the three study areas were higher among women with migrant husbands than among women with non-migrant husbands. While the study suggests a link of HIV transmission to migrants, extramarital sexual behaviours, the vulnerability of the spouse who stays back have not yet been explored. However, data from the National HSS has indicated higher prevalence among pregnant women who had a migrant spouse than those who did not in select states<sup>20</sup>. Among migrants, higher proportions of returned migrants than active migrant men also reported extramarital sex locally<sup>21</sup>.

In India, climatic changes<sup>22</sup>, education, communication facilities and expanding urbanisation also play a key role in migration. While programming has focussed on labour migrants from marginalised communities, all economic migrants are at risk because Sexual and Reproductive Health (SRH) education have been missing in schools and universities.

## 1.4 Development Process – NSP for HIV/AIDS and STIs

The process of developing NSP started with the Mid-Term Appraisal (MTA) of NACP-IV in 2016. The review was the first step to get an insight into the status of the programme in terms of its intended objectives, targets and implementation. This formed the base for the preparation of this NSP and the steps adopted are summarised in Table 2 below.

18 Census, 2011: Provisional -d-5 migrants by place of last residence, age, sex, reason for migration and duration of residence-2011. 2015

19 <http://naco.gov.in/prevention-strategies>

20 National HSS 2012-13 and National HSS 2014-15, NACO

21 Saggurti N, Mahapatra B, Swain SN, Battala M, Chawla U, Narang A. (2011). "Migration and HIV in India: Study of select districts." New Delhi: UNDP, NACO, and Population Council.

22 Climate Refugees: Implications for India, Architesh Panda, Economic and Political Weekly, Vol. 45, No. 20 (May15-21, 2010), pp. 76-79

**Table 2: Activities in Preparing the NSP with Timelines**

Activity	Timeline
MTA of NACP IV	Jan – Jul 2016
Planning for NSP team and context	Dec 2016 – Jan 2017
First Stakeholders' consultation: NACO and its implementing partners PLHIV groups Key population groups Development partners MoHFW	8 Feb 2017
Thematic sub-groups meetings	20 Feb – 24 Mar 2017
First draft strategy for inputs and circulation	27 Mar 2017
Second consultation meeting with stakeholders	29 Mar 2017
Inputs from: PLHIV Key Populations NACO and its implementing partners NGO partners Development Partners Others – academia, social scientists, researchers, religious leaders etc.	1 – 14 Apr 2017
Second Draft for circulation	15 Apr 2017
Third Consultation with State AIDS Control Societies and other stakeholders	27 Apr 2017
Inputs on second/third/fourth drafts	28 Apr – 1 May 2017
Final draft for circulation	22 May 2017
Approval of HIV and STI NSP 2017-24	14 Jun 2017

# Chapter 2

## HIV/AIDS and STI Situation in India

### 2.1 Epidemiology

India has a ‘concentrated’ epidemic with much higher prevalence among KP than the general population. As per the national IBBS (2014-15), HIV prevalence amongst FSW is 2.2%, MSM is 4.2%, H/TG is 7.5% and IDU is 9.9%. HIV prevalence among adults is estimated at 0.26% in 2015 and has been declining since the mid-2000s [Figure 2]. Women account for around 41% of all total estimated people living with HIV in the country. The estimated number of new HIV infections per annum is also decreasing, though not uniformly, across the nation. Some states and districts continue to record an increase in new infections, confirming the heterogeneity of the epidemic [Figure 3].

With a population of 1.34 billion, India is presently going through a socio-economic and demographic transition. Increase in mobility and migration, advent of information technology, rise in median income levels, persistent economic and gender inequalities among other factors, contribute to the HIV epidemic in diverse ways<sup>23</sup>. Clearly, other than the epidemiological trends, an investigation into the social and structural drivers of the epidemic at national, sub-national and local levels is also necessary for reaching the last mile.

In concentrated epidemic settings such as in Asia, the HIV epidemic has been modelled and follows what is known as the

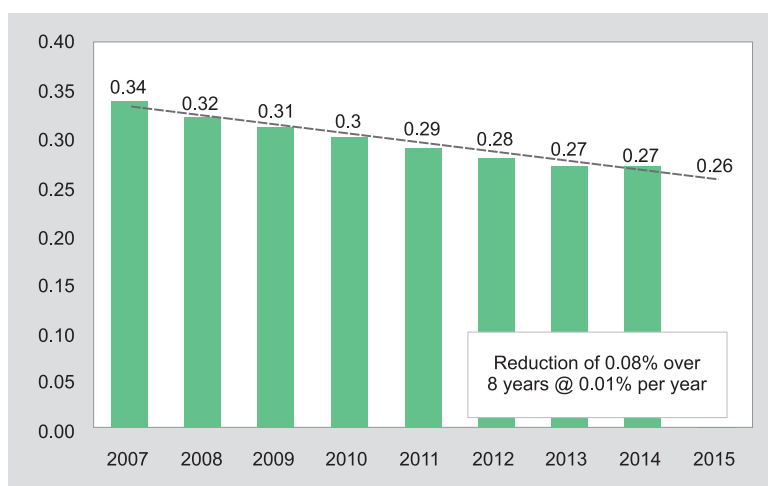


Figure 2: HIV prevalence over the years, HIV Estimations 2015

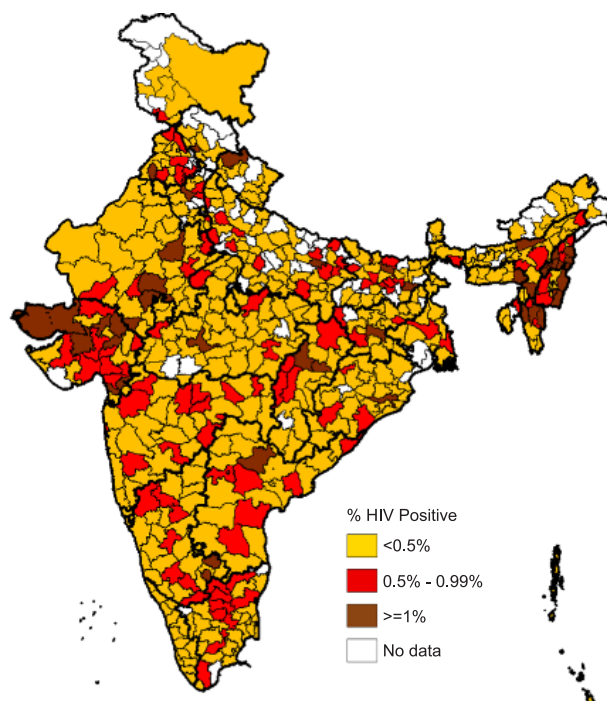
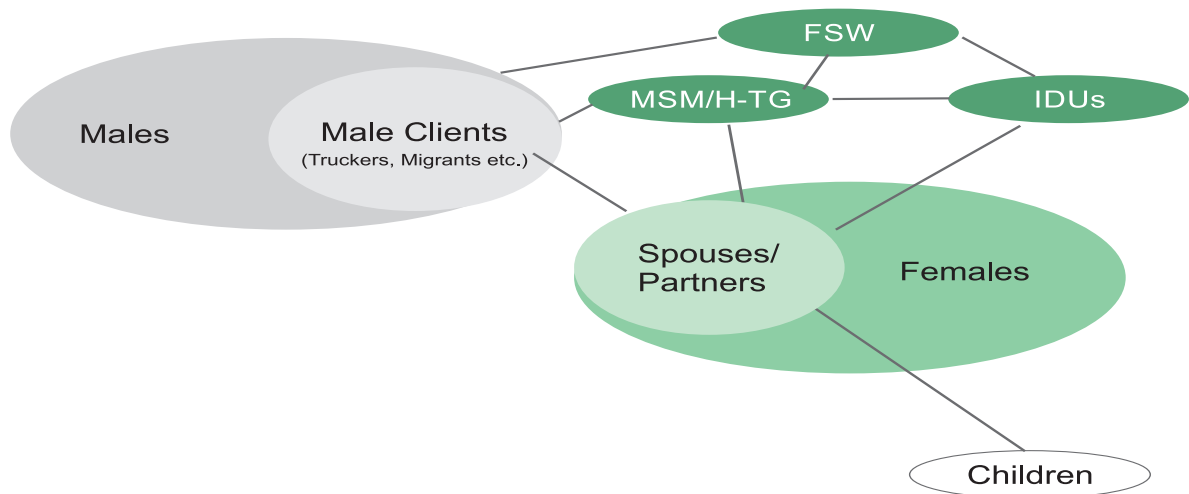


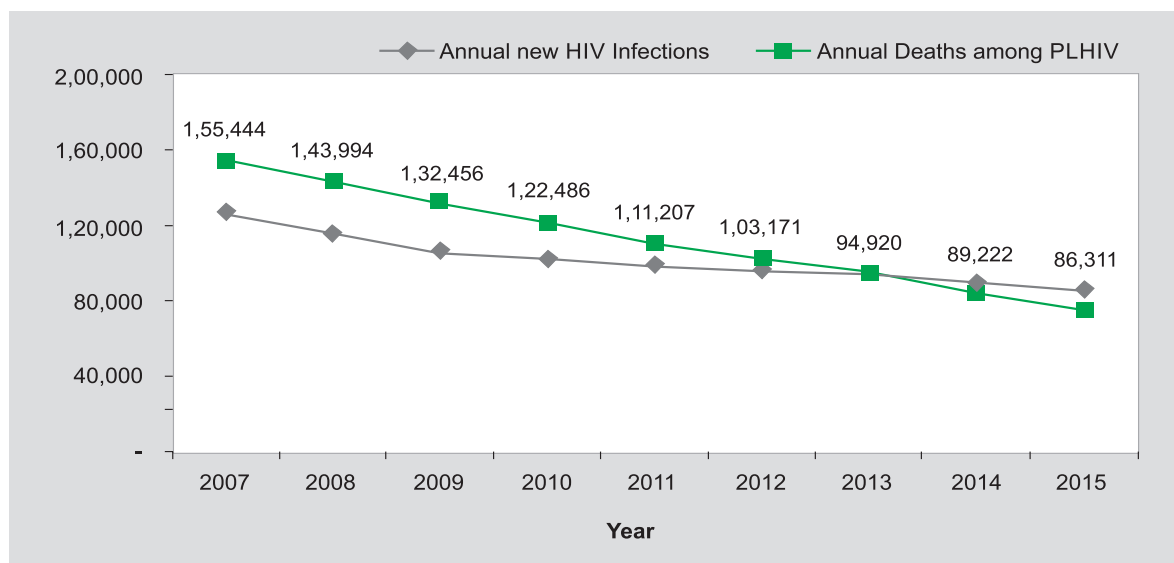
Figure 3: District wise HIV Prevalence, HSS 2014-15

<sup>23</sup>Poundstone KE, Strathdee SA, Celentano DD. (2004) The Social Epidemiology of Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome. *Epidemiol, Rev* 26 (1): 22-35. doi: 10.1093/epirev/mxh005

Asian Epidemic Model (AEM<sup>24</sup>). This model helps in understanding the patterns and trends of the epidemic and can help shape policy and programmatic changes. The transmission patterns based on the model are shown in Figure 4.



**Figure 4: Transmission Dynamics of HIV/AIDS – Adapted from Asian Epidemic Model**



**Figure 5 : Estimated new HIV infections and deaths among PLHIV, 2007-2015**

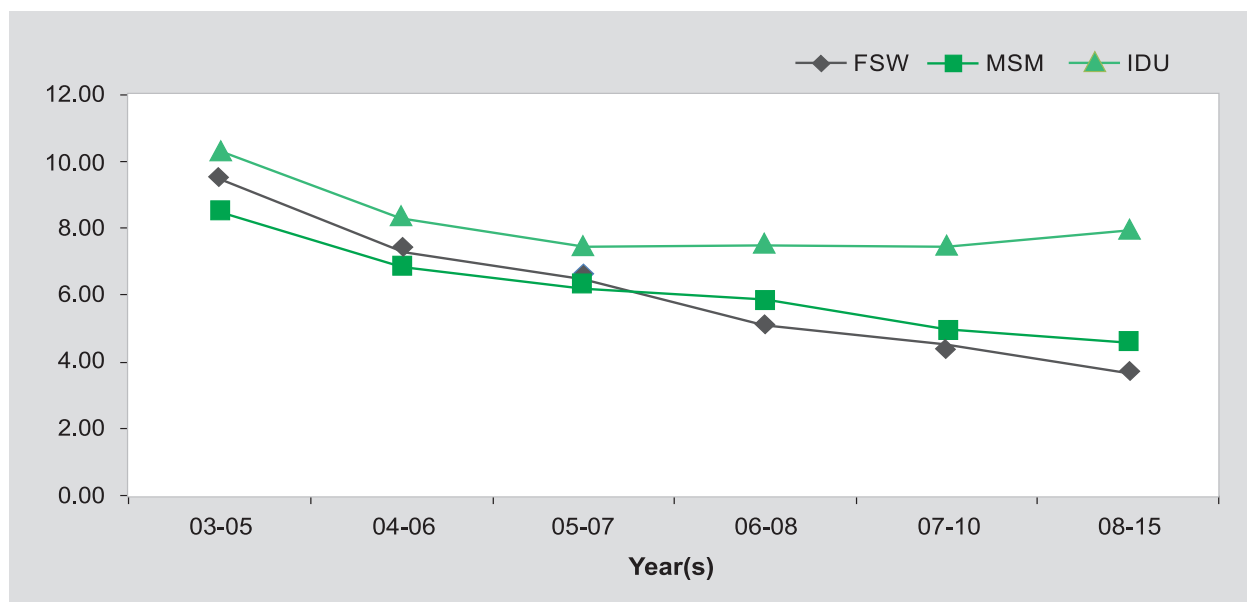
Along with the decrease in HIV prevalence, estimated new infections have also fallen by over 66% between 2000 and 2015. The estimated AIDS-Related Deaths (ARD) had begun to fall from 2007 when the effect of ART started showing results<sup>25</sup>. Estimated ARD in 2015 fell by 54% as compared to 2007. Figure 5 shows the declining rates of estimated ARD and Annual New HIV Infections (ANHI). The two lines cross each other in 2014 suggesting that ANHI will contribute to a slowdown in the pace of the ‘declining HIV prevalence’. With the adoption of ‘Test and Treat’ policy in 2017 for all people living with HIV, it is likely that ARD will show further decline and at faster pace. Thus, absolute number of PLHIV may show an increase in the coming years due to the increasing gap between ANHI and ARD.

24 Brown T, Peerapatanapokin W (2004) The Asian Epidemic Model: a process model for exploring HIV policy and programme alternatives in Asia. *Sex Transm Infect.* 80:i19-i24.

25 India HIV Estimations 2015 – NACO, MoHFW, Govt of India

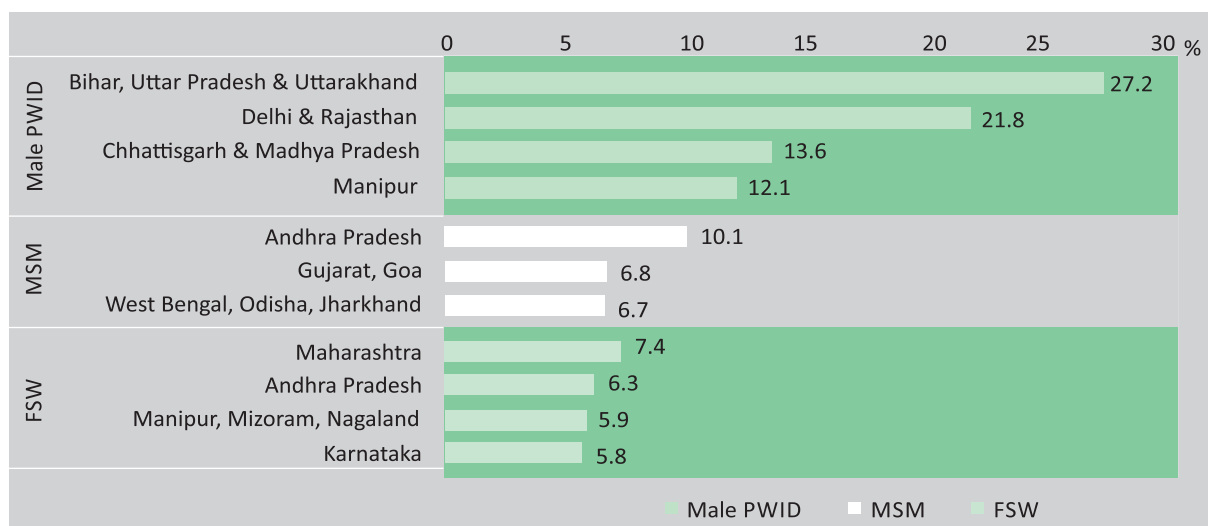


Trends of HIV prevalence among Key Populations (KPs) recorded through the HIV Sentinel Surveillance (HSS) 2003-11 and Integrated Bio-Behavioural Surveillance (IBBS) 2014-15 are shown in Figure 6. HIV prevalence has shown a continuous decline among FSW and MSM. However, the epidemic has stabilised at a higher level among the IDU.



**Figure 6: HIV Prevalence trend among Key Populations, HSS & IBBS, India 2003-2015**

While prevalence has been either declining or remained stable, nationally, there are considerable inter-state variations in HIV prevalence level which are shown in Figure 7.<sup>26,27,28</sup>



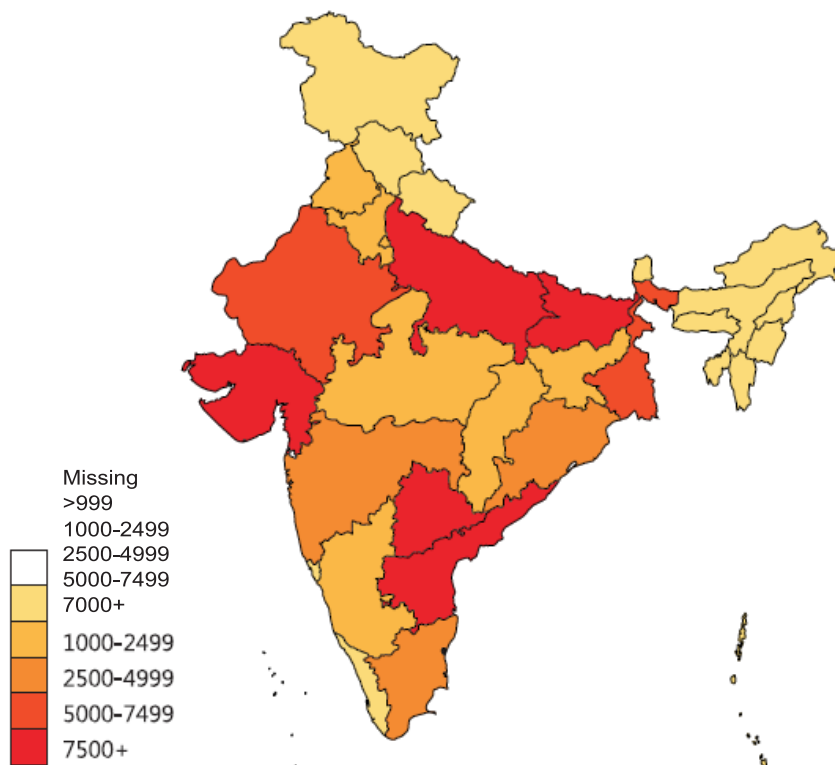
**Figure 7: HIV Prevalence among KPs in select States IBBS 2014-15**

26 Technical Brief -HIV Sentinel Surveillance 2011-12. National Institute of Medical Statistics and National AIDS Control Organisation, Ministry of Health and Family Welfare, India

27 Technical Brief -HIV Sentinel Surveillance 2014-15. National Institute of Medical Statistics and National AIDS Control Organisation, Ministry of Health and Family Welfare, India

28 National IBBS 2014-15, National Report, NACO

The HIV epidemic in India is predominantly sexually-driven. However, injecting drug use continues to contribute to infections in an increasing number of geographical areas, including the North-East, Punjab, Uttar Pradesh, Bihar, Delhi and Uttarakhand. Risk behaviours such as unprotected sexual encounters and injecting drug use are increasingly overlapping, a trend that needs to be further examined, analysed and documented<sup>29</sup>.



*Figure 8: State wise estimated New HIV Infections 2015*

The 2015 HIV estimates suggest that the State of Manipur has an adult prevalence rate of 1.15% and, thus, is the only State in India that currently has a ‘generalised’ epidemic<sup>30</sup>. The trends in HIV prevalence across State/UTs indicate that there have been successes in halting the epidemic. Many of the erstwhile ‘high prevalence’ States, such as, Andhra Pradesh, Karnataka, Maharashtra, Mizoram, Nagaland and Tamil Nadu, have shown steady declines in estimated number of new HIV infections.

These States, have a comparatively more robust public health infrastructure and have addressed the HIV epidemic relatively early on. However, a rising trend in annual new HIV infections among adults is noticed in otherwise low prevalence State/UTs, including Assam, Chandigarh, Chhattisgarh, Gujarat, Sikkim, Tripura, and Uttar Pradesh. The prevalence in these State/UTs, barring Gujarat, is still lower than the national average [Figure 8]. However, the lessons learned from the States with ‘mature’ HIV epidemics would suggest that urgent scale-up of interventions in the newly ‘emerging’ States with increasing or plateauing new infections will lead to considerable gains in terms of infections averted and health expenditure incurred.

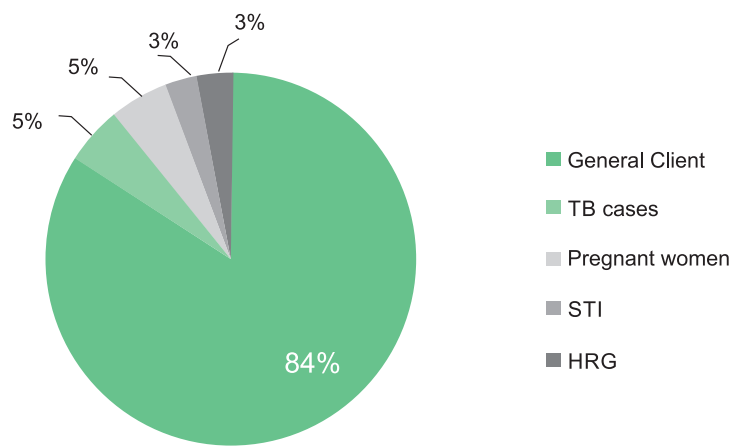
<sup>29</sup>Mishra RK, Ganju D, Ramesh S, et al. (2014) HIV risk behaviours of male injecting drug users and associated non-condom use with regular female sexual partners in north-east India. *Harm Reduct J.* 11:5. doi:10.1186/1477-7517-11-5.

<sup>30</sup>Generalised HIV Epidemic: The HIV prevalence rate is >1% in the general population.



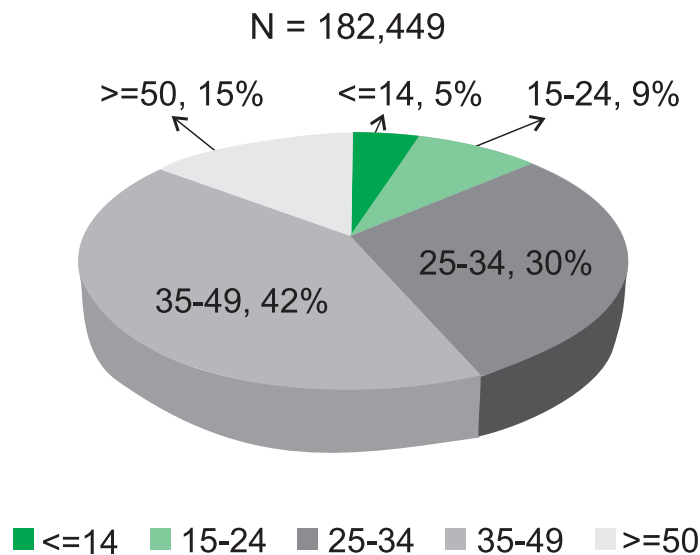


Analysis of programme data from Integrated Counselling and Testing Centres (ICTC) collected during 2015-16 shows that a total of 200,465 people tested HIV positive during this period. When disaggregated, the data collected shows 3% of these newly detected HIV cases were referred from Targeted Intervention programmes focussing on key populations. Five percent were referred from Tuberculosis (TB) testing units while pregnant women constituted another 5%. Three percent came from STI clinic attendees [Figure 9]. The remaining 84% include a mixed pool of people that need to be better characterised after conducting a detailed analysis of their socio-demographic, occupation and other personal characteristics. Additionally, the largest percentage of HIV positivity in this group belonged to 35-49 year age group.



**Figure 9: Newly Detected HIV Positive Cases, ICTC Data, India 2015-16**

Further analysis of age disaggregated data indicate that 42% of HIV cases were detected in the 35-49 years age group (76,629) and 15% are >50 years age (27,367) [Figure 10]. This indicates that HIV infected people are either coming for HIV testing and diagnosis late or HIV infections are also occurring in age groups which are being given minimal focus in the current programme. Age disaggregated analysis of CD4 count or viral load testing data will be needed to locate risk behaviour.

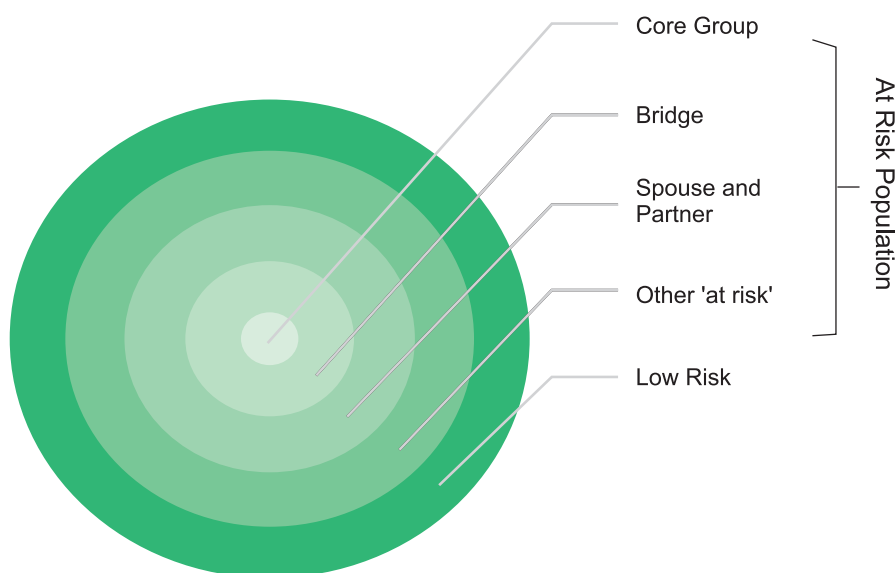


**Figure 10: Age distribution of detected HIV Positives among general clients at ICTC, 2015-16**

The analysis has multiple limitations including the lack of need for a client to declare any risky behaviours or self-identifying to be part of a key population group to less than acceptable quality of recording. Nevertheless, it indicates the need for further analysis to draw appropriate epidemiological conclusions.

The programme may also need to revisit its prevention approach, and/or adopt a wider definition of vulnerability and risk to conduct prevention among people who do not fall into the classic definition of key populations.

A rapid size estimation exercise was undertaken using data from IBBS, 2014, NFHS 3 and BSS 2006 to understand the possible size of the ‘at risk’ population. The estimation used the indicator “Percentage of respondents who reported having sex with any non-regular partner in last 12 months by residence and gender”.



**Figure 11: Spectrum of HIV Risk and prevention**

The ‘at-risk group’ was defined as ‘any individual in the age group of 15-49 years who is at risk of acquiring HIV or STI due to risky behaviour of self or partner’. This, as depicted in Figure 11 will include the core population, bridge population, their spouses/partners and other populations who are engaged in risky behaviours.

While around 10-15% of this population may be targeted with a comprehensive package of services under NACP through Targeted Interventions (TI), the rest of the people belonging to the other ‘at risk’ group are largely covered through IEC campaigns. Covering the traditional key populations and bridge populations under the TI programme has paid rich dividends, as reflected in the significant decline in new HIV infections since 2000. Epidemiological investigations need to be undertaken to further characterise the other ‘at risk’ population and design specific and suitable programmes that will further accelerate the rate of decline in new HIV infections.

### 2.1.1 Epidemiology of STI infections

STIs continue to present a major burden of morbidity and mortality both directly, through their impact on quality of life, reproductive health and child health, and indirectly, through their role in facilitating sexual transmission of HIV. Failure to diagnose and treat STIs at an early stage may result in serious complications and sequelae, including infertility, fetal loss, ectopic pregnancy, ano-genital cancers, and premature death, as well as neonatal and infant infections.



India has an estimated annual STI prevalence of 5-6% among the adult population. This would amount to around 33 million STI episodes in current scenario<sup>31</sup>. However, there is paucity of data for estimating the STI/RTI burden in India. Analysis of data for 2007-12 from STI/RTI clinics (DSRCs) and STI clinics in Targeted Intervention sites shows that 34.9 million episodes were treated (7-9 million per year).

Studies have shown significant reproductive morbidity among adolescents and women (BSS, NFHS, and Rapid Assessment Survey). Apart from 2002-03 CSTI study (ICMR), a 2005 rapid assessment survey conducted by the NIRRH under ICMR also reported that 12% of women and 6% of men attend PHC/CHC primarily due to symptoms suggestive of STI/RTI. The latest NFHS 4 data reported an average 3% of reproductive morbidity (15-40%) among women and this was found to be more in rural than urban areas, all indicative of increased risk of STIs.

Meanwhile, India is losing an estimated 67,477 women due to vaccine preventable STI induced cervical cancer<sup>32</sup>. Women living with HIV are more likely to develop persistent HPV infections with multiple high-risk HPV types at an earlier age. They also have a more rapid progression to pre-cancer and cancer and 4-5 times greater risk of developing cervical cancer than women who are not living with HIV.

There is limited data available on congenital syphilis. Some sporadic studies are available from various regional STI Centres, and estimates suggest that in 2015-16, there were about 16,023 cases of congenital syphilis in India. Systematic reporting of new cases need to be initiated<sup>33</sup>.

## 2.2 Target estimation for coverage in the context of 90-90-90

The estimated number of people living with HIV (PLHIV) in India in 2015 was 2.1 million with an adult prevalence rate of 0.26%<sup>34</sup>. In this NSP, the projected estimates for 2016-2021 have been taken from HIV Estimation exercise, 2015. Post 2021, a 'simplified projection' approach has been adopted that provides an estimate of 2.25 million PLHIV in 2024<sup>35</sup>. However, this is a crude estimate and once the results of the HIV Estimations 2017 become available, the targets will need to be adjusted for each programme area.

## 2.3 Response to HIV/AIDS and STI epidemic

India is one of the countries at the forefront of addressing the HIV epidemic. With limited evidence, HIV estimates and projections seemed to reach alarming proportions by the early 2000s. However, the last two decades of focussed programming and improved evidence generation has led to a substantial reduction in new HIV infections and more accurate estimations. This enabled the country to achieve the Millennium Development Goal (MDG) targets for HIV. Along with a gradually expanding strategic information base that informed the programme, the civil society representing people living with or affected by HIV, played a vital role in directing the governmental response to address the needs of 'those left behind'. This collaboration saw a 60% reduction in new HIV infections from 2000 to 2010 [Figure 12]. However, the pace of decline has slowed reaching an average of 3.28% per year in 2010-2015 reflecting a possible plateauing of the epidemic.

31 Burden of STI/RTI infection in India. Indian Council of Medical Research, 2002-03. As cited in Annual Report of 2015-16, Ministry of Health and Family Welfare, Govt. of India, page 35.

32 <https://www.nhp.gov.in/disease/reproductive-system/female-gynaecological-diseases-/cervical-cancer>. Estimates for 2012.

33 Vani Srinivas et al, "Towards Elimination of Parents to Child Transmission of Syphilis in India: Rapid Situation Review to Inform National Strategy", WHO South East Asia Journal of Public Health, July-December 2015

34 HIV Estimates 2015 using UNAIDS Spectrum EPP band estimates.

35 HIV Estimates 2015 results till 2021; additional PLHIV burden added into subsequent years by gap of annual new HIV infections and total PLHIV deaths

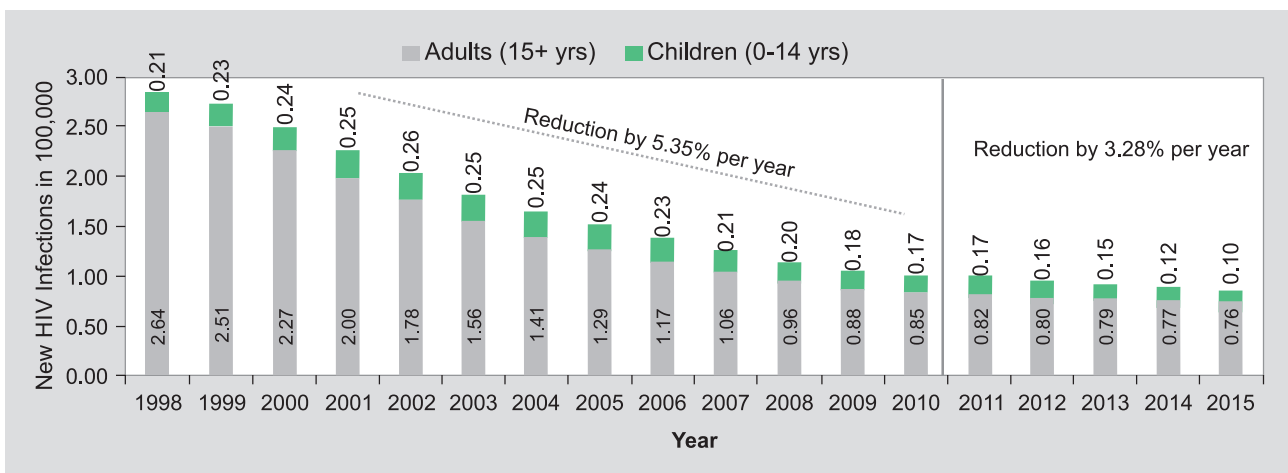


Figure 12: New HIV Infections by Adults and Children 2000-2015

The early successes of India's response were attributed to multiple factors:

1. A committed leadership with a National Steering Committee which oversaw multiple stakeholders, encouraging and enabling them to work in tandem
2. A focus on evidence generation and its use to inform the programme nationally
3. A comprehensive scaled up package of prevention, detection and treatment services covering almost every district in the country
4. Free ART for PLHIV since 2004
5. Communities at the centre of the response increasing treatment demand, providing treatment literacy, monitoring programme quality and access and engaging in programming
6. Political will, including legislative forums, parliamentary forums and the programme headed by the Prime Minister

India instituted the syndromic management for STIs during the early 2000. It allowed the treatment of STI/RTI syndromes below the district level and has contributed towards reduction of cases of syphilis and many other bacterial STIs. Further expansion of STI services with establishing Designated STI/RTI Clinics (DSRCs) with branding (Suraksha Clinics) has helped in covering more cases.

## 2.4 Analysis of achievements under NACP IV

The NACP began to accelerate the response to the epidemic under NACP IV and pushed hard to meet the targets. This was possible due to a high level of autonomy of the programme as a centrally-run scheme, strong national political commitment as well as continuing external support, government and civil society partnership including the engagement of people living with or affected by HIV. The important areas of success are given below:

**Focus on prevention:** About 99.74% of the population is HIV negative. Given the concentrated epidemic, NACP IV prioritised a prevention response. The package of prevention services included prevention of parent-to-child transmission (PPTCT). Information Education Communication (IEC), customized and tailored to the needs of different target groups, key population outreach, behaviour change communication

(BCC), condom promotion, needle and syringe exchange, opioid substitution therapy (OST), counselling and testing, blood safety, mainstreaming of HIV into other sectors, youth interventions, link-worker scheme, and management of STIs and RTIs. Prevention received 64% of the budget under NACP-IV.

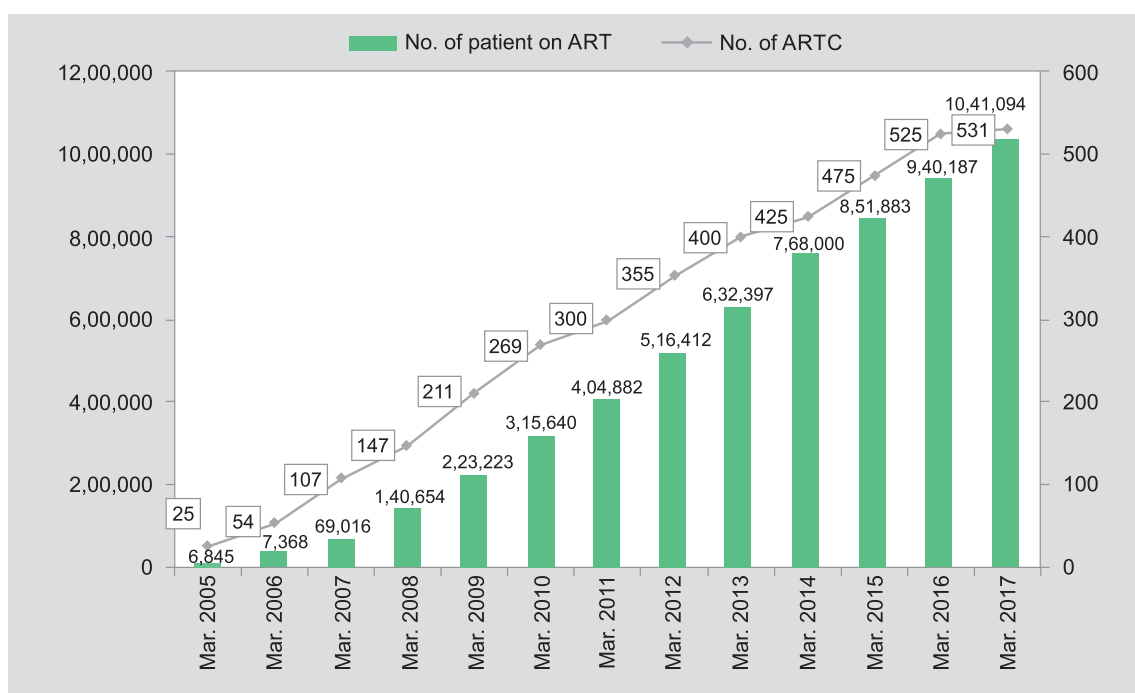
**Targeted interventions (TIs) among KP and others 'at risk groups':** As evident from declining annual new HIV infections, TI's have shown results. In 2016-17, the interventions have reached to 9,41,033 core group, 2.9 million migrants and 9,49,675 truckers through 1502 TI's. The NACO initiated exclusive TI's for Hijra/Transgender (H/TG) population and covered more than 28,000 population. Prison interventions were also initiated under NACP-IV. Fifteen prisons are being covered with HIV prevention services in 6 States and 1 Union Territory (UT). Special focus was given to informal migrants in industries through Employer Led Model (ELM). Currently, 346 industries have partnered with SACS covering 0.78 million migrants.

**Integrated testing and counselling Services:** HIV testing and counselling has improved in quality and coverage. With more than 22,000 HIV Counselling and Testing Centres (including 3,500 in private sector), HIV testing facilities is available in almost every block of the country. Almost 29 million HIV tests were performed in 2015-16 and helped identify 2,00,465 HIV positive cases. The number of patients registered for care at ART Centres was 1,82,743 (91%), a loss of 9% of those who tested in the same period. Under NACP IV, ICTC has exceeded its targets especially through mainstreaming.

**Prevention of parent to child transmission:** Universal HIV and Syphilis screening has been made a part of routine antenatal care at all Primary Health Centres, Community Health Centres (CHCs) and other secondary and tertiary care facilities for all ANC clients in 2014 under the NHM. The testing among pregnant women has increased from 8 million in 2011-12 to 16 million in 2016-17. HIV tests are now performed at all primary health centres and sub-centres by Auxiliary Nurse Midwives (ANM). Incentive is provided to service providers (ANMs/ ASHAs) in order to ensure effective linkage of HIV positive pregnant women to PPTCT and Early Infant Diagnosis (EID) services. To ensure that every HIV exposed baby is tested for EID at 6 weeks, the Dried Blood Spot (DBS) collection centres have been increased from 1157 to 5332.

**Care support and treatment:** NACO has adopted a 'Test and Treat' policy for PLHIV towards attainment of End of AIDS epidemic as a public health threat and to improve quality of life of PLHIV. As on March 2017, 1.05 million PLHIV were alive and were accessing ART through 531 ART Centres and 1108 Link ART Centres (LAC) and LAC Plus Centres [Figure 13]. Cumulative Loss to Follow Up (LFU) was 10% and 12 months ART retention was 70%.

Children living with HIV constitute 7% of HIV positive people under care and are put on ART as a matter of priority. The NACO also provides second and third line treatment at select Centres of Excellence across the country.



*Figure 13: Scale up of ART centres and service uptake in India, 2005-17*

**Care and Support Centres (CSC)** provide support to PLHIV on ART. These centres are managed by the civil society and community based organisations and provide support and linkages to various social sector schemes, LFU tracking, providing peer and psychosocial counselling, treatment literacy/adherence, home visits, stigma reduction, advocacy with other departments to increase access, partner testing, local resource mobilisation, and intensive case finding for TB. Through 360 CSCs, about 1 million PLHIV have been provided care and support services, 452,641 have been linked to various social welfare schemes and 267,901 LFUs have been tracked back into the system. Family testing, especially of spouse and children, has been a part of CSC initiative.

**HIV-TB Collaborative Initiative:** The pace of the collaborative activities picked up under NACP IV, resulting in almost 88% of registered TB patients knowing their HIV status. Seventy-two percent of Designated Microscopy Centres (DMCs) are co-located with HIV counselling and testing facilities.

**STI/RTI Services:** STI/RTI services are delivered through 1,160 designated STI/RTI clinics (DSRC). Close coordination with maternal health division (NHM) and joint procurement of color-coded STI/RTI drug kits have made the programme operational across the country including up to the PHC level. Additionally, 4,500 providers in private practice are linked through TI NGOs to provide STI service delivery for key populations. Under NACP IV, laboratory systems were further strengthened through ten regional STI Centres and 45 State Reference Centres. A syndromic management approach has been adopted to scale up service delivery in health care delivery system. The programme has consistently managed 7-9 million STI/RTI episodes per year through syndromic management since 2013.

**Laboratory Services:** These services form the backbone of quality service delivery under NACP-IV. The third phase of NACP set the foundation for institutionalising a culture of quality in laboratory services, specifically for HIV and related testing. Yearly, almost 2 million CD4 tests, 15,000 EID tests and 14,000 HIV VL tests are being carried out. Technical support was provided to testing laboratories through the

existing three-tiered network of HIV reference laboratories at the apex (1), national (12), and State level (117) through a cascade of mentoring and monitoring system and EQA programme. In NACP IV, 65% of laboratories have been accredited under national accreditation board of testing and calibrating laboratories (NABL). This includes 85% of National Reference Laboratories (NRL) and 49% of State reference laboratories (SRL). The CD4 external quality assurance programme is being run by the National AIDS Research Institute (NARI).

New and innovative point of care (PoC) CD4 testing has been successfully piloted and tested in North East and other States including Bihar, Gujarat, Rajasthan, and Uttar Pradesh. The HIV viral load (HIV VL) has been successfully started in reference laboratories. Additionally, HIV drug resistance testing is being rolled out in select Centres of Excellence (CoEs). Routine viral load monitoring is in advance stage of being initiated.


**Blood Transfusion Services:** Blood Transfusion Service (BTS) is integral to the healthcare system. Out of 2,672 functional and licensed Blood Banks, 1,131 are supported by the NACO. The BTS comprises of Blood Component Separation Units (BCSU), Model Blood Banks, Major Blood Banks, and District-level Blood Banks. The NACO provides one-time equipment, manpower, capacity building for blood bank staff, consumables and monitoring and supervision. Yearly, 1.1 million blood units are subjected to mandatory HIV screening in blood banks along with malaria, syphilis, Hepatitis B and Hepatitis C. The availability of safe blood has increased from 44 lakh units in 2007 to 109 lakh units by 2015-16 and voluntary blood donation increased substantially from 63% in 2007-08 to 80% in 2015-16. Reported HIV transmission through blood has decreased from 15% in 1992 to less than 0.5% in 2015-16. Blood Component Separation in the NACO supported blood banks is 69% in 2015-16.

**Information Education and Communication (IEC):** IEC activities have made significant progress and the emphasis has shifted from awareness-generation to behaviour change. In some of the 'mature epidemic' States like Tamil Nadu, awareness of 'either heard of HIV or AIDS' is 99.5% (BSS 2009). Major initiatives have brought HIV/AIDS into the mainstream.

Evaluation of mass media campaigns in terms of reach, recall and intent to act, has been undertaken under NACP-IV and show good levels of recall and 'intent to act'. The Voluntary Blood Donation (VBD) campaign reach and recall study showed that a greater proportion of those who had seen the advertisements donated blood as compared to those who had not seen the advertisements. Also 'intent to donate in the future' was significantly higher among those exposed to the campaign. Similarly, the PPTCT campaign evaluation (2014) showed high 'like ability' and recall of the main message among target audiences. Knowledge levels about transmission as well as importance of testing and 'intent to act' were higher among those exposed to the campaign.

On World AIDS Day 2014, a national level 24x7 AIDS Helpline was launched. The helpline is operational in 12 languages and is manned by trained and experienced counsellors. Over 17 lakh calls have been received till March 2017.

The India HIV/AIDS Resource Centre (IHRC) is a one-stop point where resource materials on HIV/AIDS are made available in digital format for access by people from India and across the globe. The resources posted on the site have been sourced from the NACO, SACS, Multilateral, Bilateral agencies, NGOs, research and academic institutions. These resource materials include policies and guidelines, newsletters/annual reports, training modules, communication materials, baseline surveys/research studies, evaluation reports, fact sheets/monographs, multimedia gallery, films/documentaries, tvcs/radio spots etc. As of



March 2017, 1,122 resource materials are uploaded on website (<http://indiahivinfo.naco.gov.in>) and more than 1,000 people registered on this website. More than 105,630 unique visits by the users to this website were recorded during the time period December 2014- April 2017.

A dedicated Facebook Page “NACO India” was initiated by the NACO in 2014 and the information is being disseminated through this page regarding the various events, activities and other important updates on resource centre and website. This page (NACO India) has more than 30,000 likes and is updated regularly with 2-3 posts in a week. The NACO is also active on “Youtube” and it shares the video materials through its Youtube channel (IEC NACO India) on regular basis. The NACO also uses 'Flickr' - online photo sharing medium for sharing the photo gallery of events organised at the national level.

**The North-East Multimedia Campaign:** The North East Multimedia campaign is successfully implemented in the all 8 States of north-east. The campaign helped reach out to over 30,000 people through music competitions in the three States directly and to more than 500,000 people through TV channels . Over 150 FBOs mobilised during the campaign, and declarations of commitments were signed. This activity has been showcased as best practice to address stigma and discrimination at UNAIDS Programme Coordinating Board.

Adolescence Education programme is being implemented in more than 55,000 schools. The Operational Guidelines have been revised in 2014 for effective implementation and monitoring of the programme. For college going youth, Red Ribbon Clubs Programme is being implemented in more than 14,000 colleges.

Under mainstreaming efforts, the NACO has signed 14 MoUs with non-health Ministries and Departments at the national level. About 188 districts have established helpdesks in service centres for facilitating Social Protection including CABA. Approximately 10.4 lakh benefits of social protection schemes and entitlements were accessed by PLHIV, CABA and MARPs.

**Strategic Information:** Under NACP-IV, Strategic Information and research was brought under one unit to ensure that rigorous and scientific evidence is available and becomes central to an effective response. Some key achievements are:

(i) Epidemic Surveillance: India has one of the world’s largest surveillance systems for monitoring the HIV epidemic. The system has provided rich data on the level and trends of the HIV epidemic over the years that has been used not only for epidemiological projections but also for resource allocation<sup>36,37</sup>. HSS in India was formalised in 1998 and currently the 15<sup>th</sup> round is being implemented.

During NACP-IV, two rounds of ANC based HIV Sentinel Surveillance (HSS) and one round of Integrated Biological and Behavioural Surveillance (IBBS) were undertaken<sup>38</sup>. India’s national IBBS 2014-15 has improved surveillance among MSM, TG and migrants to get a better understanding of the epidemic within these groups. Besides, several studies were initiated on HIV incidence surveillance, case-based surveillance and using PPTCT data for HIV surveillance.

HIV Estimations 2015 were developed using the latest Spectrum model which was populated with most recent epidemiological and programmatic evidence<sup>39</sup>. The process not only provided latest status of HIV

36 Prioritisation of districts for programme implementation, NACO, available for download at <http://naco.gov.in/sites/default/files/District%20Categorisation%20for%20Priority%20Attention.pdf>

37 Technical Briefs. HIV Sentinel Surveillance 2010-11, 2012-13, 2014-15, NACO

38 HIV Sentinel Surveillance 2014-15, National Report, NACO

39 Technical Report India HIV Estimates 2012, NACO, MoHFW, Govt of India



AIDS epidemic, but also help measured the impact of the NACP. Dissemination of surveillance findings were fast tracked and presented as Technical Briefs, National Reports and Epidemic Fact Sheets. They are also available on the website<sup>40</sup>.

(ii) Programme Monitoring: The largest data recording and management system used at the NACO is the Strategic Information Management System (SIMS). It captures data from 30,000 users every month. Available within the system is a real-time data entry with brief analysis that enables rapid corrective actions for programme managers, both frontline and mid management. Consistent reporting is over 80% from all components. Under NACP-IV a standard report module is in use for decision-making at the state and district level.

(iii) Research and Evaluation: To address the gaps in programme implementation and generate systematic evidence generation, the NACO articulated the National HIV/AIDS Research Plan (NHRP). Phase I of the NHRP was rolled out. A detailed exercise to assess existing information gaps in the programme was conducted involving programme managers at the NACO & SACS and technical experts. Around 91 priority areas for evidence generation were identified, with 37 in Phase I, categorised as epidemiological, socio-behavioural, evaluation & operational research and biomedical and clinical research. NHRP has been commissioned with support from over 60 government research institutes involving senior faculty and research scientists. Thirty-three (33) studies have been commissioned under Phase I. Two rounds of NACO Research Fellowship Scheme (NRFS) have been undertaken. Five capacity building workshops on Operational Research and 5 in Ethics in HIV/AIDS Research were held during NACP-IV. Brown Bag Seminars has been initiated to inform and build capacities and knowledge of programme managers at the NACO, community, development partners and other key stakeholders level.


(iv) Data analysis and dissemination: The NACP IV has seen increased capacity building for epidemiologists, monitoring and evaluation officers, statisticians and programme managers stationed in the State/UTs. They have been able to analyse data and disseminate it at the State/UT and district level. A dedicated data analysis and dissemination unit at the NACO has been set up and a National Data Analysis Plan (NDAP) was launched under the NACP IV. The NDAP utilised the huge amount of data generated under the programme, to develop analytical documents, scientific papers, journal articles, and to provide scientific evidence for programme management. Twenty-eight government institutions collaborated with the NACO and the SACS for facilitating the NDAP.

**Community-led HIV response:** Since the early stages of NACP-I, the HIV response communities have been at the centre of the programme. Targeted Interventions (TIs), delivery of HIV prevention services, Care, Support and Treatment or ART, have community as the main stakeholder. The NACO has involved the community at various stages, starting from identifying key populations to the delivery of services. The rich experience of community-led approaches and the lessons learned from them have fed back into the programme and helped in evolving a more systematic, robust and effective model of TIs and care and support programmes. Several TIs are run by community-based organisations (CBOs). Further, several community leaders were nurtured and capacitated to advise, support and monitor the programme at national and State/UT level through their participation in committees and technical resource groups. This has led to a stronger ownership of response by the community.

## 2.5 Lessons Learned, Best Practices and Opportunities

Two and a half decades of HIV response using innovations, new implementation modalities programming to scale has led to the halting and reversing of the epidemic. This encompasses the complete 'prevention

<sup>40</sup> All Surveillance and Epidemiology publications are available at <http://naco.gov.in/surveillance-epidemiology-0>



to care' continuum and the associated strategic management information system. Supportive enablers such as IEC and collaboration with other ministries in the form of mainstreaming have also seen lessons learned, best practices and opportunities.

Some of the unique features of the programme that have successfully resulted in reduction of new infections by 66% in one and half decade (2000-15) are summarised below:

- Communities at the Centre of the AIDS response in a collaborative and inclusive manner
- Evidence-driven strategies such as district categorization for geo-prioritised response to achieve maximum impact
- Focus on prevention especially in low HIV prevalence settings
- Free treatment scale up including second and third line treatment
- Pilot strategies for scale-up of HIV services such as Link ART Centres, OST Centres etc.
- Leveraging of partnerships and strategic in-sourcing of expertise
- Country ownership of the response

Some of the other lessons learned during this period are:

- Decentralised and collaborative approach in programming, with State/UTs leading the implementation of the response and the Centre spearheading policy, guidelines and frameworks
- Role of FICTCs in increasing HIV testing
- Introduction of accompanied referrals to reduce 'lost to follow up' between testing and enrolment in care and treatment
- Cross learning and experience sharing especially from State/UTs with better public health system (e.g., institutionalised procurement system) in place
- Treatment literacy and adherence with support from PLHIV and CBOs
- Embedding voluntary counselling and confidential testing within provider initiated counselling and testing
- Piloting self-testing
- Prevention innovations and practices (e.g., basic service package delivery at TIs)
- Consistent investment in capacity-building of various systems including the community systems.

# Gap Analysis in HIV and STI Programming

Despite many significant achievements, the NACP has had its share of challenges and gaps. This section analyses the key gaps in areas of prevention, testing, care support and treatment, and the supportive enablers.

## 3.1 HIV and STI Prevention

The NACP has a major focus on prevention. It implements the activities through (1) Targeted Interventions for KPs/at risk population and (2) Generalised IEC activities for other groups.

The major gaps in TIs (MTA, 2016 and NSP TIs March 2017) are as follows


1. Population Size Estimates (PSE) for KPs are old. The last mapping and population size estimates have been done in 2009.
2. There have been gaps in coverage – both in terms of numbers, quality as well as comprehensiveness of the service package. There is scope to update the composition of services, under a combination prevention approach, to meet the current needs of each KP group at the decentralised level. In the context of changing social and cultural norms, easy access to information technology including mobile phones, internet, more disposable incomes, increased urbanization; engaging of KPs for enrolment and uptake of comprehensive package of services is a challenge.
3. The third gap lies in the current structure and approach to deliver an adequate HIV prevention package for key and bridge population groups. Lack of flexibility, with an adherence to uniformity is a gap, when considering the varying needs of these dynamic population groups which may differ across different locations. This may lead to a gap in locating and reaching out to KP sub-groups who maybe more at risk of exposure to HIV.
4. Vulnerability due to increased migration and mobility.
5. With evolving information technologies, modes of communication among KPs keep changing.

The other gaps are presented in the section on NSP along with proposed strategies to address the gaps.

### Gap in reaching out to ‘At Risk Groups’

The section on epidemiology provides a quick analysis on the ‘at risk’ population for HIV and STIs. TIs are currently reaching out to KPs. Further granular analysis and local insights are needed to understand the other ‘at risk’ groups, who would be at greater risk due to the fact of having multiple and concurrent sexual partners, or because of engaging in unsafe injecting behaviours.

While current programme data suggest that most newly detected HIV positives are from unidentified group, this is based on self-reporting and thus would need to be interpreted following further study of the data. Nevertheless, this group has acquired HIV either due to their own or because of their spouses/



partner's behaviours. The National IBBS has revealed that almost half the KP go for HIV testing on their own and hence may not be documented as a KP in ICTC registers, either for their behaviours or for HIV positive results. However, there will still be a proportion of HIV positives that may fall into population groups that cannot be classified as KPs.

A first layer of people where large number of new cases is detected are clients of sex workers or so-called bridge populations including male migrants and truckers. Out of these populations, migrants and truckers have conventionally been targeted in India through prevention efforts, but additional vulnerable population need to be identified and covered by the prevention programme. Thus, the key gaps currently are:

- Identifying the larger 'at risk' groups,
- Designing, demonstrating and upscaling appropriate prevention intervention strategies,
- Linkage of this group to test and treat services.

### Gaps in STI Programming

The STI control programme is an integral component of the HIV programme as well as of the RMNCH+A. The major gaps identified in the STI control programme are as follows:

- Cross-cutting interventions through two vertical programmes,
- Treatment oriented nature of the programme, prevention focus absent,
- Gap in coverage and quality especially at sub-district health facilities,
- Non-functional aetiology based surveillance system,
- Reporting gaps, including those from private sectors and the NHM,
- Lack of adequate, appropriate and current data for planning.

## 3.2 HIV Testing and Counselling Services

HIV testing services forms the gateway to accessing care, treatment and support services. Meeting the SDG and fast track targets are heavily dependent on early HIV detection and swift linkage to necessary treatment and care services.

The key gaps in testing services include:

- *Gap in HIV case detection* - Till 2015-16, about 1.52 million cases have been identified and registered at ART centres<sup>41</sup>. Considering the estimated total number of people living with HIV at 2.12 million, around 28% yet remain to be detected.
- *Gaps in HIV testing among identified groups* - Analysis of programme data has indicated that there is 33-43% gap in testing of KP, around 90% gap in testing of bridge population, around 65% gap in testing of STI clients, 23% in TB patients, 45% in pregnant women and 64% in partners of PLHIV.
- *Gap in HIV counselling and testing services (HCTS) facilities* - In the States where there is improved public health infrastructure, such as Tamil Nadu, Andhra Pradesh, Karnataka and Kerala, the density of ICTCs range up to 30 per district. But in the northern and eastern States like Uttar Pradesh (UP),

<sup>41</sup> Programme Data. CST Division. National AIDS Control Organisation, Ministry of Health and Family Welfare, Govt. of India

Bihar, Jharkhand, Odisha etc., the density ranges from less than 5 to a maximum of about 10 per district. Some of these States like UP, Bihar etc. show a rising trend and hence limited number of HCTS facilities may hamper the access to comprehensive prevention and detection services.

### 3.3 HIV Care, Support and Treatment (CST)

Treatment, care and support for a PLHIV is lifelong. As the programme progressed, HIV treatment, care and support services are increasingly shifting their focus on early treatment initiation and retention in treatment and care. There has been a huge impact in terms of AIDS-related deaths averted and lives saved by enabling now more than a million PLHIVs access to ART free of cost. However, despite the phenomenal success, there are certain gaps in terms of current commitment of the Government of India.

Among the key gaps in treatment, a major one is maintaining the continuum of care. The major contributors to this gap are:

- *Coverage gap:* Currently, almost 1.52 million PLHIVs have been identified and 1.04 million are on ART. There is thus a coverage gap of 0.48 million.
- *Leaky cascade:* Linkage loss at various stages of HIV services has been identified. Currently, 12 months retention stands at 71%.
- *Infrastructure and human resources gap:* Across India 531 ART centres and 1108 ART dispensing units are operational.

These are based in a variety of settings from Medical College Hospitals to District Hospitals and distribution points even at sub district health units (i.e., Link ART Centres). But, many of them are overloaded and understaffed. This is one of the major gaps and will need to be addressed.

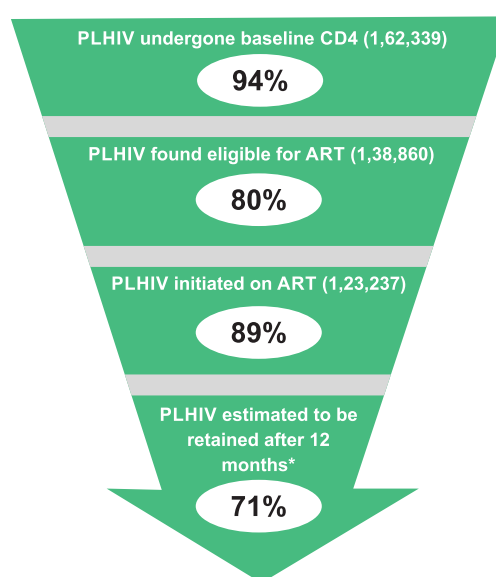
- *Gaps in standards of HIV Care:* While India has been using the CD4 to monitor the progress of PLHIVs on ART, the current standards of care suggest using viral load as principal monitoring mechanism.

Figure 14 provides the cascade analysis for HIV Test and Treatment.

As the programme focus is now to facilitate all PLHIV's access to treatment services, overcoming these challenges is critical.

### 3.4 Elimination of Mother to Child Transmission of HIV and Syphilis (EMTCT)

India is committed to the 'Elimination of mother to child transmission of HIV and Syphilis' by 2020. While these targets are reachable, there are lots of gap in reaching the target particularly at the inter-state level.

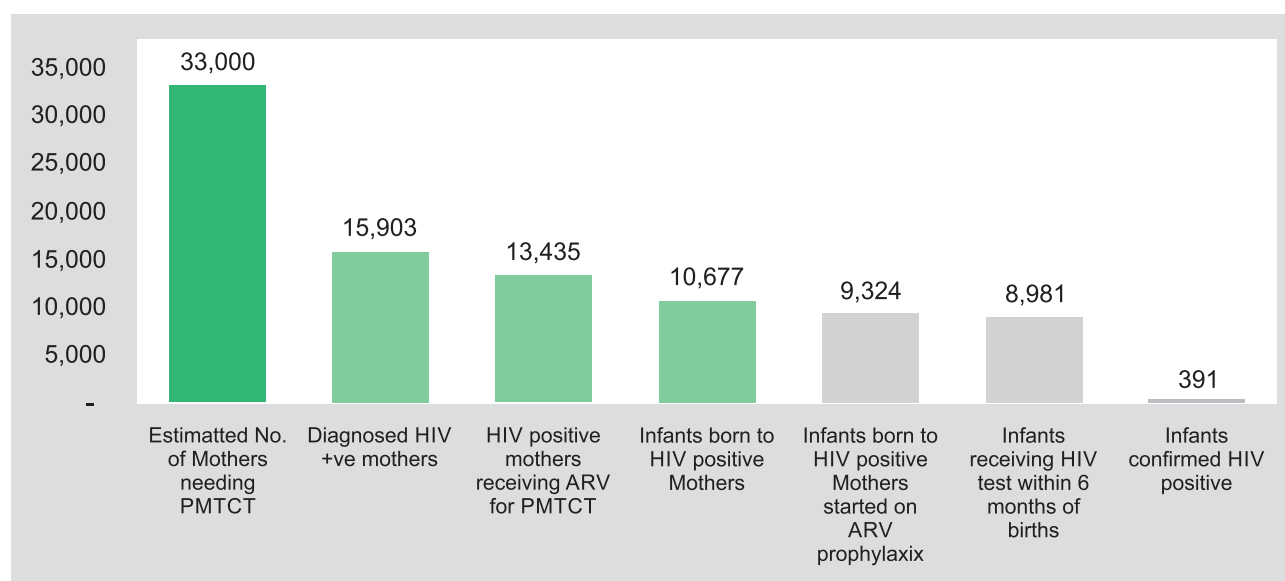


\*Based on current retention trends  
Source: March 2017 MPR  
Note: Transferred out patients have been included for calculation of retention

Figure 14: HIV Retention Cascade, India, 2015-16

The key gaps noted are:

- Gaps in current EMTCT cascade:** India is committed to eliminate mother to child transmission (MTCT) of HIV and Syphilis by 2020. It means testing of 95% of pregnant women for HIV and Syphilis, putting 95% of estimated positive pregnant women on ART and achieving an MTCT rate of less than 5% by 2020. However, in 2015, India has tested only half of the pregnant women for HIV, has put only half of the estimated pregnant women on ART and the final MTCT rate is estimated to be 27%. Clearly, there is a major gap in terms of testing and treatment initiation of pregnant women as per the population estimates that need to be covered to achieve the stated elimination of MTCT by 2020. The penetration in private sector is also sub-optimal. Almost 40% of the total deliveries are conducted at private sector facilities; however only 10% of the total HIV testing among pregnant women under the NACO is through the private sector. Clearly, lesser penetration into private sector has contributed into lesser coverage of HIV testing and subsequent ART initiation among pregnant women.
- Gaps in coverage:** Out of an estimated 29.7 million pregnancies per year, about 74.2% attended at least one antenatal care (ANC) visit<sup>42</sup>. Out of the 27.6 million ANC registered in HMIS, 59% were tested for HIV<sup>42</sup>. Against estimated PMTCT need of 35,255, the coverage is around 45% in 2015. Similarly, only 9 million pregnant women are tested for Syphilis translating into coverage of around 30% in 2016. This is a major gap in view of achieving 95% coverage target for elimination of congenital syphilis by 2020. This gap is higher in States with less HIV and Syphilis testing facilities such as Uttar Pradesh and Bihar as compared to high prevalence States such as Maharashtra, Tamil Nadu and Karnataka. The gap in PPTCT cascade is reflected below in Figure 15.



**Figure 15: PPTCT Cascade for HIV, India, 2016**

- Gaps in early infant diagnosis and continuum of care:** Out of the 10,677 HIV positive live birth, 85% of the babies have been tested at least once for EID in 2016-17. However, only 59% of the babies have been tested within 2 months (Fig 15). 391 babies have been detected PCR positive.

<sup>42</sup> UNICEF fact sheets for India. Available at [https://www.unicef.org/infobycountry/india\\_statistics.html](https://www.unicef.org/infobycountry/india_statistics.html). Accessed on 23 March 2017.

- *Cohort Follow-up management:* The EMTCT services start with detection of HIV positive mother and continues till HIV exposed baby has reached to 18 months. In the absence of strong IT enabled and automated system, the follow-up of birth cohort under EMTCT becomes challenging.
- Challenges with availability of Injection Benzathine Penicillin and existing fear among the clinicians related to its use, is a major deterrent of achievement of EMTCT of HIV and Syphilis.

### 3.5 Laboratory Services

Laboratory services are an inherent requirement for any good public health programme. Starting from diagnosis to outcome, quality-assured laboratory services is a vital component of the NACP. The package of laboratory services articulated under the NACP IV includes quality assurance in HIV testing, CD4 testing, Early Infant Diagnosis (EID), Viral Load and STI labs as critical components.

The key gaps in laboratory services are:

- Routine HIV Viral Load testing is still in its inception phase. Currently, measuring the progress towards achieving the third 90% remains an important gap which is being addressed.
- Quality assurance of testing especially in F-ICTCs (where screening for HIV is done) remains a challenge.

### 3.6 Blood Transfusion Services


Blood Transfusion Services (BTS) has been managed by the NACO under the NACP since 1992. Unfortunately, there are multiple agencies that are not only stakeholders but also controllers for part of operations.

The key gaps noted are:

- *Multiple systems for BTS:* The work related to BTS is being carried out, overseen and monitored by multiple controlling agencies/Departments within the MoHFW. There is the National Blood Transfusion Council (NBTC) and each State has their State Blood Transfusion Council (SBTC), NACO and SACS, DCGI/State FDA, and National Blood Cell (NBC) and their State bodies. The limited coordination between the agencies leads to inefficiency in service provision and duplication of efforts.
- *Gaps in accessibility and availability of safe blood:* India collects 10.9 million blood units against an annual requirement of approximately 13 million units (WHO norm of 1% of population). The voluntary blood donation (VBD) in the NACO supported blood banks is 80%, which is lower than proposed NACP IV target of 90%. There continues to be reliance on replacement donation.
- The component separation in the NACO supported blood banks at 69%, which is lower than proposed NACP IV target of 80%.
- As per the Baseline Assessment conducted across all licensed Blood Banks, there is lack of uniform Quality Management Systems with 33% pendency in licensing.

### 3.7 Information Education and Communication (IEC)

Information, Education and Communication (IEC) for promoting behaviour change and to encourage and sustain positive healthy behaviours among individuals and communities is the cornerstone of HIV programming. However, the recent NFHS-IV has shown that comprehensive knowledge about HIV/AIDS



among men has been at 32.3% as compared to 33% in NFHS-III; in fact, the knowledge has declined in few of States. The last two years of NACP IV has seen a paucity of funds coupled with change in the mechanism for disbursement thus affecting the scale and nature of IEC initiatives. Some of the challenges and gaps in IEC and communication are:

- Newer technologies yet needs to be tapped,
- Communication need assessment may be undertaken for developing target specific BCC package for HRGs,
- Extensive 360° multimedia approach with specific messaging to be coined. There is need to have specific intervention for reaching to out of school youth,
- Communication needs assessment in school, in college and these adolescents youth who are out of any educational system,
- Lack of coordination between different departments and the NACO on youth programmes,
- Lack of innovative activities under youth intervention,
- Mainstreaming efforts to be extended in more departments.

### 3.8 Monitoring, Evaluation and Surveillance

Collection, management, analysis and use of various information sources are the key for monitoring the epidemic and evaluating the response at different levels. These activities need to be undertaken in a rigorous and timely manner. During various phases of the NACP, many programme information systems were developed as deemed necessary to NACO divisions or programmes and projects including the Strategic Information Management System (SIMS). These systems need to be linked for facilitating patient monitoring across the HIV cascade. Equally, the programme, epidemiological and behavioural data available needs to be analysed in conjunction with one another for a more comprehensive understanding of the epidemic, response and needs at the decentralised level.

The key gaps in MES are summarised as follows:


- *Multiple data systems at NACO:* Most of the systems that have been developed are stand-alone and work in isolation. This presents several challenges to monitoring the programme and the epidemic and tracking clients across the continuum of care.
- Real time monitoring of the NACP continues to remain a gap.
- Epidemic surveillance and analysis at State/UT and district level is a major gap with almost no representation from private sector.

The other gaps are presented in section 6 along with strategies to address these gaps over this NSP period.

### 3.9 Research and Evaluation

HIV related research in India in diverse disciplines, i.e. epidemiological, clinical, behavioural and social sciences, based on sound knowledge and research support, has contributed to a much better understanding of the dynamics of the epidemic. The NACO recognises rigorous and scientific evidence as central to an effective response. However, critical gaps were observed under Research & Evaluation Division:



- 
- *Lack of assured funding support for research activities:* There are no dedicated funds available for operations research within NACP. Funding is available more on an *ad hoc* basis rather than in a planned manner. Donors have mostly funded programme activities while research and evaluation have been a low priority.
  - *Procedural delays in the processing of research proposals at the NACO:* The approval process on research studies needs a revision. Further, there are administrative delays in the release of funds which dissuades many researchers from even applying for the grants. This has led to loss of relevance of some studies since they do not serve the purpose of informing the programme in a timely manner.

### 3.10 Procurement and Supply Chain Management (PSM)

Procurement and supply chain management is one of the most important critical enabler in NACP and central to ensuring continuous, uninterrupted supply of services. In the absence of a well-functioning PSM, the implementation of prevention programmes, HIV testing services, and Treatment, care and support for HIV will be defunct and ineffective. For instance, a PLHIV who may not receive regular access to medicines is at increased risk for developing drug resistance which could lead to treatment failure unless second or third line treatment regimens are made available and easily accessible.

PSM practices under NACP have many gaps and challenges. The key gaps are:

- Lack of effective forecasting and real time data.
- Inadequate organisational arrangements to coordinate and manage an effective PSM.
- Lack of standard inventory management system across the system.



# National Strategic Plan for HIV/AIDS and STIs

## 4.1 Context of the Plan

India contributed to the elaboration of the Sustainable Development Goals (SDGs) for 2030. The SDG 3 encompasses Sub-Goal and Target 3.3 which includes 'Ending of the AIDS epidemic as a public health threat' by 2030. To achieve this target, countries need to fast track their HIV- response by 2020. India aims to achieve 90-90-90 as well as other Fast-Track targets and proposes to do so by scaling up strategic efforts while simultaneously maximizing returns on investments, which require sufficient human resources, technical know-how and financing. Enhancing the cost-effectiveness of interventions is a guiding principle for the NSP with specific attention on sustaining service-delivery in the long-run.



*Figure 16: UN Sustainable Development Goals*

Fast tracking the AIDS response requires strategic planning, predictable resource mobilisation and reinvigorating implementation which is more responsive to the local contexts and needs. Based on the Political Declaration at the High-Level Meeting (HLM) on HIV/AIDS in June 2016, which India was a signatory to, the United Nations defined ten global commitments that are essential to ensuring a continuum of prevention-testing-treatment and the required social enablers. The implementation of the Political Declaration is being monitored under the Global AIDS Monitoring (GAM) framework.

Despite the milestones achieved by the NACP, new HIV infections are still occurring across the country and particularly among certain geographic areas and populations. On an average, new infections are declining at a rate of 3% per year since 2010, and this is set to pose a significant challenge towards achieving the fast-track target of reductions in new infections by 75% by 2020. It is estimated that around 28% of estimated PLHIV do not yet know their HIV

- Evidence-informed and result-oriented
- Coverage and Quality
- Rights-based approach
- Investment
- Flexible and adaptive
- Multi-sectoral design and implementation

*Box 4: NSP Guiding Principles*

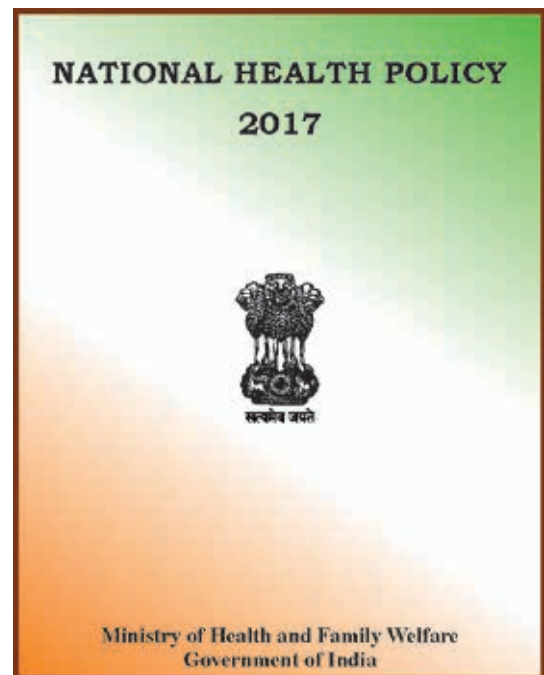
status and have no access to life-saving ART. Adherence to ART needs to be urgently increased to reduce mortality, morbidity and improve quality of life, but also prevent transmission through effectively reducing viral load. There is also an urgent need to close the testing and treatment gaps. The continuum or cascade of interventions can be strengthened through improved service accessibility, the reduction of stigma and discrimination and stimulating other social enablers. Considering the epidemic trends and geographical variations, the NSP 2017-24 will focus on the attainable vision of 'An AIDS Free India by 2030'.

## 4.2 Guiding principles

This NSP was developed in line with the following guiding principles:

- *Evidence-informed and result-oriented programme design:* The strategies detailed in this NSP draw on evidence and accordingly prioritise results.
- *Coverage and quality of interventions across regions:* Scaling up programmes for the greater good is the mantra, without compromising quality and comprehensiveness of services and equitable access.
- *Equity, gender and rights-based approach:* The AIDS programme is a unique public health response that touches multiple facets of human lives and should remain people and community-centric.
- *Relevant, efficient and result oriented investment:* Investment in combination prevention, which includes behavioural, bio-medical and enabling interventions must be cost-effective; and should have the benefit of minimal disruption to the socio-economic and cultural situation and development of individuals, families and the nation. The gains made due to infections averted or the loss accrued due Disability Adjusted Life Years (DALY) should be very high.
- *Flexible and adaptive:* The drivers of the epidemic as well as the response depend on various factors, including socio-economic and life-style context. The HIV response needs to consider varying epidemiological, structural and socio-cultural scenarios across State/UTs. Additionally, moving beyond the one-size-fits-all approach and shift analysis and planning to the sub-national and local levels.
- *Multi-sectoral and inclusive:* The health sector provides many but not all services in the continuum associated with HIV/AIDS. Therefore, a strategic multi-sectoral partnership is required involving various areas in the public sector, the private sector, civil society and community-based organisations.

During the development of this strategy, defining policy frameworks concerning the national, regional and global level were drawn upon, to articulate the vision, mission, goal and objectives of this NSP 2017-24. These have also included India's National Health Policy 2017.



**Figure 17: National Health Policy, 2017, Ministry of Health & Family Welfare, Govt of India**

## 4.3 Vision, Mission, Goal and Objectives

**Vision:** An AIDS Free India

**Mission:** Attain universal coverage of HIV prevention, testing, treatment to care continuum that is effective, inclusive, equitable and adapted to population and local needs.

**Goal:** Achieving zero new infections, zero AIDS-related deaths and zero AIDS related stigma & discrimination.

**Strategic Framework:** The NSP is designed around a results-based framework that reflects the fast-track targets and the 'ending of AIDS' commitment. The framework is based on a causal relationship between the vision, mission, goal and the outcomes. This will be articulated in terms of inputs, outputs and costs in the implementation plan. While there are several external and internal risks that may positively or adversely affect results, the combination of strategies adopted will be calibrated according to the epidemiological, health priorities and resource scenarios of different State/UTs and in cognisance of needs of people living with HIV and communities. Figure 18 on next page provides an overview of the overall NSP framework that is being proposed.

Based on the this strategic framework, a specific planning approach is required which helps differentiate States and Union Territories (UT) according to three predominant epidemiological contexts:

- (i) States/UT with a 'mature' epidemic where HIV incidence and prevalence are high in key, bridge and other at-risk populations and, in some cases, in other segments of the general population
- (ii) those States/UT where there are 'emerging' epidemics with relatively new and rising rates of infection among key, bridge and other at-risk populations
- (iii) States/UT with 'low' or stable epidemics where there is still a need to focus on potential risks among key, bridge and other at-risk populations, to maintain the low infection rates and eliminate HIV transmission. While a range of services is needed in all the three case scenarios, the mix and relative weight of each set of interventions and service-delivery models may need to vary accordingly. The most critical interventions include prevention, outreach, testing and counselling, treatment, PPTCT, viral load suppression, care and support, as well as social protection. Programmatic support components (e.g. monitoring and evaluation, surveillance, research, laboratory services, procurement etc.) remain relevant across all three contexts. However, the service delivery modality, the level of integration into health systems and corresponding budget requirements will vary according to the epidemiological, social and demographic characteristics of the above three contexts.

**Objectives:** This NSP proposes six objectives towards fulfilling its vision of an AIDS free India. These are:

Objective 1: Reduce 80% new infections by 2024 (Baseline 2010)

Objective 2: Ensure 95% of estimated PLHIV know their status by 2024

Objective 3: Ensure 95% PLHIV have ART initiation and retention by 2024, for sustained viral suppression

Objective 4: Eliminate mother-to-child transmission of HIV and Syphilis by 2020

Objective 5: Eliminate HIV/AIDS related stigma and discrimination by 2020

Objective 6: Facilitate sustainable NACP service delivery by 2024

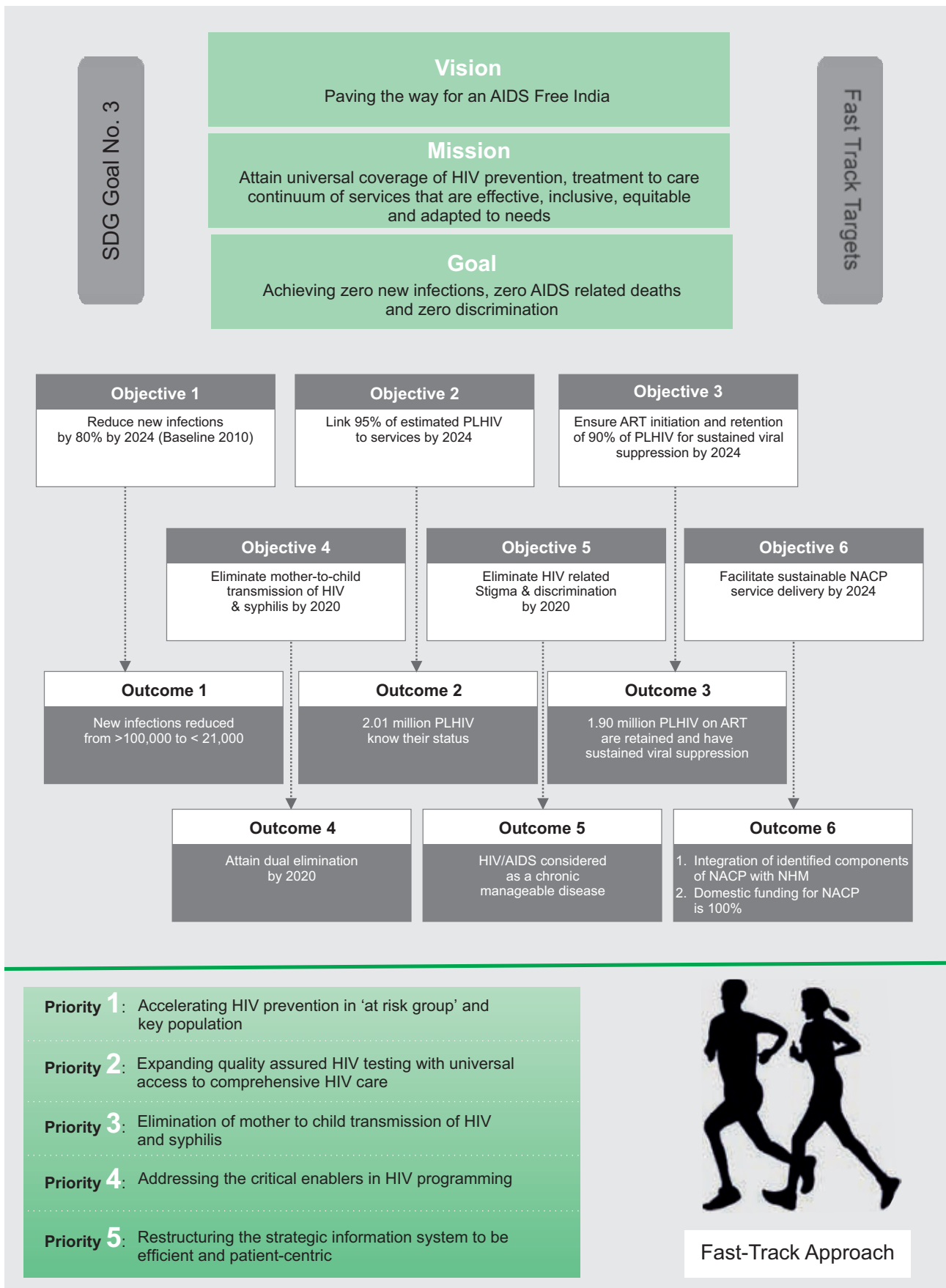


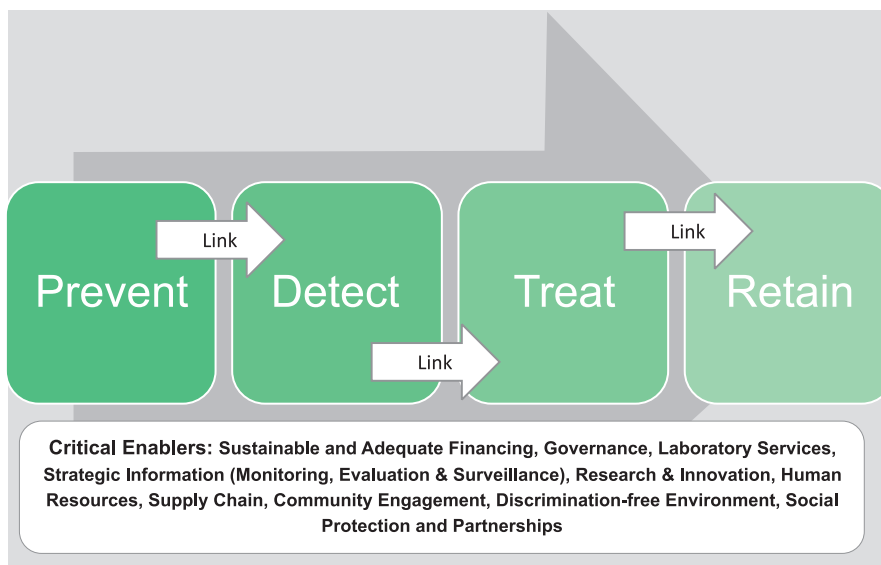
Figure 18: Overview of HIV NSP India 2017-24



Achievement of these objectives by 2024 would result in the following:

1. Estimated new infections will reduce from 102,226 (2010) to < 21,000 per year
2. 2.14 million PLHIV of the total estimated PLHIV (2.25 million) would know their status
3. 2.03 million PLHIV would be put on ART
4. 1.93 million PLHIV would be retained on treatment and have HIV VL <1000 copies/mL
5. Fullfilment of <50 cases of new paediatric HIV infections per 100,000 live births with a mother-to-child transmission rate of <5% by 2020 and maintenance of same thereof
6. Attainment of <50 cases of congenital syphilis per 100,000 live births and maintenance of same thereof
7. HIV/AIDS will be perceived as chronic manageable disease with no stigma and discrimination attached to it
8. Key components of the NACP such as prevention outreach, testing, treatment, prevention of mother-to-child transmission, viral load suppression, care and support, as well as social protection schemes will continue through 100% domestic funding

The Strategic Framework for this NSP is presented in Figure 19.



*Figure 19: Strategic Framework of the NSP*

The section on Gap Analysis provides information on key lacunae in selected programme areas of the NACP that are currently challenging the schedule from attaining its intended objectives. This NSP proposes a set of three major strategies to address the gaps for NACP to reach its milestones and goal.

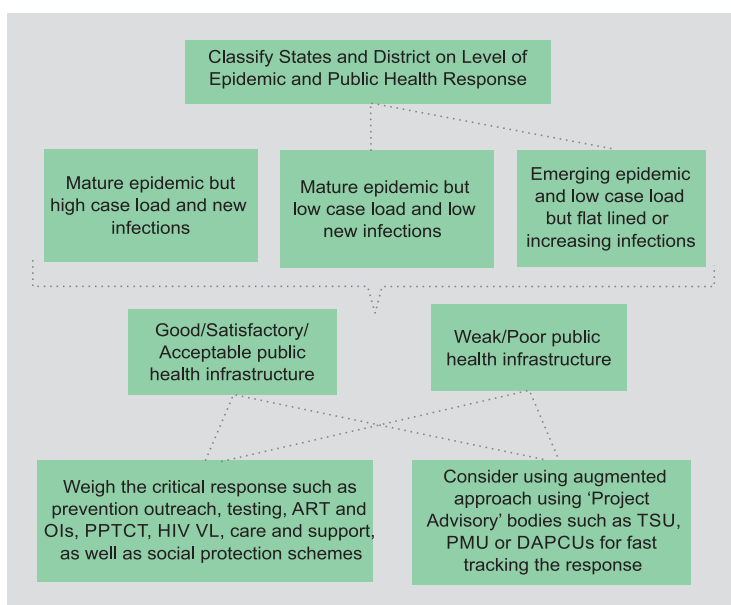
i. **Fast-Tracked Flexible Approach to HIV Programming:** The HIV epidemic is not uniform in all States/UTs of India, and even within the State/UTs, there are vast differences in both situational and epidemic trends. To address this issue, a flexible approach to HIV programming and implementation is proposed. The approach is shown in Figure 20. The critical elements to be considered are:

- Improving knowledge of level, trends and drivers of HIV epidemic and tailoring the response correspondingly,
- Capacitating State/UTs and districts to fast track the response,
- Active involvement of PLHIVs / NGOs/ CBOs/ Private Sector, as well as other sectors and departments.



It must be kept in mind that walking the last mile becomes progressively challenging due to saturation of identified groups and targets, especially in mature epidemic States which may have relatively higher programme coverage as compared to emerging epidemic States which have a lower schedule coverage. Moreover, tailored high-impact; low-cost response strategies will need to be considered noting the epidemic pattern, volume or number of people in need of services, and overall public health infrastructure. To reach the intended targets of this NSP, there should be enough flexibility to use related response mechanisms such as non-governmental agencies, private agencies etc. to fast track the response in areas which are in need of immediate action.

All people living with HIV and their spouses should know their status and be initiated on treatment soon after detection. This will significantly help in reducing new infections. Encouraging people living with HIV to voluntarily reach their other partners and contacts, without breaching privacy and confidentiality of individuals, will increase the detection of HIV and linkage to care. This will also enable the programme to reach wider at-risk populations through a social and sexual network approach.



**Figure 20: Fast Tracked Approach to HIV Programming**

**ii. Leveraging integration of the AIDS Programme with the National Health Mission:**

The NACP is in its fourth phase of implementation currently, and has accomplished several targets. Many external donors such as the World Bank, Global Fund for AIDS, TB and Malaria, UNAIDS, WHO, CDC, USAID, BMGF etc. have extended support for the same. But because of the dwindling funding scenario, an increased domestic budget support will be required in future to continue the momentum and impact for successfully accomplishing the last mile. A comprehensive resource mobilisation plan may also need to be considered to ensure adequate resource availability at the State/ UTs and district level for operationalising the NSP.

Many components of the NACP require support from general health systems and other programmes. For example, PPTCT is heavily dependent on the RMNCH+A programme to get pregnant mother under ANC care and hence tested for HIV. The STI programme also requires support from the NHM for reaching its targets. In districts, the DAPCU's already work closely with DPMU of the NHM on multiple activities.



India has passed the HIV Prevention and Control Act 2017. This seeks to ensure that PLHIVs have access to sustainable lifelong treatment, care and support beyond the life of the NACP.

The NACP would need to plan and transition its principal activities in a phased manner to the NHM for sustainability and continuation of services. In order to achieve this goal, the NACP and the NHM would have to put in synergistic efforts and develop an action plan to attain the milestones as detailed in this document. An Advisory Committee is proposed under this NSP to oversee the leverage, convergence and integration for goal achievement. The implementation details are presented in the section on implementation arrangements.

- iii. **Active collaboration with private sector:** Over the years, increasing efforts have been made to engage the private sector, but more work is needed in this area. This NSP recognises this as an opportunity for expanding the coverage of services and achieve greater impact. Suggested strategies along this line include:
- o Developing an Advocacy, Communication and Social Mobilisation (ACSM) approach
  - o Introducing policies and/or legislation on integration of private sector reporting with national programme management information systems
  - o Engaging public and private sector companies through their corporate social responsibility (CSR) functions and funds.

### Core indicators for monitoring the NSP

Globally, a set of ten commitments and corresponding indicators have been adopted for monitoring efforts to end the AIDS epidemic by 2030<sup>43</sup>. The indicators allow tracking progress on key components of the national response encompassing the complete spectrum of prevention, detection, treatment as well as stigma and discrimination related issues (Table 3 on page 40). A range of indicators are included, such as condom use, which has a direct impact on reducing new infections; HIV testing and counselling for PLHIV to learn about their status; enrolment on ART of those who know their status in order to reduce AIDS-related deaths; sustaining those already on ART on treatment to achieve suppressed viral load, and hence reduce HIV transmission; and the degree to which the national response is domestically funded. The progress on these core indicators will be measured through a comprehensive monitoring, evaluation and surveillance (MES) system. Ten core indicators are suggested to monitor progress and evaluate results of the NSP<sup>44</sup>.

43 Global AIDS Monitoring, 2017. [http://www.unaids.org/sites/default/files/media\\_asset/2017-Global-AIDS-Monitoring\\_en.pdf](http://www.unaids.org/sites/default/files/media_asset/2017-Global-AIDS-Monitoring_en.pdf)

44 Consolidated strategic information guidelines for HIV in the health sector, 2015. [http://apps.who.int/iris/bitstream/10665/164716/1/9789241508759\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/164716/1/9789241508759_eng.pdf)

**Table 3: Indicators for monitoring NSP progress 2017-24**

Indicator	Baseline (2010)	2020	2024	Data source
1. Number of people living with HIV/AIDS (in million)		2.13	2.25	HIV Estimates/Modelling
2. Percentage of HIV response financed through domestic budget (sustainable service delivery)		80%	100%	Programme data
3. Percentage of condom use among key populations and sterile needles/syringes among PWID		80%	90%	IBBS or HSS Plus
4. Number and percentage of PLHIVs who have been diagnosed with HIV (in million)		1.75 (82%)	2.14 (95%)	Programme data
5. Number and percentage of diagnosed PLHIVs currently on ART (in million)		1.53 (87%)	2.03 (95%)	Programme data
6. Percentage of PLHIVs retained and surviving on ART (12 months, 24 months and 60 months)		78% - 12 months	95% - 12 months	Programme data
7. Percentage of PLHIV undergone VL test (in million)		1.1	1.6	Programme data
8. Number and percentage of PLHIV and on ART who are virologically suppressed (among all those currently on treatment who received a VL measurement regardless of when they started on ART) (in million)		0.99 (90%)	1.52 (95%)	Programme data
9. Number and percentage of pregnant women tested for HIV		28.5 (90%)	25.69 (95%)	Programme data
10. Number and percentage of HIV-related deaths		TBD	TBD	HIV Estimates/Modelling
11. Number and percentage of new HIV infections (Incidence)			< 21,000 (80%)	HIV Estimates/Modelling

The details of measurement design of these indicators have been described in MES section.

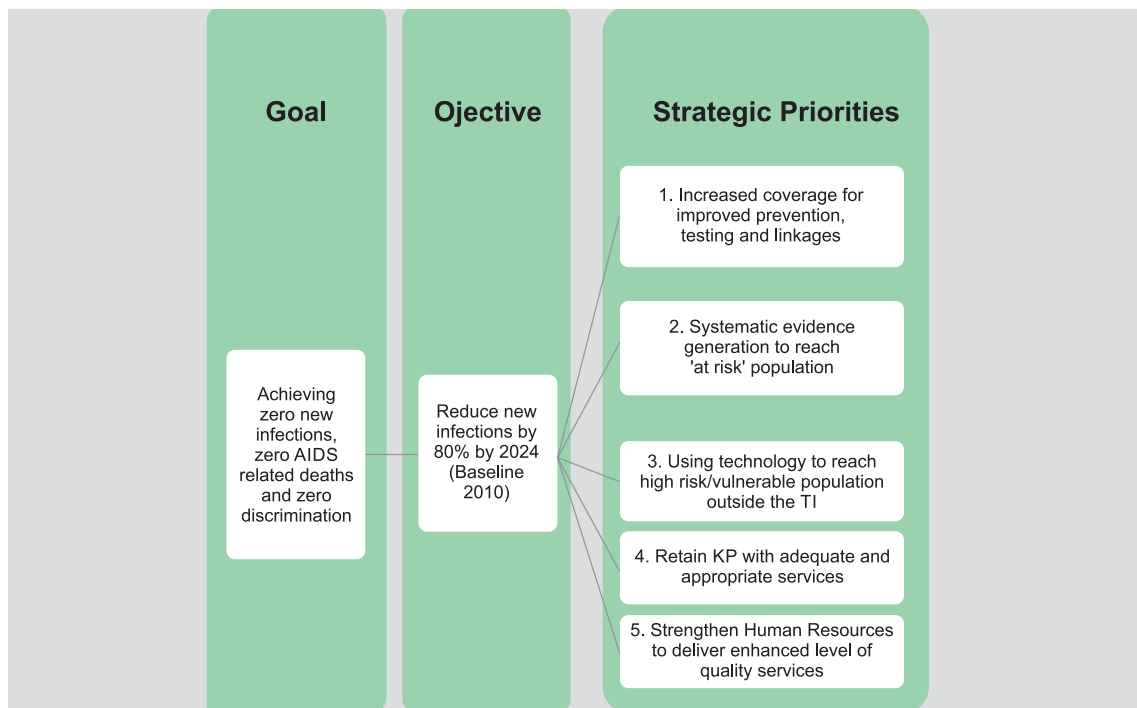
## 4.4 Priority areas

### 4.4.1 Priority 1: Accelerating HIV Prevention in ‘at risk’ population including ‘key population

#### A. Refocusing HIV interventions in Key Populations for improved reach

Addressing existing gaps in prevention outreach for KPs is vital at this stage of the program. In addition to the major disparities noted in the previous chapter, following are the other broad voids that need attention.

- Within a TI, individuals may have different risk and vulnerability profiles and needs. These are not optimally addressed in a comprehensive and conducive manner, as per risk profiles, which affect service uptake thus, leading to lower efficiency.
- While the aim was to strengthen and empower the community, consistent CBOs capacity across the country is a challenge.



**Figure 21: Overview of Strategic Priorities for HIV Prevention for KPs**

- Intervention intensity generally follows prevalence data, though greater focus needs to be on monitoring annual new HIV infections across various populations. Available evidence reflects a rising epidemic of new HIV infections in certain hitherto low prevalence States and districts. These areas have higher vulnerabilities, including migration to high prevalence areas. Therefore, these geographies need to be given priority when moving towards ending AIDS.
- Linkage of sub-set of populations from TIs (truckers, migrants, FSW and PWIDs) to treatment, care and support continues to be weak. Anecdotal evidence indicates that HIV service uptake in a general health setting is also poor/lacking.
- ART adherence among KPs is a major challenge<sup>45</sup>. Additionally, the HIV and TB co-infection rates are higher with low uptake of services.
- Evidences indicate higher prevalence of HCV among PWIDs. The programme need to address the situation considering the same transmission route of HIV and HCV.
- There is a resource gap in implementing the KP interventions.

<sup>45</sup>Mhaskar R, Alandikar V, Emmanuel P, Djulbegovic B, Patel S, Patel A, Naik E, Mohapatra S, Kumar A. (2013) Adherence to antiretroviral therapy in India: A systematic review and meta-analysis. Indian J Community Med 38:74-82

- The profiles of the KPs have changed. The *'identifiable group'* may possibly be having lower risk behaviour and saturated with TIs. The *'expanded group'* that is yet to be clearly identified and reached, could fuel the epidemic in the future. There is a gap in identification and reach of this *'expanded group'* of FSW, MSM and PWID with sustained parallel focus on those already receiving services.

The HIV epidemic level and trend among key and other at-risk populations is not uniform at the inter-state level. Updated data on HIV prevalence among key population is expected in 2017. However, available information suggests that HIV, though declined significantly amongst FSW, continues to pose challenges among other key populations - especially PWID, TG and MSM - at national, state and district levels. Even among FSWs, HIV prevalence among southern and western States of Andhra Pradesh, Maharashtra and Karnataka remains high. It indicates that the scenario continues to be challenging and that there is no place for complacency as the endeavour is to secure the end of AIDS as a public health threat.

The epidemic among key populations has the potential to rebound — and may further proliferate to other *'at risk'* populations considering the transmission dynamics — that may undo the gains of three decades of programming. If the quality and comprehensiveness of all services are scaled-up to reach all those in need, and the link between prevention with care and treatment is strengthened; it would help break the chain of HIV transmission. This, as treatment adherence contributes to viral load suppression and therefore, resulting in reduced transmission.

Programme gap analysis has highlighted a decline in the coverage of KP in NACP IV through decline in number of Targeted Interventions (TIs). This is of concern as KPs remain at risk and vulnerable to HIV infection. The National IBBS 2014-15 indicated that, while the reach of targeted interventions is quite high especially in certain States, the intensity of the coverage has lots of scope of improvement and access to a comprehensive range of services. The National IBBS has also revealed that prevalence of safe risk behaviours, such as consistent use of condoms, is moderate in FSW and MSM<sup>46</sup> while a sizeable proportion of all KPs are married. This highlights the need of sustained coverage of high intensity among the group to ensure that further HIV infection is prevented and does not spread among KP's spouses as well as regular and casual partners.

The HIV prevention programme has enabled epidemic control. This is particularly evident in the now mature epidemic States where annual new HIV infections have declined sizeably. However, addressing identified gaps is necessary to accomplish the primary objective of 80% reduction in new infections by 2024.

A brief strategic approach and plan is presented in this section.

## **I. Increasing coverage for improved prevention, testing and treatment**

### a) Increase the number of TIs for better coverage

TIs have proposed a scale up plan for optimal coverage from 2017-20. Currently funded through The World Bank NASCP, the funding comes to an end in 2020 unless there is an extension of support for TIs.

The proposed targets for 2017-24 period are provided in table below:

<sup>46</sup> National IBBS among HRG, 2014-15

**Table 4: Scale up plan for 2017-24 Targeted Interventions for KPs and At Risk Groups**

Year	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Group	Coverage in Lakhs						
<b>FSW</b>	6.5	7.0	7.7	8.1	8.3	8.4	8.4
<b>MSM</b>	2.20	2.40	2.60	2.73	2.80	2.83	2.85
<b>TG/Hijra</b>	0.30	0.35	0.40	0.42	0.43	0.44	0.44
<b>PWID/IDU</b>	1.21	1.31	1.41	1.48	1.52	1.54	1.55
<b>Migrants</b>	33.0	36.0	39.0	40.95	41.97	42.50	42.76
<b>Truckers</b>	11.0	11.5	12.0	12.60	12.92	13.08	13.16
<b>LWS (KP)</b>	1.13	1.25	1.37	1.44	1.47	1.49	1.50
<b>LWS (VP or At Risk)</b>	16.0	17.6	19.0	19.95	20.45	20.70	20.83

The quickest way to increase coverage is to rapidly increase TI sites, and ensure efficient outreach and service quality — for better uptake and retention of KP, bridge and ‘at risk’ population. Efficient linkage to care and treatment services are critical under the new ‘test and treat’ approach to ensure no leak in the HIV care continuum cascade. This ensures coverage of easiest target of ‘high risk’ population groups. The increased coverage and reach will encrust the mapped community, while moving beyond the chartered community would require other outreach strategies.

b) Adapt TI strategy for interventions among newer static groups, including prisoner populations and adolescent PWIDs

Global evidence shows that prevalence of HIV, viral hepatitis, tuberculosis (TB) and other viruses in prison populations are many times higher than the general population (2-50%). A study conducted in Tihar Jail in Delhi has shown that 8% of prisoners<sup>47</sup> were known to be drug users. A more recent study of 466 inmates in Delhi, Mumbai and Punjab prisons showed that 63% reported to using illicit drugs<sup>48</sup>. In India, seven studies have shown HIV rates up to 14% among female prisoners and up to 7% among male prisoners.

Analysis of Indian prison data in 2015 indicated that across 1,401 prisons, there were 4,19,62,349 prison inmates including 2,82,076 under trial (67.2% of total inmates). Eighty eight percent of the under-trial prisoners were below the age of 50 years and will eventually return to the community outside the prison. To address this population, static prevention service will be provided. Introduction of TI in prisons will require close coordination with the Ministry of Home Affairs (MHA) to effectively implement the HIV prevention and treatment service. The National Prison HIV strategy has been developed, funded and will be implemented in the next phase of TIs (2017-20).

47 Sethi HS. (2002) Drug abuse among prison population: A case study of Tihar Jail. New Delhi: MSJE, Govt. of India and UNODC.

48 Prevention of spread of HIV amongst vulnerable groups in South Asia: Our work in South Asian prisons. New Delhi: UNODC; 2008

49 As on 31<sup>st</sup> December 2015. National Prison Directory data. As quoted in Restructuring of TIs 2017-2020 pp 28.



## II. Systematic evidence generation and data mining to locate newer high risk population groups for focused delivery of prevention services

According to the 2011 Census, Male Migrants, who move across districts or State/UTs for work/employment, are estimated to be about 46 million. Tracking them and providing prevention services to them across the country is not feasible. However, increasing use of 'big data' may provide an opportunity to enhance knowledge on migration and mobility, and information on their trends and patterns. The data is collected from various sources including from the railway booking systems and as well as post offices offering money transfer services. Banking and digital payment transfer platforms are another source of such data. Negotiations to use big data to facilitate health service delivery will be required while checks and balances to ensure anonymity and confidentiality need to be put into place.

Concurrently, the existing NACO database on migrants called Migrant Service Delivery System (MSDS) may also be mined for providing differential prevention and care services to population groups within the broad migrants' category.

### *Special Population Groups*

Mining of available TI data on PWID, FSW, MSM, H/TG could be used to identify behaviour patterns, movement patterns, smaller or newer groups. Definitions of KPs and their sub-groups will need to be refined to ensure that all vulnerable groups are adequately captured and targeted by prevention interventions. This will enable focused prevention and treatment services as well as differentiated services.

### *Addressing the Prevention Needs of 'At Risk Population' for HIV and STIs*

Three decades of HIV programming has been able to communicate HIV prevention messages across the youth and population at large. However, with an ever-growing younger population, targeted prevention interventions among the newer or expanded young population and those 'at risk' require further strengthening. While combination prevention services available under the programme can be accessed by youth and the 'at risk' population at large, this NSP proposes a time bound epidemiological and behavioural investigations to get information on this population and design of a more appropriate prevention measures to address the risk of HIV (**Annexure 1**).

It is further understood that the effective coverage of this 'at risk' group may not be possible before 2020, which is the end date for 'fast track' targets. Thus, alternative measures that could be undertaken during the intermediary period. This could include:

- Use of mass media, mid media, social media and IEC to have HIV prevention messages, and information on service availability, spread out in population groups beyond KPs, including youth who do not fall into the conventional KP groups.
- Expand sexual and reproductive health education with a focus on HIV prevention across all public and private high schools and among youth, in and out of school.
- Target youth with focused intervention and convergence with the NHM.

## III. Using technology to reach high risk/vulnerable population outside the TI

Information technology is rapidly evolving and changing the channels of interaction between people, including how sexual partners meet and sex is transacted. Social change is occurring more rapidly, and with it, sex work has begun to move from physical venues to mobile phone and web based virtual sites.



Presently smart phones/mobiles have become one of the primary mechanisms for soliciting commercial sex<sup>50</sup>. Peers willing to embed themselves within these networks will be used to reach and provide services to the mobile and internet networks. Another area to explore further is the use of biometrics to map migratory sex workers and locate newer areas of sex work.

Differential approaches are required to cater to the changing trends in sex work from brothel to streets, lodges and hotels, homes, rented spaces and other non-traditional hotspots as also confirmed by the 2014-15 IBBS. The differential approach will consider specifically tailored strategies for urban and rural based sex workers more generally, while also considering the volume of populations that would need to be reached at the district/State level and this would require innovative local mechanisms to reach out to a wider gambit of population. Younger peer workers may be required to reach out to young and new sex workers. Accessing younger workers may require agreements with the network drivers or owners which will have policy and legal implications.

Under a comprehensive health service approach, use of a common platform of 'sexual and reproductive health' to provide telephone counselling and referrals would generate linkages that can be converted for prevention services<sup>51</sup>.

A groundswell of information will need to be created through use of social media and over a variety of channels within a concentrated period. This will be used to establish contact recall for SRH information for provision of prevention services.

#### **IV. Retain KP with adequate and appropriate services**

##### *Commodities*

The efficacy of comprehensive combination prevention services is highly dependent on the availability of essential commodities and provision of appropriate services. KP under TI need an uninterrupted supply of commodities in adequate quantities to ensure effective prevention. Presently supply chain glitches as well as modest forecasting of commodity requirements mean poorer quality of protection services with gaps.

##### *Services*


TI programme need to be updated considering the current needs of KP, bridge population and other 'at risk' focus populations as well as local socio-cultural contexts. The TIs at present provide basic prevention services. Under a combination prevention approach, testing and treatment for HIV and SRH will also be included. Mobile KP will benefit from 'one stop' prevention, testing and treatment facilities which will create increased demand and prevent multiple loss to follow-up.

##### *Risk segmentation and prioritisation of services*

Enhanced services will also focus on risk segmentation to move less risk behaviour individuals faster through the unit and focus on those who are more at risk. Vulnerability profiling by using data from different sources will also be an important means to develop outreach and IEC strategies. However, this vulnerability profiling and risk segmentation needs to be done strategically as those who may be perceived at 'less risk' still require access to prevention commodities, HIV testing services, etc. Similarly, prevention

50 Navani-Vazirani S, Solomon D, Gopalakrishnan et al. (2015) Mobile phones and sex work in South India: the emerging role of mobile phones in condom use by female sex workers in two Indian states. *Cult Health Sex.* 17(2): 252-265.

51 Sambasivan N, Weber J, Cutrell E. (2011) Designing a phone broadcasting system for urban sex workers in India, May 1, 2011; Proceedings of the annual conference on Human Factors in Computing Systems.



interventions should be designed and contextualised through closer collaboration with communities and people living with HIV. There is need for further research, including qualitative studies for better understanding of behaviour of different groups.

#### *Hepatitis C:*

A 2014 study on burden of Hepatitis C virus disease and access to Hepatitis C virus services in people who inject drugs in India by S S Solomon et al, was the most recent study to assess the burden of Hep C among PWIDs. The study tested 14,481 PWIDs in 15 cities across India. The prevalence of HIV among this population was found to be 5.7%, however the Hep C prevalence was 25.6% and prevalence of coinfection of Hep C and HIV was 14.4%. In addition to this, 6 of the 15 cities showed a co-infection of higher than 30%. To address this, the NSP envisages comprehensive Hepatitis C screening and treatment among KP. It will include capacitated delivery of comprehensive package including IEC, screening and linkages for KP.

### **V. Strengthen Human Resources to deliver enhanced level of quality services**

Prevention services to the last mile clients will need dedicated and skilled human resources (HR) at all levels of the service continuum. Both numbers and quality of staff will need to increase. A comprehensive capacity building cum training plan, with induction, refresher and multiple thematic trainings provided.

#### *Capacity building*

- The cascade training plans (across all thematic areas) could make way for more cost-effective web based training sessions. These video and podcast based training modules will allow for less disruptive training, pursuing of training at individual speeds and an evaluation at the end. All modules would include a specific session on non-discriminatory, quality service provision, as appropriate.
- Using these training methods, all staff would be expected to complete a set of modules. Completion of training modules could have a significant weightage on their next increment.
- Telephone based mentorship and supportive supervision would also be made available for all staff to motivate and keep them focused.

Team building time and budget could be made available for all TIs.

#### *Addressing stigma and discrimination*

In addition to focusing on reducing stigma and discrimination through focused IEC, engagement with law enforcement agencies, mechanisms for formal engagement with professional bodies will be developed to reduce stigma and discrimination and enhance the access to HIV prevention and treatment services. Sensitisation and training programmes for healthcare professionals will be carried out. Advocacy will be carried out to make such training an integral part of the medical curriculum, especially in practical testing.

#### *Peer Ratio, Peer Navigator and Peer Advocate*

An HR ratio for 'Peer to Key Population' (1:40 and 1:60) will be maintained with flexibility available to States to decide on the HR requirement to reach a wider population catchment as required, within reason, and without creating an adverse effect on quality of outreach services.

An intermediary resource person, called a "peer advocate" and 'peer navigator', functioning between the Outreach Worker (ORW) and the Peer Educator (PE) to undertake responsibilities such as advocacy with



law enforcement, external stakeholders, linkages to ICTC/ART, District Legal Services Authority (DLSA) among others, will be introduced, wherever necessary.

### *Community strengthening to reach last mile*

Creating an enabling environment through community involvement and participation at various levels of decentralised planning/programming and implementation is crucial to ensure that services available for various population groups are relevant, and designed in a manner that is responsive to their needs; further, can facilitate service retention across the HIV care continuum. Involvement of people living with HIV will also be critical to design more inclusive approaches for facilitating couple counselling and testing, HIV prevention services for partners of migrants in source sites, and referral and access of women and spouses to wider HIV-health services including STI, cervical cancer screening, etc. Community mobilisation and ownership building is essential to reach the last mile.

## **B. Strengthen STI/RTI Control and Prevention**

There is an established epidemiological synergy between HIV and STI. To impact HIV transmission and improved sexual and reproductive health, there is a need to strengthen STI/RTI diagnosis and treatment. The vision of STI/RTI control and prevention programme is to provide standardised STI/RTI services as part of Sexual and Reproductive Health (SRH) services at all levels of health system through convergence with the NHM and private sector; especially focusing on 'at risk' population, women, adolescent and marginalised population. The programme will build capacity of health care providers in both public and private sector and position regular supportive supervision to enhance the quality of services. The specific strategies are as below:

### **I. Comprehensive STI/RTI services as a part SRH umbrella**

Sexual and reproductive health is a state of complete physical, mental and social well-being in all matters relating to the reproductive system. Every individual has the right to make their own choices about their sexual and reproductive health. Syndromic case management with appropriate laboratory test, inclusive of screening for HIV as well as Syphilis, will remain the corner stone of STI/RTI management for 'at risk' as well as general population at all levels of care. The service package would include free supply of condoms, partner management and counselling services. The 'Suraksha Clinic' brand may be extended to all health facilities to destigmatise as well as standardise.

### **Partnership with organized public sector and private sector to enhance coverage and reach**

Large proportion of the STI/RTI burden is hidden and service providers range from unqualified practitioners to highly qualified specialists in public and private settings. The NSP envisions partnership between the organised public sector and private sector through nationally accredited professional organisations in order to build capacity, standardise service delivery and improve reporting.

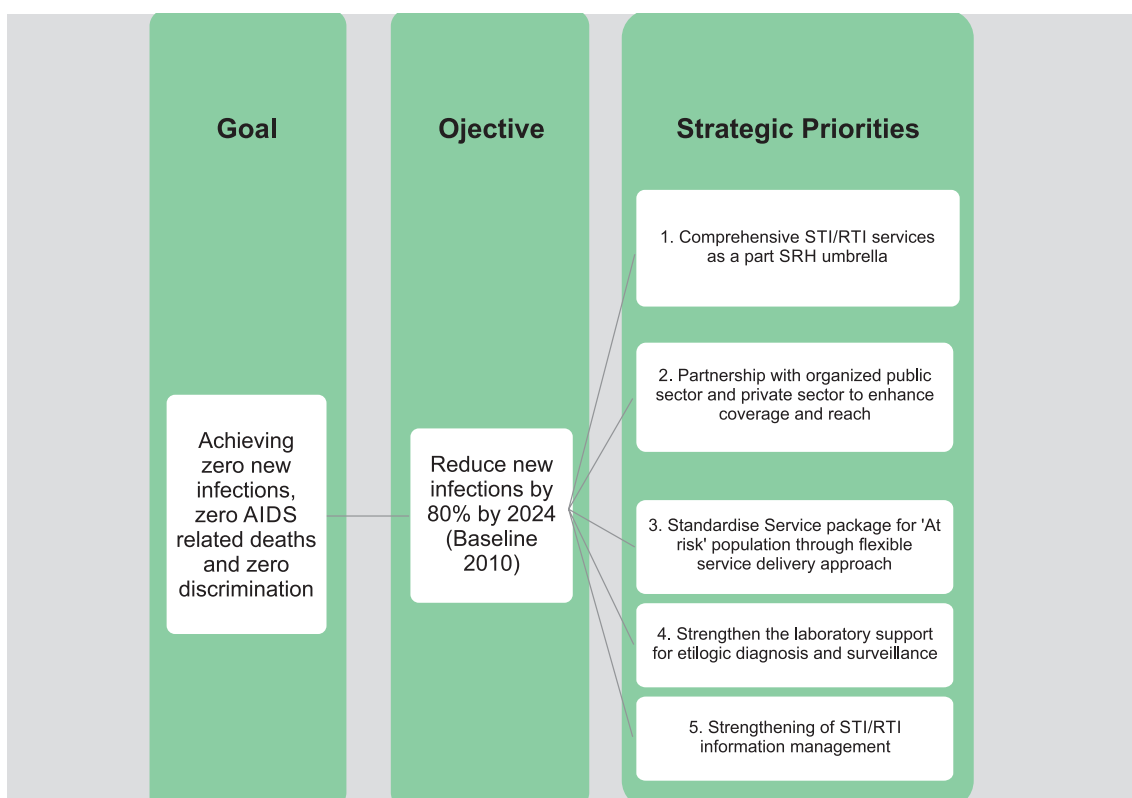
### **II. Standardise service package for 'at risk' population through flexible service delivery approach**

Regular clinical contact with key populations is important to reinforce preventive communication, counselling, addressing the SRH need and providing free STI/RTI management. STI/RTI services will be provided at all TI's as part of the enhanced response. This will include symptomatic and presumptive treatment, a regular medical check-up, and biannual periodic Syphilis screening. Different modalities of service delivery, including static clinics, mobile clinics, preferred providers, health camps, linkage to government facilities and hybrid models, would ensure flexibility.

### III. Strengthen the laboratory support for etiologic diagnosis and surveillance

Syndromic case management needs validation by laboratory tests and periodic monitoring of anti-microbial susceptibility testing. Existing network of regional and State STI laboratories would be strengthened and capacitated to conduct etiologic diagnosis, syndromic validations, gonococcal anti-microbial susceptibility (GASP), Syphilis EQAS and provision of evidence based directions to STI programme through research activities. STI etiologic based surveillance system would be set-up to monitor trends of STI over time.

**IV. Strengthening of STI/RTI information management** an integrated information management system. Community based prevalence studies will be implemented to have a recent burden estimates and assess elimination of STIs. Feasible bio-markers for STI would be included in routine HSS.



**Figure 22: Overview of Strategic Priorities to Strengthen STI/RTI Control and Prevention**

#### 4.4.2 Priority 2: Expanding Quality Assured HIV Testing with Universal Access to quality assured comprehensive HIV care

##### A. Expanding Quality Assured HIV Testing

India is committed to achieving the 90-90-90 targets across the country and population groups by 2020. To reach the second and third 90, it is necessary to achieve the first target i.e. 90% of PLHIV know their status. This cannot be achieved unless the programme significantly scales up HIV testing and counselling in key geographies and populations with highest yield, using a blend of strategies including facility based services, use of mobile clinics/vans and community based testing, etc. A continuum of supplies to all HIV counselling and testing facilities i.e. Screening (F-ICTC) & Confirmatory (SA-ICTC) for effective programme performance and satisfactory service to clients must be ensured. Presently ICTC facilities are available at 22,222 health units in both public and private sectors, reaching every block in the country.

As detailed under the gap analysis, the NACP IV surpassed its proposed targets, but nevertheless, the PLHIV who know their status still remain below the 'fast track' target of 90%. Some of the other gaps identified under MTA and programme review are:

- **Gaps in HIV testing:** Analysis of programme data has indicated that there is 33-43% gap in testing of KP, around 90% gap in testing of bridge population, around 65% gap in testing of STI clients, 23% in TB patients, 45% in pregnant women and 64% in partners of PLHIV. HCT facilities are only available in 40% of government health facilities. The gap at the PHC level is 60%, at the CHC/RHC level it is 39%, at UHP/Maternity homes, it is 95% and in Prisons/Jails, it is 89%. Private sector response is seen to be limited.
- **Gaps in HIV case detection:** Out of the estimated 2.12 million PLHIV, 1.52 million have been identified and registered for ART care as on March 2016<sup>52</sup>. In other words, there is a gap of 28% in detection of PLHIV. Also, there is need to plug the lacunae between screening and confirmatory test in cases of people having tested reactive to HIV having been referred from different sources of screening points.
- **Late detection of PLHIV:** As noted from programmatic data analysis, the median baseline CD4 count was 25653. With '90-90-90' being the cornerstone of NSP, the emphasis would need to be on early detection through strategies of community based testing, graded approach to testing and geo-prioritisation.
- **High concordance among spouses:** There is scope to reinforce couple counselling and HIV testing for early detection. The current high concordance is assigned to time lapse in testing. It is expected to shift to higher proportion of sero-discordance when couple testing becomes normalised, testing uptake increases, and treatment is initiated soon after detection for viral load suppression. In this context, primary and secondary HIV prevention services to reduce the transmission are critical. Currently, the sero-discordant rates are approximately 30%. Early detection is expected to lead to lower levels of sero-discordance over time.
- **Gaps in reporting on HIV testing by private sector:** HIV tests are performed in the private sector especially in large conglomerate laboratories. However, the current reporting system at the NACO does not capture this data.
- **Unequal distribution of Testing Centres:** There are presently 22,222 ICTCs in India. However, their distribution is unequal across the State/UTs. In States that have improved public health infrastructure, such as Tamil Nadu, Andhra Pradesh, Karnataka and Kerala, the density of ICTCs range up to 30 per district. But in northern and eastern States like Uttar Pradesh, Bihar, Jharkhand, Odisha etc. the density ranges from less than 5 to a maximum of about 10 per district. Some of these are States showing a rise in the epidemic.

Further, as members of the pool of HIV positive people are identified and swiftly put on treatment, the positivity rate will go down with diminishing testing yield, and it will become harder to find the remaining cases for which more strategic interventions and approaches will be needed, and are being considered. Of the 29 million tests done in 2015-16, newly detected HIV positive cases were 2,00,465, of which 1,82,743 were linked to care. The basic estimate of the number of tests required to reach '90% of estimated PLHIV' across different sub-groups such as pregnant women, TB, STI patients and chronic disease patients are provided in Table 5

52 Programme Data. CST Division. National AIDS Control Organisation, Ministry of Health and Family Welfare, Govt. of India  
53 Programme data analysis provided by CST division of NACO

**Table 5: Estimates of test required among different population groups to achieve first 90%**

	Preg. Wom.	TB	STI	Chronic. Pat.	KP	Gen Clients	Total
<b>Min number of HIV tests req. (in millions) for saturation</b>	30.0	9.8	30.0	15.0	7.0	35.0	126.8
<b>Number of HIV tests required for scale up (Moderate Coverage)</b>	30.0	2.0	9.0	3.0	5.0	11.0	70.0

Using the table above, a graded target for testing is presented in Table 6 below:

**Table 6: Targets for HIV Testing 2017-24 in India**

Indicator	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Estimated number of PLHIVs (in mil.)</b>	2.11	2.11	2.11	2.12	2.13	2.18	2.21	2.25
<b>HIV Positive detection</b>	1.58	1.60	1.64	1.70	1.75	2.00	2.03	2.14
<b>Proposed coverage (in mill)</b>	34.6*	36.14	40.0	45.0	50.0	66.80	78.83	90.01

\* Actual data for testing

As detailed in section on gap analysis, the current pace is not adequate to detect the targets proposed under 95-95-95 scenario. The above table proposes two scenarios, one a moderate increase in testing and another, the optimal requirements. These are estimates and have been derived through linear forecasting methods.

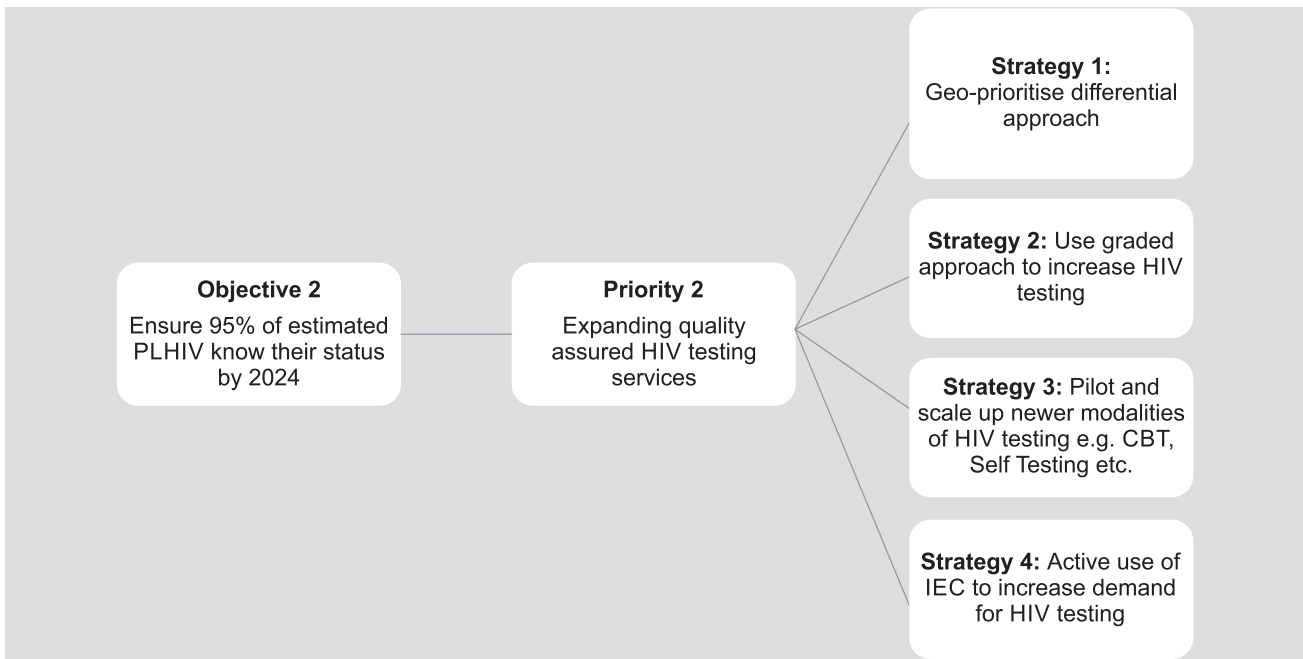
The key strategy proposed for increasing HIV testing coverage, keeping in view the yield and value for money context, is to saturate high yield areas first and then expand to other areas.

The overview of strategies are shown in Figure 23 on next page.

The major strategies proposed to increase HIV testing include: (a) Geo prioritising the districts where higher positivity is noted but have a low coverage of testing; (b) Using a graded approach of screening in wider net (PHCs, Community Based Testing, Self-Testing etc.) and confirmatory in select quality assured centres; (c) Pilot and scale up newer modalities of HIV testing such as community based testing for KPs, pregnant women, TB patients, STI and others as appropriate, self-testing and (d) Active use of IEC to increase demand for HIV testing.

Some other strategies would include cross cutting areas such as

- Development of technological solutions for reporting diseases including HIV, syndromic STI, TB, Hepatitis C and Hepatitis B (part of MES)
- Strengthening CHCs to work as HIV confirmation centres (Institutional strengthening)
- Integration of gender sensitive HIV and STI testing with the NHM facilities (integration strategy)



*Figure 23: Overview of major strategies for HIV testing service*

**Community based screening** would be an important strategy for improving early diagnosis especially reaching those people who seldom use clinical services, including men and adolescents in high-prevalence settings and HRG populations.

**Graded approach to testing** implies there are more screening centres with a single screening test and fewer confirmatory centres so that reach and workload is distributed for high efficiency while maintaining quality of services.

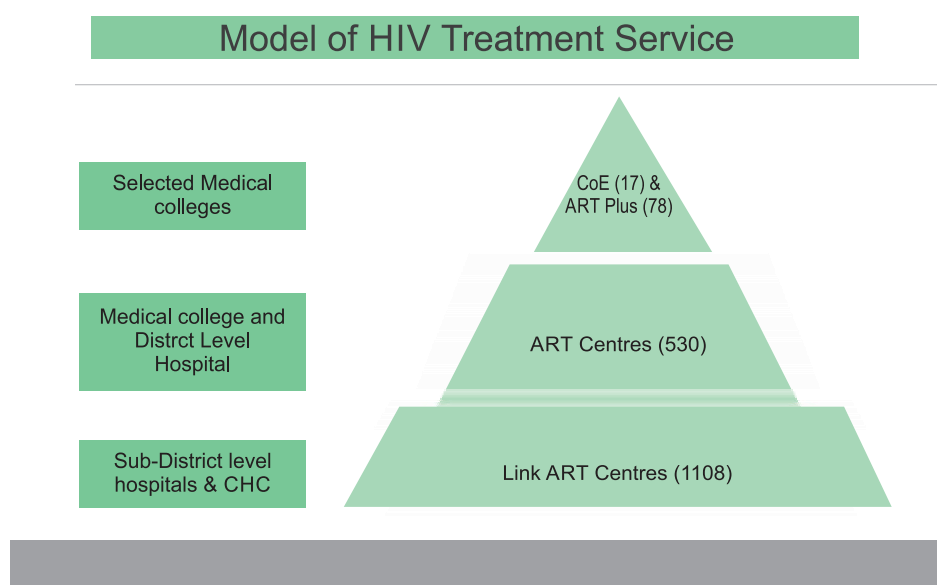
The other strategies of testing are discussed in detail in the operational guidelines for HIV Testing and Counselling (HTCS).

#### *B. Universal access to quality assured comprehensive HIV Care*

The Government of India announced the '**test and treat**' policy for all PLHIVs, aligned with the WHO/UNAIDS recommendations for providing universal access to comprehensive, equitable, stigma free, quality care, support and treatment services to all PLHIV. As noted earlier, this is the key area for the NACP to address. There is currently a gap of almost 7,00,000 PLHIVs who are yet to be put on treatment. As detailed earlier, ART coverage, leaky cascade, quality of care and poor functioning of LACs remains a major gap. Apart from these gaps, there are cross cutting challenges such as (i) lack of manpower and infrastructure, and (ii) supply chain management.

The current structure of treatment care and support consists of:

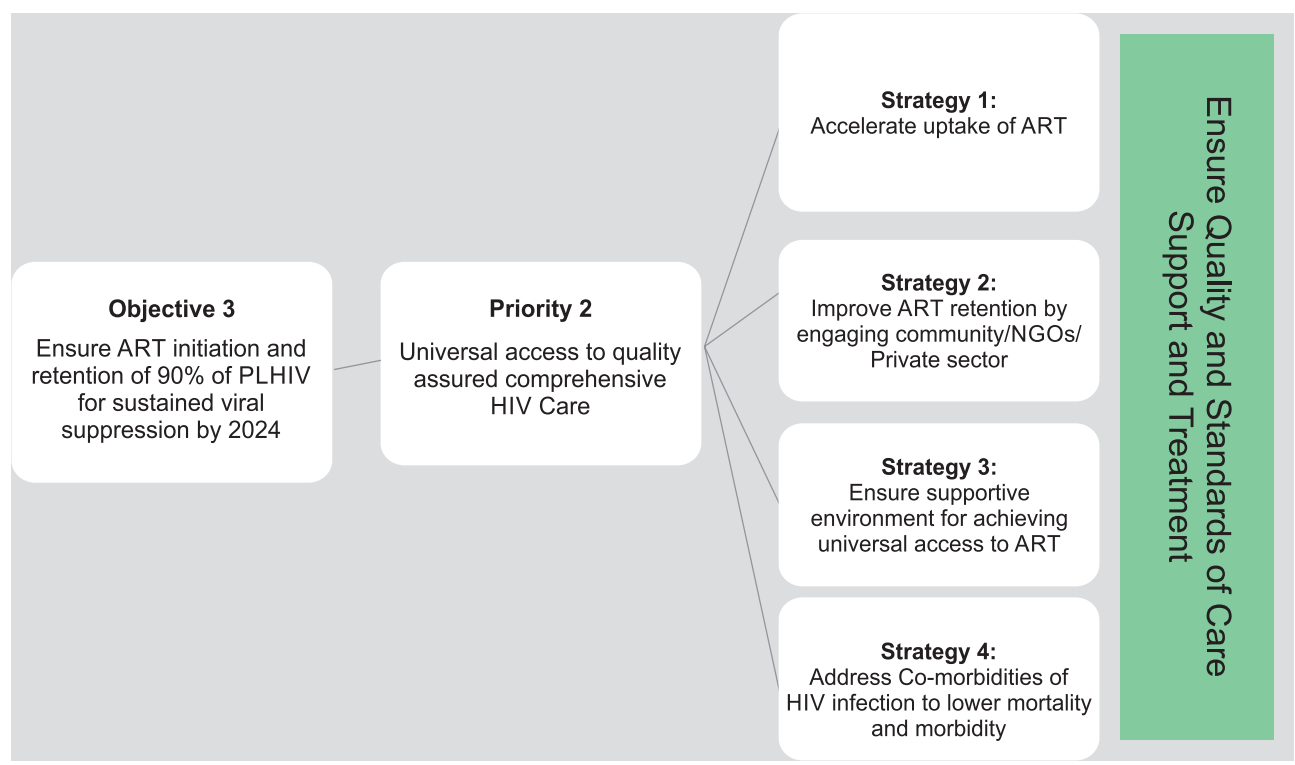
- Standardised Antiretroviral Therapy including first, second and third line treatment.



**Figure 24: Model of HIV Treatment Services in India**

- Prophylaxis – diagnosis – management of Opportunistic Infections and Comorbidities.
- Laboratory monitoring of response to treatment with CD4 and Viral Load testing.
- Care and Support through individualised and thematic counselling, positive living, positive prevention, family centric approach, and linkages to social beneficiary schemes.

The major strategies planned in CST to achieve the objectives of this NSP is presented in Figure 26 on page 50.



**Figure 25: Overview of the key strategies in achieving universal access to quality assured ART**



**I. Accelerate uptake of ART:** Increasing the pace of expansion of ART coverage and improving ART adherence are the primary objectives of this NSP to reaching the second and third 90. However, as noted from the section on gap analysis, by 2020, around 7,00,000 more PLHIVs would be put on treatment if the detection of HIV positives happens as planned. To enhance coverage for ART and improve retention, a multi-pronged strategy has been planned.

- a. Plugging the loss of clients from ICTCs to ART. Use of Care Support Centres (CSCs), PLHIV networks, CBOs/NGOs and private sectors
- b. Improving access to ART. ART services will be scaled up, in a phased manner, based on geographical variations, epidemiology and need. Differentiated care to improve efficiency at ART centres, client led counselling etc. will be piloted.
- c. Comprehensive clinical management with global standards of HIV care.
- d. Addressing cross cutting issues of paucity of human resources and monitoring and evaluation.

More details on these approaches are available in technical and operational guidelines on ART services.

The scale up and uptake targets for ART are proposed as follows:

**Table 7: Scale up and uptake targets for ART under NSP**

Indicator	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Estimated number of PLHIVs (in million)	2.11	2.11	2.11	2.12	2.13	2.18	2.21	2.25
HIV Positive detection (in million)	1.58*	1.60	1.64	1.70	1.75	2.00	2.03	2.14
PLHIVs on ART (in million)	1.04	1.13	1.26	1.39	1.53	1.87	1.97	2.03
PLHIV tested for VL	NA	NA	0.5	0.7	1.1	1.3	1.4	1.6
Number of PLHIV and on ART who are virologically suppressed (among all those currently on treatment who received a VL measurement regardless of when they started on ART) (in million)	NA	NA	0.25	0.49	0.99	1.17	1.26	1.52

\* Actual achievements

At current pace of ART uptake, reaching the fast track treatment target 90-90-90 for ART and Viral Load suppression which is needed to secure rapid decline in annual new HIV infections (75%) and AIDS related deaths (65%) by 2020, will be a challenge.

The modelled scenario is presented to show a fast-tracked approach to achieving the second 90. It is critical that of the 90% PLHIV who are detected, 90% are on treatment by 2020.

**II. Improve ART retention:** ART retention is a challenge, particularly considering that India has more than one million PLHIVs on treatment. Current retention rates (12 months) are close to 70%. The following mechanisms are proposed for maximising ART retention:

- a. Mobilise PLHIVs, through community engagement and private sector involvement, for better adherence and retention of PLHIVs on ART.



- b. Address quality assurance and quality improvement activities in all HIV care and treatment sites.
- c. Implement pre-defined guidelines on CSCs, basic care package, treatment literacy and adherence, linkage to social support schemes, loss to follow up management and engaging the private sector.
- d. Strengthen monitoring of chronic HIV care and treatment including scale-up of viral load monitoring and surveillance for drug resistance.
- e. Strengthen treatment monitoring and evaluation of clinical complications and effects of long-term use of antiretroviral drugs.

**III. Ensure enabling environment for achieving universal access to ART:** To maintain good quality of care support and treatment services, which are provided in a non-discriminatory sensitised manner, at all service delivery sites, a comprehensive approach for ensuring high quality implementation of services for PLHIV is planned. It will include onsite and distant mentoring of service delivery sites, supportive supervision, cadre wise induction and refresher trainings of the health care workers (HCW) using updated training curricula, continued medical education programme for clinical staff, and focused quality improvement initiatives at each site.

Clinical and programme mentoring will enable HCW to practice new skills at service delivery sites with the support and guidance of more specialised and experienced professionals. Effective mentoring will promote application of classroom learning in clinical and programmatic settings by enhancing skills, knowledge, and confidence of HCW in service delivery; improving the quality of care and patient outcomes; and strengthens systems, policies, and procedures that support delivery of high quality care.

Some key areas under this would be:

- a. Mentoring and supervision support
- b. Focussed quality improvement
- c. Developing revised and updated training curricula
- d. Regular review meetings for continuous improvement in quality
- e. Strengthen M&E system
- f. Convergence with general health system for effective utilisation of infrastructure and facilities

#### **IV. Address Co-morbidities of HIV infection to lower mortality and morbidity**

The major co-morbidities are: (1) HIV-TB; (2) HIV – Hepatitis B/C and (3) HIV – Visceral Leishmaniasis (VL). Among these, the most common is HIV-TB, which is also the leading cause for AIDS related mortality. People living with HIV and PWID are also vulnerable to both Hepatitis B and C.

##### **i. HIV -TB**

As detailed in the section on gap analysis, there are challenges in implementation of HIV-TB collaborative activities despite almost 16 years of programmatic associations. Some of the other major noted ones are summarised below:





Collaboration of the HIV Programme with TB Programme is imperative to ensure the survival and quality of life of people living with HIV, as TB is a leading cause of morbidity and mortality among people living with HIV. HIV testing among TB patients, which currently stands at 88% needs to be further strengthened. Similarly, the screening of people living with HIV for TB in ART centres is 81% (20-100%) with a wide variation (Jan-Feb 2017).

Some of the operational and technical gaps include the following:

- Challenges in countrywide implementation of 3‘I’ strategy<sup>54</sup>, including Isoniazid prophylaxis treatment (IPT) at ART centres, and in daily Anti Tubercular Treatment (ATT). Approximately 3% of the total PLHIV on active care have been put on IPT with variation of 0% to 15% among the State/UTs.
- Decentralising IPT to ICTCs as per the operational guidelines needs to be implemented.
- Decentralised ART services through the Revised National Tuberculosis Control Programme (RNTCP) facilities for co-infected patients to be provided: especially in areas with minimal coverage of ART services. Decentralised services for drug resistant TB (DRTB) cases — which account for 500/51 MDR/XDR cases annually — is also a gap.
- Awareness and implementation of airborne infection control measures for people living with HIV in hospital settings, especially in high TB burdened places.
- Privately notified TB patients are seldom screened for HIV and thus large numbers are lost. Among 3,30,186 TB cases notified from private sector, accounting for 19% of total notifications, 2% knew their HIV status.
- Supply of Rifabutin and loose anti TB drugs for PLHIV on PI based regimen.


Universal access to TB care for HIV patients and routine provider initiated counselling and testing for HIV testing for TB patients are the two important targets that need to be achieved.

As a brief background, HIV-TB collaborative activities between Revised National Tuberculosis Control Programme (RNTCP) and National AIDS Control Programme were started initially in the year 2001 under an integrated approach. Since then, HIV-TB activities evolved in line with updated scientific evidences. The National Framework for joint TB-HIV collaborative activities was developed, under which National and State TB/HIV coordinating mechanism were put in place. Service delivery level coordination bodies were established at the district level. Components such as dedicated human resources, integration of data systems, joint training, standard recording and reporting, joint M&E, operational research were strategically implemented and nationwide coverage was achieved in July 2012. The National level TB-HIV coordination committee (NTCC) and technical working group (NTWG) regularly monitor and make suggestions on key policies related to TB/HIV collaborative activities. It aims to significantly reduce the morbidity and mortality due to HIV/TB co- infection through prevention, early detection and prompt management of both HIV and TB.

The proposed strategic approaches are detailed in the section below:

Leveraging Active case finding for TB in HIV prevention services – The approach is to establish F-ICTCs in all designated microscopy centres (DMC). This will have the following dual benefits: (i) availability of testing services in TB centres; and (ii) support of HIV patients on ART for adherence and retention, in the longer run.

54 Intensified case-finding (ICF), Isoniazid preventive therapy (IPT) and Infection Control (IC)



Active case finding / HIV testing – Revised National TB control programme is initiating the active TB case finding in communities to enhance its case finding ability. This presents a good opportunity to introduce basic service package for prevention of HIV among the TB suspects.

Intensified TB case finding (ICF) activities in HIV care settings – Cross referrals for TB include verbal screening for TB symptoms in PLHIV. At every visit to the ART centres, the PLHIV needs to be screened for four main symptoms of TB. If any of them is positive, the patient should be referred for TB diagnosis using rapid molecular testing systems such as CBNAAT, etc. Once found positive for TB, treatment with daily ATT should be initiated without any delay along with ICT based adherence tools for tracking.

Preventive therapy for TB – Isoniazid preventive therapy would be scaled up to cover all the HIV patients across the country. Innovative short course therapies would also be included in the programme after pilot testing, including means to assess its adherence.

Involvement of private sector – The private sector must be involved if we aim to achieve the END AIDS. A substantial proportion of TB patients are diagnosed and treated in private sector. There is no provider initiated counselling and testing for HIV in the private sector. Thus, a good number of patients are missed by the programme. A collaborative effort by both TB and HIV programme is necessary to address this gap.

Strategies for TB HIV high priority 20 selected districts – Strategies for TB HIV high priority 20 selected districts including early diagnosis, decentralised service delivery models, private sector engagement and increased uptake of newer initiatives like test and treat.

#### ii. HIV-Hepatitis B and C infection

Population prevalence of Hepatitis B is around 3-4%<sup>55</sup> and that of Hepatitis C is around 1%<sup>56</sup>. This accounts for almost 40 million chronic HBV and 12 million HCV infections in India. Unfortunately, there is no strategic plan for addressing the issue of chronic hepatitis in India as of now, and it is recommended that this be remedied.

The PLHIV are at high risk of co-morbidity with Hepatitis B and C. It is important to ensure timely detection and initiation of Hepatitis B or C treatment in HIV/ viral hepatitis co-infected patients to minimize hepatitis-related liver disease and its long-term negative impact on HIV outcomes. Hepatitis B and C detection and treatment for PLHIV will be provided at ART centres. Hepatitis B treatment is available as part as ART programme since ART regimens containing tenofovir (TDF) plus a second NRTI active against HBV (3TC/ FTC) have been shown to suppress both HIV and HBV viral replication. Treatment for Hepatitis C using direct acting antivirals (DAAs) such as sofosbuvir, grazoprevir, glecaprevir etc. will have to be procured.

Plans are underway to address the larger issue of hepatitis in India. Till that becomes a reality, detection and treatment strategies will be planned under this NSP for the co-infection.

#### iii. HIV – Visceral Leishmaniasis (HIV – VL)

HIV-VL is endemic in some States like Bihar, Jharkhand and Uttar Pradesh. As the Government of India aims for elimination of HIV – VL, addressing the HIV-VL comorbidities will also be critical. The gaps in diagnosis are the main impediment to appropriate treatment and favourable outcomes. This NSP will address the HIV – VL co-morbidities through active case finding that will include universal screening of all visceral leishmaniasis cases/ suspects for HIV and all PLHIV for visceral leishmaniasis in visceral leishmaniasis endemic States.

<sup>55</sup>Indian Council of Medical Research. New Delhi: Indian Council of Medical Research; 2010. Minutes of the Expert group meeting on Hepatitis B and Hib vaccines.

<sup>56</sup> NCDC Newsletter Jan -Mar 2014. Available at [http://ncdc.gov.in/writereaddata/linkimages/NewsLtr0103\\_20146480274026.pdf](http://ncdc.gov.in/writereaddata/linkimages/NewsLtr0103_20146480274026.pdf). Retrieved on 7 May 2017.

The interventions planned in addressing Priority 2 of Expanding Quality Assured HIV Testing with Universal Access to quality assured comprehensive HIV care is summarised in figure 26.

### 4.4.3 Priority 3: Dual Elimination of Parent to Child transmission of HIV and syphilis

India accounts for about 29.7 million pregnancies annually. Antenatal clinic check-up (ANC) is one of the first steps in ensuring good health of the mother and child and appropriate steps are being taken by the government to increase ANC service utilisation and institutional delivery. Interventions to improve the screening and treatment coverage of pregnant women for both HIV and syphilis could reduce incidence of stillbirth and perinatal deaths, thereby facilitating advancement to the SDG Goal. If India aims on achieving the targets of MTCT elimination for HIV and Syphilis, an accelerated response with focused tracking and uptake of Syphilis and HIV related services are required at both State/UTs and district level. The gaps in programming, linkage and implementation — as reflected in the section on PPTCT cascade ‘Gap Analysis’ — will need to be addressed using tailored strategies as reflected ahead.

The NSP proposes the targets for double elimination of HIV and Syphilis by 2020. The targets for testing and Syphilis /ART uptake for pregnant women are presented in Figure 26:

#### Interventions Planned for Achievement of 90-90-90 by 2020

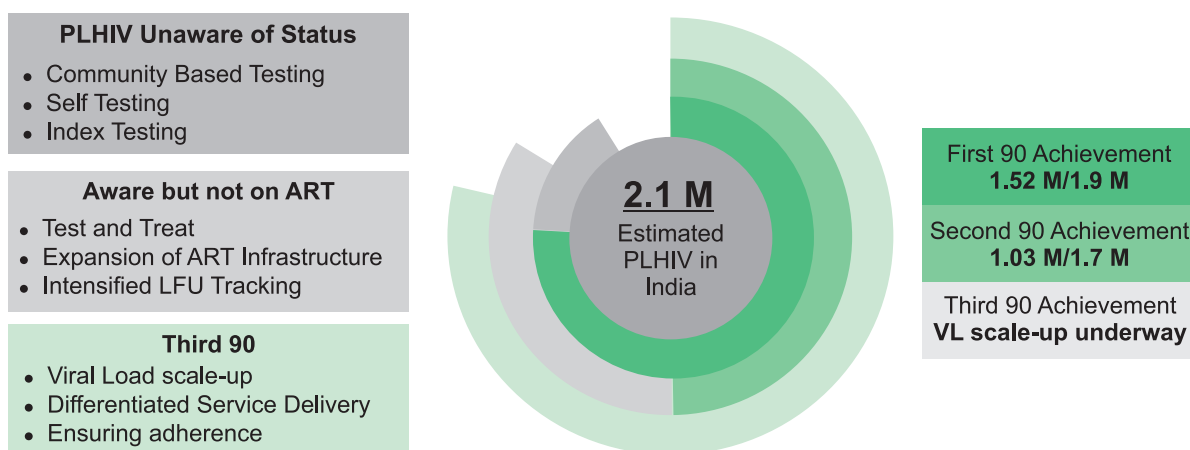


Figure 26: Overview of the key strategies in achieving universal access to quality assured ART

Table 8: PPTCT Targets for elimination of HIV and Syphilis

Indicator	2017	2018	2019	2020	2021	2022	2023	2024
Estimated number of of Pregnancies (in million)	29.68	29.27	28.92	28.55	28.17	27.79	27.42	27.04
Estimated number of HIV positive pregnant women	32,238	31,000	30,008	29,192	28,516	26,972	25,806	24,684
Estimated number of Syphilis positive preg. women	1,02,806							
Testing for Syphilis and HIV (in million) (%)	16.5 (59%)	19.02 (65 %)	23.13 (80%)	25.7 (90%)	26.76 (91%)	26.40 (92%)	26.05 (93%)	25.69 (95%)
Percentage of Positive for syphilis received treatment	90%	90%	90%	90%	95%	95%	95%	95%
Number and percentage of HIV positive on ART	14,526 (45%)	15,669 (51%)	18,905 (63%)	23,646 (81%)	24,229 (85%)	24,277 (90%)	23,742 (92%)	23,450 (95%)
Number and percentage of HIV exposed infants receiving virological test for HIV, within 2 months of birth	8,000 (28%)	10,000 (36%)	14,000 (52%)	18,000 (68%)	20,000 (78%)	20,000 (82%)	20,000 (86%)	20,000 (90%)



It must be noted that out of an estimated 29.7 million pregnancies in India, the programme intends to cover 28 million by 2020. With the HIV programme being dependent on RMNCH+A (NHM) for the ANC registrations and convergence for HIV and Syphilis testing, prioritisation will be done to focus on those State/UTs and districts that have a high HIV and Syphilis prevalence. Simultaneous concentration would be on saturating convergence of HIV and ANC services to increase testing and treatment coverage, in those State/UTs where integration is optimised.

## Elimination of parent to child transmission of HIV and Syphilis

The primary route of HIV transmission to children is from mother to child. The transmission of HIV from an HIV-positive mother to her child during pregnancy, labour, delivery or breastfeeding is called mother-to-child transmission. In the absence of any interventions, transmission rates lie in the range of 20-45%. With effective interventions, this rate can be reduced to levels below 5%. The global community has committed itself to accelerating progress for prevention of vertical HIV transmission with the goal of eliminating new HIV infections in infants by 2020 and improving maternal, new-born; further, child survival and health in the context of HIV.

India started the Mother-to-Child Transmission of HIV and syphilis programme in early part of the NACP II in the year 2002. Using 'single dose nevirapine (SD-NVP) to both mother and child', the programme rapidly scaled up. More efficacious medicines for eMPTCT were introduced under the programme in 2012-13. In September 2012, Option B+ as a policy, which states ensuring of lifelong ART for PMTCT for all HIV infected pregnant women, was adopted. This supported the country's transition from the SD-NVP strategy to that of multi drug ARV prophylaxis irrespective of CD4 count.

Globally, evidence suggested that ARV prophylaxis using SD-NVP can effectively reduce the risk of transmission from about 45% to around 10%. However, the 10% uncovered risk is unacceptably high since paediatric HIV can be eliminated if the currently available drugs are used effectively and started early on during the pregnancy. To detect HIV among all positive pregnant women and eliminate transmission of HIV from parent to child, HIV screening is conducted by frontline health workers (Auxiliary Nurse Midwives) at the sub-centre level.

Package of services currently offered:

- The HIV testing and counselling (pre-test and post-test) services are offered as part of the ANC package at the ANC clinics and ICTC.
- All HIV positive pregnant women, including those presenting in labour and breastfeeding, are to be initiated on lifelong triple ART, irrespective of CD4 count and WHO clinical stage, for preventing mother-to-child transmission risk.
- The recommended duration of NVP for the infant is a minimum of 6 weeks but can be extended to 12 weeks, if the duration of ART during pregnancy is less than 24 weeks. This recommendation on extended NVP duration applies to infants of breastfeeding women only and not to those on exclusive replacement feeding.
- The prevention and treatment services to all pregnant women attending the health care facility are availed through 22,222 ICTCs and 1,636 ART centres (including LAC) established in the country as of October 2016.

The key for elimination of e-MTCT of Syphilis is to universalise Syphilis testing and treatment among the pregnant women, their partners and new-born. The elimination efforts require use of newer and low-cost technology like dual point of care test for enhancing the Syphilis and HIV testing access in the



community. The NSP envisages to immediately overcome the gap between HIV and Syphilis testing using the resources and information system technology resources under the NACO. Elimination efforts will also require close coordination with the NHM and the use of their infrastructures like manpower (ANM, lab technicians etc.).

India being a signatory to UN SDGs and elimination of mother to child transmission of Syphilis and HIV, the programme needs to step up to address the issue of MTCT on a war footing. The strategic approaches are structured to attain the elimination targets.

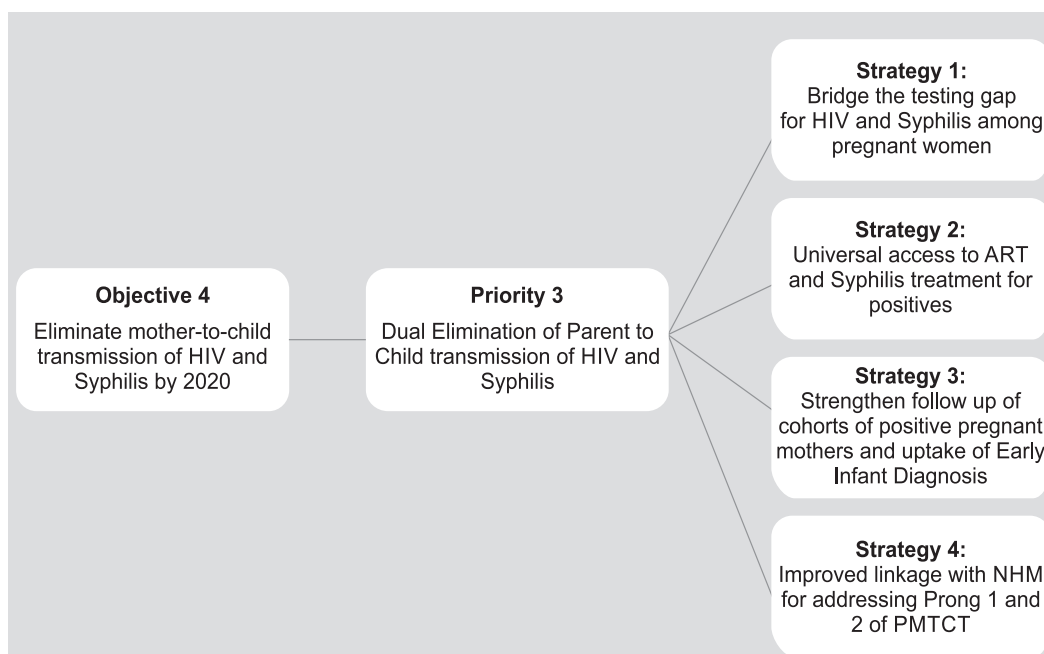
The WHO indicators used for elimination for MTCT of HIV and Syphilis are described in Table 9 below:

**Table 9: Impact and process indicators to support validation of EMTCT of HIV and Syphilis**

Impact indicators [at least last one year data]
<ul style="list-style-type: none"> <li>• Case rate of new paediatric HIV infections due to Mother-to-Child-Transmission (MTCT) of HIV of <math>\leq 50</math> cases per 100 000 live births and</li> <li>• <math>\leq 50</math> cases of congenital Syphilis per 100,000 live births</li> <li>• HIV transmission rate of <math>&lt; 5\%</math> in breastfeeding population or <math>&lt; 2\%</math> in non-breastfeeding population</li> </ul>
Process indicators [at least last two-year data]
<ul style="list-style-type: none"> <li>• Antenatal care (ANC) coverage (of at least one visit) of <math>\geq 95\%</math></li> <li>• Coverage of pregnant women who know their HIV status of <math>\geq 95\%</math></li> <li>• Antiretroviral (ARV) coverage of HIV positive pregnant women of <math>\geq 95\%</math></li> <li>• Treatment of Syphilis – sero positive women of <math>\geq 95\%</math></li> </ul>

Reaching out to all pregnant women in this country with services for HIV and Syphilis may appear to be challenging, considering the volume of estimated annual pregnancies in India. However, service scale-up is reliant on substantial support from RMNCH+A Programme, under the NHM and government focus and commitment to expand ANC coverage and safe institutional delivery practises. Differential State/UTs specific strategies need also to be framed between HIV and RMNCHA+A programme considering the level of integration.

Figure 27 provides the overview of major strategies planned to address the gaps and meet the intended targets for elimination of HIV and syphilis.



**Figure 27: Overview of Strategic Priorities for EMTCT**



1. *Bridge the testing gap for HIV and Syphilis among pregnant women:* The approaches described are in brief. Please refer to operational guidelines on PPTCT for more details.

- Regular monitoring of the HIV care cascade and situational analysis at the State/UTs level to understand specific contexts and factors affecting coverage and retention—that may be particular to a district or group of districts—for appropriate differential strategies to be formulated to support service uptake and retention in the State/UTs.
- Geographic prioritisation for establishing HIV screening facilities at all public health service delivery points.
- Strengthening reporting mechanism from private sector.
- Bridge the testing gap for HIV and Syphilis among pregnant women by reinforcing universal screening of pregnant women during the first antenatal visit in both private and public sector. Encourage couple counselling and partner notification.
- Use innovation to improve testing uptake for pregnant mother such as the CBT during village health and nutrition day (VHND), Health Camps, etc.
- Stronger integration between The NACP and RNMCH+A programme at the field level particularly in northern States.
- Improve private sector reporting through innovative and expanded approaches such as involvement of professional bodies like IMA and FOGSI, active case detection and focussed outreach

2. Universal access to ART and Syphilis treatment for HIV positive pregnant women and mothers:

To address this gap, the critical enablers are good outreach and universal availability of ART and Syphilis treatment. The latter is a part of the NHM and would require strong coordination between the two programmes. Follow up of positive pregnant women for HIV would require dedicated coordinating agency if the targets for elimination are to be reached.

Linkage and retention on ART must be ensured through excellent coordination between screening, testing and ART centres.

3. Strengthen follow up of cohorts of positive pregnant mothers and uptake of Early Infant Diagnosis:

- Point of care EID test at EID centres.
- PCR testing at birth may ensure that the baby undergoes testing before being discharged from the hospital.
- Establishing a strong mechanism for timely follow-up and tracking/monitoring of HIV exposed infant/child for early diagnosis at 6 weeks, 6 months, 12 months and 18 months.
- Establishing a follow-up mechanism through routine immunisation visit.
- Implementing the cohort monitoring system (i.e. PLHIV ART linkages System or PALS) at all facilities and following up on case wise basis.
- Auto generated Monthly Work plan of ICTC should include all the follow up activities through PALS.

- Innovative solutions such as SMS alerts to service provider as well as beneficiary.
- Outreach/home visit through service providers.
- Ensuring all HIV exposed babies are followed until 18 months of age for confirmation of HIV diagnosis and accordingly retained on treatment.

#### 4. Improved linkage with the NHM for addressing Prong 1 and 2 of PMTCT

To address the primary prongs of PMTCT i.e. Prong 1, preventing HIV infection in young reproductive group through prevention messaging and Prong 2 address unmet needs of family planning in HIV positives. These two prongs can be well addressed through collaboration with the NHM.

The approaches are detailed in the section on integration with the NHM.

- Universal ANC Check up
- Single prick for HIV and Syphilis
- Treat all who are Syphilis positive
- Active case detection for partners with testing and treatment for HIV and Syphilis
- Available supply of commodities and drugs
- Collaboration with other agencies
- New detection and point of care tests

#### ***Box 6: Summary of Key Elimination Strategies for HIV and syphilis***

In summary, the key for elimination is to universalise HIV and Syphilis testing and treatment amongst the antenatal women and their partner across all health facilities. Further, introduce & strengthen the use of newer and low cost technology such as point of care test for enhancing accessibility of testing in the field. Efforts towards elimination will also require collaborative effort from the NHM functionaries, physician in private practice and sharing of resource from EMTCT of HIV and Syphilis.

#### 4.4.4 Priority 4: Addressing Critical Enablers in HIV Programming

There are many critical enablers for HIV programming that need to be addressed for the programme to achieve its intended objectives. Some of the key enablers are presented in the sections below:

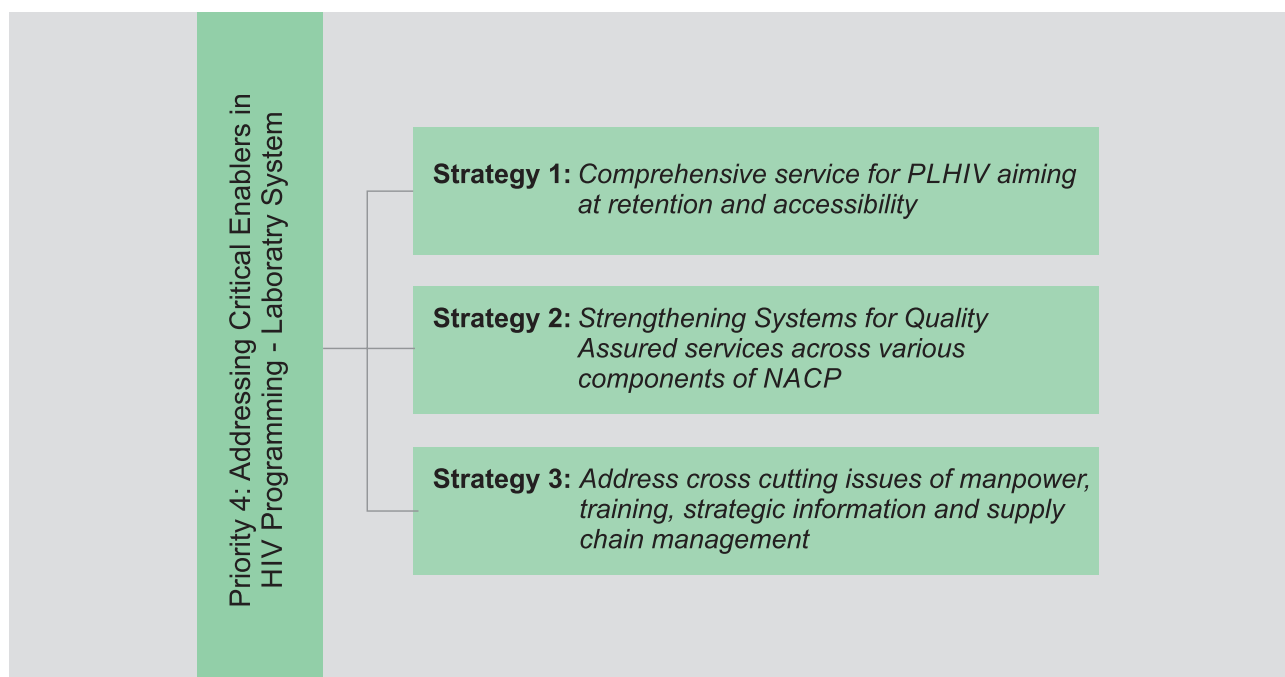
##### **A. Laboratory Systems (LS) and Support**

The NACP recognised that emphasis on quality assured laboratory service delivery is important to the success of the programme. The NACP IV builds upon the stage set by the NACP III that laid the foundation for institutionalising a culture of quality in laboratory services, specifically HIV and related testing. This was done with establishment of the laboratory services division for standardisation of tests, technologies and logistics, formal recognition for the laboratory network for implementation of EQAS programme. Technical support was provided to testing laboratories through the existing three-tiered network of HIV reference laboratories at the apex (1), national (12), and State/UTs level (117) through a cascade of mentoring and monitoring system and EQA programme. The External Quality Assurance Scheme (EQAS) was set up and ensured high reliability and validity to the HIV and CD4 tests under the programme and higher levels of proficiency amongst participating laboratories.

The package of laboratory services articulated under the NACP IV includes quality assurance in HIV testing, CD4 testing, Early Infant Diagnosis (EID), Viral load and STI labs as critical components.

Some of them have been discussed in the respective sections and the overarching strategy is presented in the sections below:

Building on the learnings and achievements of LS in the past decade, it is rational and imperative that the NACP scale-up good practices to other service deliveries under the NACP, with an objective of achieving HIV epidemic control through systems strengthening. This section outlines a strategic overview of activities proposed for next phase of the NACP aiming at providing reliable quality services across varied service deliveries under the NACP. The foundation of the proposed strategies is based on the following elements:



**Figure 28: Overview of key strategies for Laboratory Systems**

*I. Comprehensive services for PLHIV aiming at retention and accessibility:* This strategy proposes to include diagnostic services for complete clinical care of PLHIV

- Introduction of diagnosis for Co-infection & Opportunistic infections: The inclusion of diagnosis of co-infections like HBV, HCV, HPV, Candida, Cryptococcus etc. will be considered under the programme.
- Innovative mechanisms/options will be piloted to increase accessibility of HIV lab services for hard to reach populations including KPs and difficult geographic terrains like the NE: validation of POCT, DBS specimens for testing etc.
- Operational research for CQI will be promoted: aimed at efficient sample collection and transportation, testing and report delivery mechanisms.
- Drug Resistance: Developing labs for surveillance of drug resistance.

*II. Strengthening Systems for Quality Assured services across various components of NACP:*

This would be for a continued focus on quality assured services at various facilities under NACP. A dedicated 'Quality Cell' would be set up to ensure the development, implementation and monitoring of



quality management systems across all facilities under NACP, with a focus on Lab services, including care, support and treatment; and prevention. Main functions of a QA cell include:

QA for Lab services:

- NABL accreditation - For HIV testing referral labs (NRLs and SRLs), CD4, EID, STI and VL labs. NABL accreditation of HBV, HCV & opportunistic infections
- System for certification will be developed for other sites that conduct lab testing viz. ICTCs, SRL, DSRCs etc.
- Viral Load –set up national EQA programme.
- Quality assured HIV Testing towards increased accessibility – to support community based testing and/or self-testing under NACP for improved accessibility to HIV testing aimed at first 90 (Fast-Track 90-90-90 HIV treatment targets), a QA procedure will be developed.
- Set up calibration labs to facilitate accreditation.

QA for CST services: Identify and institutionalise quality indicators (QCI and EWI) and consider NABH accreditation for facilities providing clinical care (ART centres etc.).

- Prevention: Certification for OST centres and TIs will be promoted.

## *II. Address cross cutting issues of manpower, training, strategic information and supply chain management*


System Strengthening through Capacity Building: For a large programme such as India's NACP, training needs are humongous. It is well recognised that for efficient services, trained human resource is of critical importance. Under this strategic plan, it is proposed to;

- Develop a NACP specific web-based training hub for cost-effective distance learning, self-learning and readily accessible training platform.
- Promote certificate course for specialised HIV related diagnostics and quality assurance for HIV, molecular testing viz. HIV drug resistance testing and viral load.

Validation of newer tests: Set up of systems for validation of all new technologies that are expected to be introduced in the next 7 years like POC testing/ Incidence testing and tests like oral self-testing etc.

Data management and health informatics:

- Data management for quality assurance will be completely integrated with the MES framework of NSP. The framework will take advantage of case based surveillance system and will focus on improving the analysis and feedback mechanisms of lab related aspects.
- Additional benefit to quality of care is optimising the costs involved in healthcare delivery. This strategic document therefore, proposes adoption of health informatics including Laboratory Information Systems (LIS), data analytics and making use of Real Time Analytics (RTA) for improved response.
- Mobile and other newer technologies would also be used to maximize information flow and improved communication between various divisions and beneficiaries.



Sample referral & sample transportation: A robust mechanism for sample transportation and its proper documentation into the larger MES system will be developed so that the patient has to travel a minimal distance and only the sample is transported to the testing laboratory. A system would ensure that quality of sample is not compromised during transportation.

### **B. Blood Transfusion Services**

Blood Transfusion Services were brought under the purview of the NACP in 1992, since the start of NACP. The licensing part remains with the Drugs Controller General of India (DCGI). Currently, the services overall work as a collective effort by the NACO, the NHM and the Ministry of Health and Family Welfare in general at the national as well as at the State/UTs level.

The gaps analysis section has brought out a variety of challenges and gaps that need to be addressed. Some of the major thought provoking issues are:

- a. Should the Blood Transfusion Services be a part of the NACO or should be housed under the Ministry of Health and Family Welfare as part of general health systems?
- b. Blood is considered as drug under the Drugs and Cosmetics Act and Rules thereof, with licence being issued by State FDA with the approval of DCG (I). Dual control and authority is creating a challenge. Should the licensing of Blood banks be taken up at the State or Central level?

With a plethora of issues ranging from fragmented blood transfusion system, partial availability and accessibility of blood, unequal distribution of blood banks and variable equality of service, the proposed strategy seeks:

‘To ensure universal access to safe blood and blood components to those who are in need with optimum quality by strengthening the structure, systems, and services across the country under the unified umbrella of National Blood Transfusion Council (NBTC)’. The approach seeks to improve the referral linkages for the HIV-positive donors, to care continuum towards achieving the 90-90-90 treatment target. The key components of the strategy are:

- I. Advocate for developing a Nationally Coordinated National Blood Transfusion System in two years’ time

Since the establishment of National Blood Transfusion Council in 1996 and the adoption of the National Blood Policy in 2002, the yeoman role played by the NACO in ensuring availability of good quality blood and blood products, can now be taken over by an agency designated for the purpose. The NACO’s role would be in advocating for and handing over the expertise in a timely and efficient manner.

The NACO will advocate for a National Blood Transfusion System with single decision/policy making body for BTS at National and State/UTs level i.e. NBTC – the apex central body and SBTC at the State/UTs level, directly under the umbrella of the Ministry of Health and Family Welfare. The advocacy will seek to review and suggest legislative changes to the existing National Blood Policy and NBTC guidelines to give it the necessary authority to streamline and improve the functioning of Blood Banks. The NACO will support the development of common national standards for Blood Transfusion Services and Blood Banks enforceable by law.

- II. *Build capacity of the NBTC to promote voluntary non-remunerated blood donation ensuring universal access to blood and blood components and strengthening Quality Management Systems (QMS)*



The NACO will focus on transferring knowledge and skills for promotion of voluntary non-remunerated blood donation (VNRBD), building a base of regular repeat donors, including proper donor selection, counselling, recruitment, and retention using the latest technology, Advocacy, Communication and Social Mobilisation (ACSM).

For universal access to blood and blood components, especially to the rural hinterland, modern technologies and contemporary supply chain management using hub and spoke model will be implemented to improve availability and optimum utilisation.

State of the art Centres of Excellence (CoE) in Transfusion Medicines and Plasma Fractionation centre will be established through PPP approaches to enhance component separation and develop self-sufficiency in plasma derived medicines.

e-Initiatives will be strengthened and implemented to ensure transparency, effective networking and efficient blood transfusion management. Deployment of bio-metrics devices to track and eliminate deferred donors will be explored.

Capacity building of Blood Bank staff for effective counselling of blood donors, strengthening QMS and appropriate clinical use of blood would be emphasised. Introduction of EQAS programmes with encouragement to move towards accreditation will remain a focus area

*II. Provide support for improving reporting, counselling and referral of HIV positive cases as well as follow up to ensure transfer completion*

The NACO will support institutional strengthening of the NBTC to establish robust testing, reporting, counselling and referral of donors whose blood has been found sero-reactive for HIV. Donors who test sero-reactive for Transfusion Transmissible Infections (TTIs) will be referred to related services facilities for confirmation and further management. The NACO will build capacity including follow up sessions especially for counsellors to ensure 100% referral. The NACO will also support the NBTC to establish a follow up system that ensure transfer of HIV sero-reactive donors are completed and not lost within the transfer process. The NACO will also support the development of a Donor Look-back Mechanism to identify donors potentially within the window period and refer them to care continuum, as necessary.

The proposed targets under the BTS are summarised in Table 10 below:

**Table 10: Proposed target under BTS, NSP-NACO**

Targets	2016	2020	2024
Percentage of Voluntary Blood Donation (VBD)	80%	100%	100%
HIV reactivity among blood donors	0.14%	<0.10%	<0.05%
Percentage of HIV positives referred for care continuum	25%	>50%	>90%

**C. Advocacy Communication and Social Mobilisation (ACSM)**

A significant scaling up of Advocacy, Communication and Social Mobilisation (ACSM) will be needed to achieve the programmatic goals set for AIDS control as per different milestones. The ACSM work plan focuses on those areas where ACSM has most to offer and where ACSM strategies can be most effectively concentrated to help address the key challenges of AIDS control at country level:

- Reaching out to ‘At risk’, youth and other unattended population groups to promote safe behaviours and HIV testing



- Promoting ‘gendered’ messages for HIV prevention, against intimate partner violence, and couple testing.
- Early diagnosis/detection and treatment adherence
- Addressing stigma and discrimination
- Information on social protection and other supportive measures
- Empowering people affected by AIDS
- Mobilising political commitment and resources.

Two major strategic directions have been proposed based on gaps that have been identified in MTA as well as gap analysis sections:

1. ‘The Call for Action’	2. ‘The Framework for Action’
<ul style="list-style-type: none"> <li>• Describes the key challenges to be addressed</li> <li>• Summarises the current evidence of ACSM contribution and lessons learnt</li> <li>• Sets out the key principles underpinning the work plan</li> </ul>	<ul style="list-style-type: none"> <li>• Explains the vision, goals, objectives and targets of the ACSM strategic framework</li> <li>• Outlines the framework’s basic components</li> <li>• Examines how progress could be monitored and evaluated</li> <li>• Explores key partnerships and roles</li> <li>• Presents and justifies the budget</li> </ul>

In the ‘Call to Action’, many State/UTs and different districts in India present different levels of prevalence and the situation and response needs vary substantially. The Communication Strategy, therefore, needs to be innovative and flexible to be adopted and adapted according to different audience needs. Resultantly, it has been designed to build and reinforce the gains of previous phases evidence, while developing a strategic response to emerging communication challenges in the new programme.

The key principles are:

- Knowledge is critical
- Knowledge is not enough
- ACSM should be integral and proportionate to NTPs
- ACSM should be non-discriminatory and rights-based
- ACSM requires country-led approach, and investment in national and State capacity

In the second part of the action strategy, ‘the framework for action’ specifies the action plan and implementation modalities

The vision is for all communities to reach a level of empowerment to protect themselves against HIV as also, access HIV-health services. By applying ACSM strategies from health-care settings to house-holds, PLHIVs will be supported and treated with dignity and respect. Furthermore, steps will be taken for people living with HIV and communities to increasingly be involved in shaping the AIDS response.



Over the next 7 years, the ACSM strategy aims to establish and develop a core component of AIDS prevention and treatment efforts. The ACSM strategy has the following goals:

- To provide communication support for meeting different programmatic targets such as prevention messages for pregnant women for early testing.
- To develop a communication strategy to meet 90-90-90 HIV treatment targets and provide a way for elimination of HIV by 2030.
- To foster participatory ACSM planning, management and evaluation capacity at regional, national and State/UTs levels, involving people living with HIV and communities.
- To support and develop strategies to achieve key behavioural and social changes, and leveraging the health messaging component of the NHM, with a focus on local context.

Objectives:

- Enhance comprehensive knowledge and create an environment that fosters early testing and treatment through motivating key populations, bridge population and other groups, including women, using innovative communication approaches.
- Target age specific messaging for promoting the ABC approach among general population and vulnerable groups including youth.
- Generate a demand for quality services, strengthen linkages and avail social protection schemes by PLHIVs.
- Provide an enabling environment to reinforce positive attitudes, beliefs and practices to address stigma and discrimination.
- Reinforce messages on sexual, reproductive health and rights for women.
- Mobilise political commitment and resources for AIDS control.

Adolescent and Youth

- a) Adolescence Education Programme (AEP):** The AEP is a key intervention that builds life skills of young people and help adolescents cope with negative peer pressure through a 16-hour module based teaching or learning???. The programme at present is being implemented in more than 55,000 schools across the country covering 8<sup>th</sup>, 9<sup>th</sup> and 11<sup>th</sup> standard classes.
- b) Red Ribbon Clubs (RRC):** The Red Ribbon Club (RRC) Programme is a comprehensive promotional and preventive intervention to harness the potential of youth in educational institutions. The programme is being implemented in over 12,000 colleges across the country.
- c) Out of school Youth (OSY):** The OSY programme targets youth who have either dropped out of school or have never been to school. At the national level, a collaboration with the NIOS has been critical in reaching out to adolescents not in school.

Intervention required –Future

- There is thrust to continue AEP and RRC programme with regular monitoring through coordinated efforts at national and State/UTs level.



- Further sensitisation required - school teachers, principals, parents, collectors, State/UTs and district level officials.
- Estimation of adolescents and youth in need of care support and treatment for HIV/AIDS.
- Sustained efforts to increase awareness in adolescents through new innovative mediums utilising the existing apparatus and Innovative approach to reach the tech savvy youth.
- Development of e-portals for engagement of youth in expressing their views and accessing knowledge on HIV/AIDS and real time interaction with experts.

Strengthening collaboration and support from all the partners working on youth and adolescent issues in the country.

Partnerships with other constituting ministries are fundamental in reaching the IEC targets etc. The strategic approaches proposed are:


#### *Mainstreaming & Partnership*

- **MoUs with Ministries/ Departments**
  - Set up strong coordinating mechanisms & structures between NACO & other ministries/ departments with whom MoUs are signed, to prevent fragmented multi-sectoral response and make the efforts most productive; including synergistic reporting systems.
  - Formalise partnership of all key Ministries which include social, infrastructural and uniform forces. MoUs proposed for 31 Ministries. 14 MoUs have already been signed. Fifteen Ministries/ Department may be mobilised for partnership with the NACO.
  - A Gender Unit at the NACO could be set-up on special gender-transformative initiatives, which could also work on mainstreaming approaches with other ministries and departments (e.g. the WCD and Social welfare departments) so that sexual and reproductive health and hygiene can be integrated into the work of other departments.
  - Leveraging resources from Ministries/ Departments at national as well as State/UTs level.
  - Institutionalise HIV/AIDS prevention activities as one of the planned activities in each Ministry/ Department at the central and State/UTs level.
  - Bi-annual inter-departmental meetings at the State/UTs level for enhanced administrative support to HIV/AIDS prevention activities.
  - Plan and undertake comprehensive capacity building on issues of mainstreaming and social protection for staff at all levels (district, State/UTs and central level), avoiding stand alone training of different ministries staff.
- **Political and Administrative supports**
  - Constitution of State/UTs Council on AIDS (SCA) / Inter-Department coordination committee in all States/ UTs to enhance administrative support and involvement on HIV/AIDS prevention activities.
  - Constitution of Legislative Forum on AIDS (LFA) in each States/UTs to enhance political support and mobilisation on HIV/AIDS prevention activities.

- Engagement of urban and rural local bodies, PRIs in the districts for HIV/AIDS prevention activities. Build ownership on HIV/AIDS prevention activities by district administration, municipal corporation etc.
- Engagement of District Health Society for decentralised planning & implementation, monitoring and review of programme support.
- **World of Work Response**
  - Strengthen response of World of Work through enhanced coverage of formal and informal sectors.
- **Social Protection**
  - Evolve and recommend a basic minimum social protection package for PLHIV (nutrition, financial assistance, education, shelter & travel for ART etc.) across all States/UTs and ensure SACS work with concerned departments to operationalise them and facilitate uptake.
  - Directives to be issued from the State/UTs governments to extend benefits of social, legal and economic protection of people infected and affected by HIV and Most at Risk Population.
  - Strengthen district level mechanisms for enrolment of PLHIV in social entitlements and social protection schemes.
  - Mechanism of social protection uptake to be established in all districts.
- **Legal Protection**
  - Mechanism for legal protection in each district for PLHIV, children affected by HIV and key populations.
  - Enhance involvement of SALSAs, DALSAs and Bar Council on legal aid.
- **Mainstreaming Training**
  - HIV and related issues to be a part of induction training of each Government department.
  - Integration of HIV/AIDS in every induction training programme of H &FW department.
  - Emphasis on Training of Trainers (ToT) instead of sensitisation programmes/ stand alone training.
  - Involvement of Positive Speakers at all major trainings.
  - Capacity building of SACS officers on legal issues related to HIV/AIDS.
  - Along with basic information on HIV, topic on stigma and discrimination needs to be addressed in each training programme.
  - Trainings of health care providers on stigma and discrimination.
  - Impact assessment of the training needs to be conducted before refresher trainings

#### **D. Finance, Procurement, and Supply Chain Management**

Procurement & Supply Chain Management (PSCM) is the backbone of any public health programme as planned delivery depends immensely on it. Across NACO & SACS, procurement & Supply Management of HIV/AIDS commodities involves a series of activities to ensure a continuous supply of products from the



point of manufacture to the point of care. The supply chain function operates within a system that provides programme managers with data to help determine what types of products are needed, also, where and when they are needed, and in what quantity and condition.

**I. Institutional mechanisms will be established for comprehensive uplift of PSCM functions under the NACP**

**i. Human Resource:**

- Roles and responsibilities of staff related to procurement and Supply Chain Management will be clearly defined.

**ii. Training:**

- Regular Capacity building of NACO/SACS staff on Supply Chain Functions, Guidelines and SOPs.

**iii. Policies & Procedures, Guidelines, SOPs, Manuals (e-procurement):**

- Develop/update the Guidelines and Standard Operating Procedures for supply chain functions, including the standard formats for PSCM functions.

**iv. Governance/ Redressal Mechanism**

- **Maintenance of complaint books and action taken:** This is the basic documentation that needs to be maintained at the State/UTs and national level. These complaints would be documented in detail and reviewed periodically. This will also strengthen the internal system by tracking the nature of complaint, thus improving future procurements to avoid such complaints.
- **Immediate experience sharing between centre and State/UTs on common issues/complaints:** A knowledge bank on the issues will be prepared and shared among the State/UTs and centre to find solutions for most common problems faced by the State/UTs. Specific issues will be dealt on case to case basis and steps would be taken to resolve them within the prescribed time frame.
- **Establish mechanisms for client/community feedback:** Feedback system for client/community comment to be established including 'real time monitoring' of commodities and services.

**II Strengthen Operational Mechanisms across the spectrum of PSCM functions**

**v. Forecasting:** Development of tools and training of staff on effective forecasting.


**vi. Indenting and Inventory management:** Mapping of existing indenting, issuing and receiving processes of commodities will be done to suggest crucial changes in the process for overall improvement in commodity management. An agency would be identified for end-to-end supply chain management.

**III Storage/Warehousing (Ambient and Cold)**

**vii. Assessment of storage and warehouse requirement:** An assessment of the existing warehousing facilities at SACS level will be done to find out the actual space requirement. This assessment will also focus on various facilities required to be in place at warehouse to manage pharma grade storage practices.

**viii. Development / Hire requisite infrastructure at SACS Warehouse, DAPCU & Facility comprising of IT Enabled Tools, Manpower, Material handling Equipment**



- 
- IV AMC/CMC Services:** A database of all the functional equipment needs to be prepared and assessment will be done to verify their effective status. This will cover all details about the equipment and type of maintenance services required to keep them working.
  - V Centralised Inventory Management System:** An online Inventory Management System will be developed and integrated into the larger MES framework. The system will be implemented across all the utilities for better monitoring of inventory movement and report generation.



# Priority 5: Restructuring the Strategic Information System to be efficient and patient centric

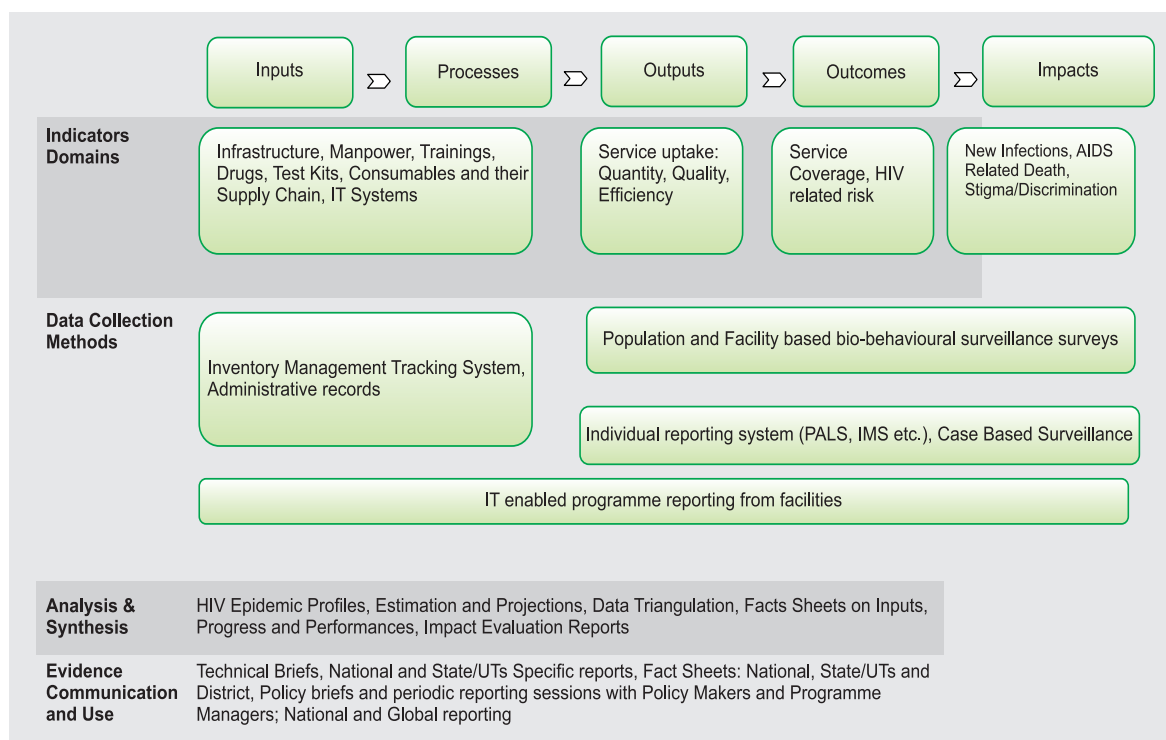
Strategic information (SI) is a critical piece that shapes the direction and quantum of response to the HIV/AIDS epidemic. Strategic information management and evidence based decision making through a strong monitoring, evaluation and surveillance (MES) framework has been fundamental to India's noteworthy response to the HIV/AIDS epidemic. It started with setting up of surveillance systems in early days of the HIV/AIDS epidemic that guided initial response under the NACP I. Since then, the system has evolved as an exceptionally comprehensive one over time. The number of data sources, over the last three decades, have expanded to currently consist of many complementary sources that include specific bio-behavioural epidemiological studies (HSS, IBBS, HIV estimations etc.), general population household surveys (NFHS, DLHS), population size estimates as well as routine programme monitoring data (consolidated as well as individual tracking).

While the data sources have expanded over the years, the geographical unit of data generation, analysis and use for planning has shifted from the national to the State/UTs, district, sub-district level and now up to the individual level. The NSP 2017-24 envisages further strengthening the rich tradition of evidence based decision making under the programme through sustained focus on strategic information systems and their timely upgrade in terms of methods as well as technologies.

NSP envisions establishing an overarching strategic information management strategy encompassing all strategic information activities to ensure:

- Implementation of one integrated MES system encompassing all information systems used in different programmatic areas
- Sustained generation analysis and dissemination of high quality strategic information using contemporary methods and technologies .
- Systematic engagement with policy makers and programme managers at the national, State/UTs and district level to further strengthen evidence oriented policy making, planning and implementation at all levels.
- Design and implement robust concurrent evaluation systems to measure progress and assess impact with regard to stated targets and goals of the NSP.

The MES framework for the NSP has been summarised in Figure 29 below. The major activities included in the MES framework are periodic bio-behavioural surveillance focusing on HIV and STI trends and their determinants, HIV estimations, IT enabled programme monitoring and in-depth data analysis and dissemination. Collectively, these systems form a comprehensive complementary system for epidemic and programme monitoring and contribute into the evaluation design of the NACP on core indicators.



**Figure 29: Monitoring, Evaluation and Surveillance Framework under NSP, 2017-24**

**Epidemic Surveillance:**

HIV Sentinel Surveillance (HSS) and HIV estimates provide key evidences on the level of the HIV epidemic and its trends across population groups and locations. Data from HSS, available across a large network of 776 ANC sites and 663 key and bridge population sites, has been used to generate estimates of HIV burden at the national and State/UTs level in the country through two successful rounds of HIV estimations in 2012 and 2015 during the NACP IV. HIV estimations in 2015 were done using the latest version of Spectrum with most recent epidemiological and programmatic data. Additional bio-markers were added to surveillance which resulted in all specimen having been tested for HCV in ANC HSS 2015 and IBBS 2014-15. Findings from surveillance had multidimensional benefits; produce HIV estimates, for programming and M&E, but also published in a timely manner in the form of Technical Briefs, National Reports and Epidemic Fact-Sheets. Various studies have been completed on HIV incidence surveillance, case based surveillance as well as on use of PPTCT data for HIV surveillance.

HSS among KPs have been accorded priority to understand the epidemic trends and spread. With a view to strengthen the surveillance activities among KPs, the NACO implemented the National Integrated Biological and Behavioural Surveillance (IBBS). The IBBS has generated evidence on characteristics of KPs and BPs and their vulnerabilities and risk behaviours to support planning and prioritisation of programme efforts at the district, State/UTs and national levels. Never has an attempt been made to capture biological and behavioural data that is nationally representative. IBBS covered 1,38,400 individuals from 258 domains across around 350 districts of the country – this was the largest sample for an IBBS in the world. Computer assisted personal interview (CAPI) devices were used for conducting all interviews and have helped minimise data recording errors. Data of both of HSS and IBBS has provided critical evidence, like that of expansion of IDU epidemic in northern India, that has guided the programme in fine-tuning its response to the HIV/AIDS epidemic.

## Programme Monitoring:

The Strategic Information Monitoring System (SIMS) is an integrated web-based data reporting and management system. It captures the programme monitoring data monthly from over 30,000 facilities and users across the country who operate under various components of the HIV/AIDS Control Program. SIMS facilitates data entry and access to data for programme implementers and managers with functions that allow producing reports. These present data in graphic format for analysis and evidence based action to monitor progress and put in place corrective measures in a timely manner.

## Data Analysis and Dissemination

The NACP IV already identified as a critical priority, the need to disseminate and use data and translate knowledge into action at different levels of the programme. The NSP will focus on capacity building of epidemiologists, M&E officers, statisticians as well as programme managers using simple methods and tools of analysis and modelling. Institutional linkages and partnerships will be fostered to support the programme with its analytical needs at national and State/UTs levels. Specific activities will be undertaken for promoting data use at national, State/UTs and district levels. Scientific writing within the programme on important topics will be undertaken and articles published in peer-reviewed journals. Additionally, conferences will be facilitated.

Based on the gaps identified in strategic information management, the following strategies are proposed for a patient centric and efficient MES under the NSP.

## 5.1 Programme Monitoring

- **One integrated M&E IT Framework:** One integrated M&E IT framework will be the core strategy of the strategic information management. The SIMS will be capacitated and maintained as comprehensive system for data management and data analysis to avoid multiple data reporting and parallel data management systems and to ensure linkages and individual patient tracking across programme components. It will be proposed that all the M&E personnel sitting in various divisions collaboratively work with MES unit as a team to avoid the duplication and increase efficiency.
- **Establishment of IT Cell:** An IT cell would be established composing of manpower having specified skills related to ongoing IT applications – SIMS, IMS, PALS, ITS, NIRANTAR, MSDS and other portals like the NACO website, digital resource library, NBTC website and HSSP portal. A sustained arrangement vendors will support new development, implementation, maintenance and helpdesk at the NACO, for troubleshooting, resolution of errors etc. Also, an additional post will be created at SACS level along with M&E to support ongoing IT related hardware and software management.
- **Assessment of IT Systems of NACO:** An agency will be hired to assess the needs and requirements of different divisions like changes in MIS Formats, new developments, unique ID number, development of dashboard, alerts / SMS based key outputs for fast transmission of data and information and plan for integration of the different IT Systems developed on different platforms in SIMS. A white paper documenting a clear and transparent road map for long and short term planning will be developed.
- **Project Management Team:** A Project Management Team comprising of technical and IT experts will be constituted at the NACO for ongoing management of different software and vendors including SIMS. The team will be responsible for smooth functioning of IT systems at the NACO.




- **IT enabled atmosphere:** As IT infrastructure become obsolete, new infrastructures with in-built maintenance plan will be introduced. It will include providing the computers with latest hardware and software with proper licensing systems at the national and State/UTs level. All IT applications are to be migrated to Meghraj, a Cloud Computing initiative of the Government of India.
- **IT infrastructure for paperless reporting:** This is a cross cutting issue within many areas such as ICTC, ART, Blood Banks and TIs. It needs to be effectively used for real time data especially in case of supply chain issues. This NSP proposes a dedicated unit to address this critical challenge that has an amplitude to improve the most crucial areas of each component programmes
- **Indicator Rationalisation:** M&E systems under the NACP will focus on collecting only those indicators that have programmatic or epidemiological relevance. An indicator rationalisation exercise will be undertaken with an objective to minimise the reporting burden from a peripheral level and simplifying the reporting formats as much as possible. The MIS formats needs to be frozen to increase the data consistency and meaningful output reports.
- **Strengthening MES Manpower:** Filling up of all the sanctioned positions at national and State/UTs level, will be vital to the strengthening of MES functions. At State/UTs level, the post of JD (M&E) IT officer will be created in each State/UTs to monitor progress and support the IT components of MES division. With an increase in the number of facilities over years it is also proposed to add one data entry operator and M&E staff at each testing centre.
- **Capacity Building:** The knowledge transfer, update of latest systems, data definitions, revised guidelines, changes in formats need to be percolated to M&E officials on a frequent basis to increase performance and efficiency. The trainings need to be organised to build the capacity and coordination with other divisions at the State/UTs level.
- **Core Committee:** A Core Committee of IT / M&E experts will meet on a quarterly basis to discuss and review the progress at NACO. A team of key M&E officials will be identified for sharing knowledge and building capacity to enhance the monitoring, quality and use of data.
- **Evaluation Systems:** The NSP 2017-24 will have a strong in built component to measure its impact and guide the programme in evaluating and achieving fast track and sustainable development goal of ending HIV/AIDS epidemic by 2020 and 2030 respectively. It will be done through a complementary system of IBBS, NFHS, estimations, evaluation surveys and programme data. A joint participatory mid-term and end-term appraisal engaging all stakeholders will be also implemented to
  - (i) Review the achievements
  - (ii) Identify the opportunities and challenges and
  - (iii) Advise and offer recommendations for planning the next steps of the programme.

## 5.2 Epidemic Surveillance

- **Strengthening of epidemic surveillance at State/UTs, district and sub-district level:** The epidemic surveillance will be strengthened at the State/UTs level and the State/UTs will provide support for epidemic surveillance at district and sub-district levels to enable front-line workers to understand the epidemic and fine tune their response to the same. It will be done through simple tools that will draw and triangulate data from both surveillance as well as programme systems with automated

epidemiological dashboard that will enable the front-line workers to identify the geographical areas and population groups that require attention.

- **Programme based surveillance:** There has been tremendous increase in terms of programmatic data sources. The programme data sources are providing monthly consolidated reporting as well as also doing individual tracking of beneficiaries. This provides a unique opportunity to complement the current periodic HSS as well as bio-behavioural surveillance survey with a system of programme based surveillance. Among ANC, operational framework for PPTCT based surveillance will be developed and implemented in established high coverage State/UTs. TI-based HRG cohorts for epidemiological monitoring and modelling at State/UTs and national levels in selected TIs will be developed for ensuring representation at regional/ national levels (well-performing NGOs with good data documentation practices). This will be used to generate epidemic indicators of incidence, prevalence, etc. at State/UTs and national level using back calculation methods.
- **Case based surveillance:** With the successful roll-out of individual tracking system among different components, there is a potential to implement a case based surveillance in India. To develop this, a system of unique identifiers like that through linkage to national IDs or any other method like capturing biometrics etc. will be explored. A detailed analysis of existing system of PALS and IMS will be carried out for reviewing India's status and devising next steps for strengthening of case/cascade based surveillance in India.
- **Strengthening of existing periodic bio-behavioural surveillance:** As the complementary new surveillance model based on the programme will be developed and launched, the existing model of epidemic surveillance through periodic bio-behavioural surveillance survey will be further strengthened. HSS has been upgraded to provide complete cascade information among key population; systems will be explored to do the same among the ANC. Among HRG, to improve the representation of key population for surveillance who are outside the programme area, strategies like Respondent Driven Sampling or rapid hotspot listing and size estimation will be piloted under HSS. Addition of Hepatitis as a bio-marker will be considered towards development of integrated surveillance model. Behavioural survey integration with biological component is costly and cannot be done frequently and hence alternative strategies will be explored. The case of Philippines and Vietnam where HSS plus is implemented, will be explored for key populations.
- **Generation of evidences for modelling and projections of India epidemic:** All the assumptions under the spectrum model and relevance of inputs for the Indian context will be explored. To the extent possible, programmatic and other survey data from India will be explored to inform the assumptions with Indian data. However, wherever the data is unavailable or does not exist, special epidemiological investigations will be commissioned to generate evidences specific to India for modelling and projections of the India epidemic. Newer modelling approaches or techniques like AIDS Epidemic Model (AEM), Case Surveillance and Vital Registration (CSAVR) will be piloted to strengthen the epidemic modelling. The modelling exercises will be upgraded to project the epidemic scenarios under different options for informed decision making by policy makers.
- **Population size estimates:** This NSP recognises the critical importance of mapping and size estimates of key and other 'at risk' populations. Regular update of population size estimates is indispensable in planning outreach to different population groups and to estimate the costs involved. A white paper will be developed to improve current population size estimates methods and ensure they are updated in a timely manner to adequately inform strategic planning, costing and reporting.

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- **Continued institutional collaboration:** Epidemic surveillance under the NACP has mutually benefitted from a meaningful engagement and collaboration with developmental partners. These include Indian Council of Medical Research (ICMR) institutes as well as other reputed government public health institutes like the All India Institute of Medical Sciences (AIIMS, Delhi), and Post Graduate Institute of Medical Education and Research (PGIMER, Chandigarh) etc. The collaborations will continue the enabling of pooling and maximising of resources and expertise available in government set-up to conduct robust, high quality, collaborative, multi-centric epidemic surveillance activities that have helped in-depth analysis and evidence based decision making on policy, management and evaluation of interventions. The collaboration will be continued during the NSP through MoUs to further strengthen the best use of available expertise.
  - **NSP core monitoring indicators:**As mentioned under strategic context, the programme will have a strong in built component of core indicators to measure its impact. This will be done through a complementary system of bio-behavioural surveillance surveys, estimations, facility survey and programme data as detailed under the **Annexure 2**. These indicators are consistent with the global monitoring framework for tracking the responses to the HIV/AIDS epidemic aiming to end of AIDS as a public health threat by 2030.
  - **Development of mechanism to strengthen the dialogue with programme manager on status of epidemic:** As the epidemic surveillance is strengthened to district and sub-district level on a real time basis, a formal system will be developed to nourish the dialogue with programme divisions on epidemic status so that appropriate programmatic decisions may be taken. It will include publication of quarterly and annual fact sheets, technical briefs as well as organisation of formal dissemination meets.

### 5.3 Data Analysis and Dissemination

- **National Data Analysis:** This will entail developing guidelines and document mechanisms for institutionalisation of the flagship initiative of National Data Analysis Plan and establishing a scientific group, with the involvement of key institutes, partners and stakeholders. The scientific group would advise on various methods for data analysis (different types of modelling etc.) and advise on the technical and scientific approach for data analysis to make sure the knowledge used for decision making is on strong scientific basis.
- Building institutional resource pools in the HIV/AIDS analysis in every State/UTs to support programme on knowledge management through fostering linkages with academic institutes, research organisations and expert bodies.
- Developing a mechanism to dedicate one or two M&E officers under the programme monitoring division exclusively for quality audit, analysis and feedback from routine programme data. This responsibility may be rotated among the M&E officers working in the division, so that everyone has equal exposure to both administrative as well as technical work.
- Devising and putting in place, systems to identify new recruits at NACO, SACS, DAPCUs, TSU and other programme structures and providing them with standardised induction training on data systems, data management, analysis and use. Standardised modules and material for such induction training should be developed.



- Developing a plan for promoting data use at national, State/UTs and district levels, in consultation with the data management teams and programme divisions at NACO and SACS, that include activities to:
  - Develop the approach or mind-set of using data for decision-making and programme planning.
  - Inculcate among programme managers, a habit of looking at data regularly.
  - Emphasize the importance of local knowledge and contextual understanding, that only the local level programme managers can add to the analysis.
- Standardising approaches, methods, tools and mechanisms to ensure data quality and data analysis.
- Developing mechanisms for close coordination between programme divisions and data teams to understand the requirements for evidence and guide the analysis to meet the same; establishing regular processes for identifying strategic knowledge gaps in form of questions that can be answered upon further analysis of existing data.
- Undertaking capacity building of programme managers at national, State/UTs and district level on applied data management techniques/methods including:
  - Identifying programme questions.
  - Identifying data sources that can answer their questions.
  - Simple methods and tools for quality checks, validation and analysis of data, for routine programmatic analysis, and evidence-based planning, prioritisation and decision making for improving the programme.
- Undertaking activities to sensitise staff at peripheral reporting units on applied data management techniques relevant at the facility level, enabling them in identifying quality issues in their data. These will also help in making them understand the importance of data they generate and the need for ensuring its quality, further, appreciate the use of data at higher levels.
- Promoting scientific writing within the programme on important topics, involving the data management teams and programme managers, additionally, facilitating their publication in peer-reviewed journals and conferences. This will contribute at a dual level, first to the development of programme and second to the professional growth of experts working in the programme.
- Encouraging the use of data triangulation methodologies using data from different sources to provide answers to strategic questions. Data triangulation endeavours can be done quickly and efficiently when appropriate process is followed for developing questions and finding answers. The district reports and summaries developed through the specific exercise on 'District Epidemiological Profiling using 'Data Triangulation' should be updated by district teams every year.
- Community monitoring - Efficient 'real time' systems for community feedback and monitoring to be established to cover service availability, quality of services, stigma and discrimination.



# Research and Innovations

## 6.1 Research and Evaluation

Research and Evaluation is a vital component of Strategic Information Management under the National AIDS Control Programme (NACP). The National AIDS Control Organisation (NACO) focuses on ensuring translation of research outputs into programmatic action and policy formulation. The NSP will ensure that research priorities are customized to the emerging needs of the programme. Emphasis would be given to undertaking HIV/AIDS research required to answer the key questions and gaps in the programme. The research mandate under the NACP included preparation of national plan for HIV/AIDS research, promoting and coordinating research on HIV/AIDS through partnership and networking with stakeholders, supporting capacity building for HIV/ AIDS research and being a central repository of all relevant resources, research documents and data base on HIV/AIDS in the country.

India's NACP prides itself in the use of evidence based information to provide direction to the programme. In the past, various research studies commissioned/initiated by the NACO have led to key implications to the programme such as:

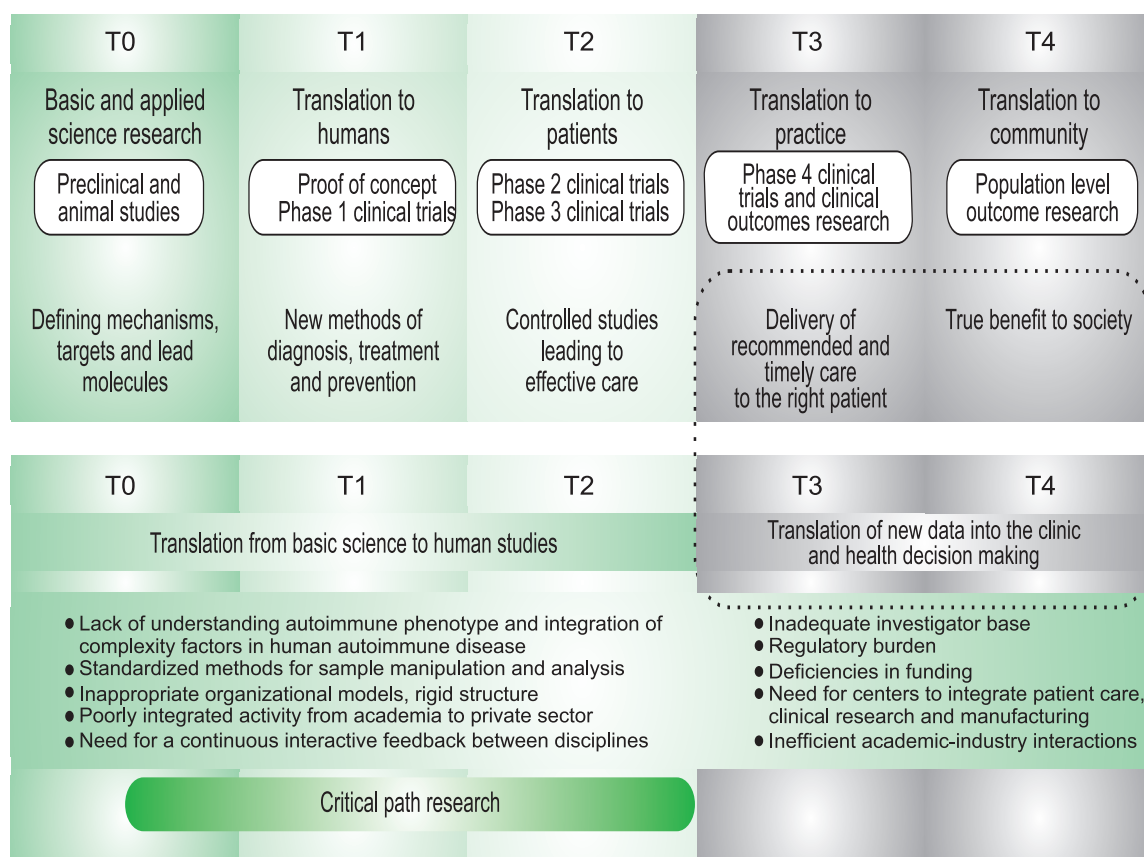


Figure 30 Translation Research and Health decision making



- Emergence of the concept of Link ART Centres;
- Reaffirming the programme strategy of TIs & the programme’s response to HIV epidemic being on track;
- The need to link ART patients, have a detailed line-list and do regular follow-up of patients to ensure linkages in logical pathway to Care, Support & Treatment;
- Revision in migrant strategy by establishing linkages between male out-migration and HIV transmission among both men and women in districts with high out-migration – research has contributed to a better understanding and response to the HIV epidemic under the national programme.

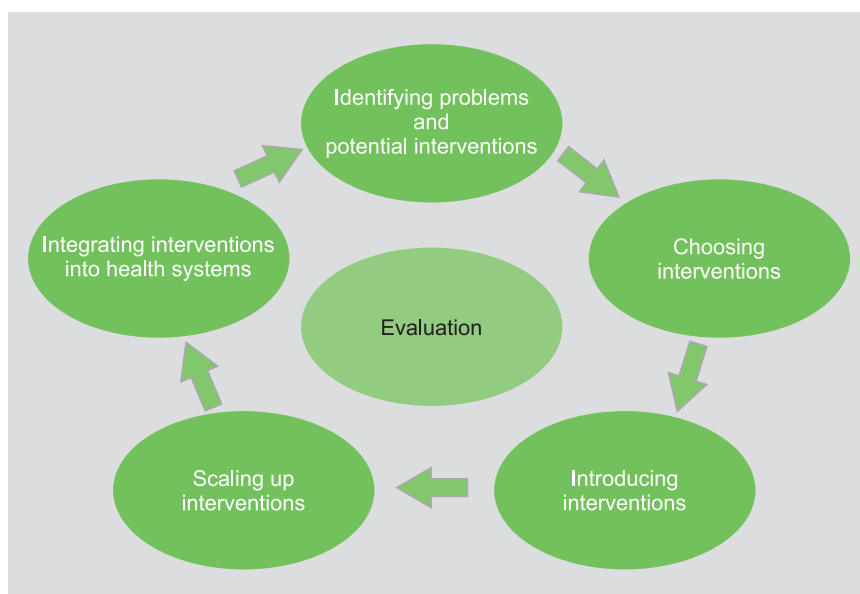
This NSP would reaffirm the priority of translational research where outputs could directly feed into programmatic and policy formulation.

The NACP has previously articulated the ‘National HIV/AIDS Research Plan’ (NHRP) with a focus on commissioning time-bound research studies in a phased manner, with multi-centric approach, evolving a strong mechanism to use the research outcomes for programmatic purposes. The key defining features of NHRP were:

- Research focused on addressing current evidence requirements of the programme and to assist evidence based policy decisions and programming.
- Multi-centric and representative research for meaningful evidence at the national level.
- Ability to offer solutions customised to region specific context.
- High standards of scientific rigour and robustness.
- Innovative research methods to overcome research barriers.
- Institutional collaboration and cross-learning.
- Active involvement of programme leading to ownership of research outcomes and their translation into programme.

This NSP will expand the NHRP and include research priorities identified by the Technical Working Group on Research and Evaluation. The research priorities are presented in **Annexure 3**.

With a vision to enhance knowledge and evidence based on aspects of HIV response for an accelerated progress towards achieving SDG to END AIDS by 2030, this NSP will focus on generating evidence and providing it an enabling environment through the following key strategies:



**Figure 31: Evaluation as part of decision making in Health**

### 1. Identification of research priorities and gaps for evidence generation

Research priorities will be customised to the emerging needs of the programme. Identification and updation of priority research areas will happen once in two years through a consultative process in order to address the goals and motives of NACP.

### 2. Promotion of innovations and innovative approaches to generate new evidence

This NSP will have an increasing emphasis on introducing innovative approaches to put new evidence, science and knowledge into practice. Support will be provided for innovations focused on evidence generation for programme management, coverage saturation, treatment adherence and quality improvement, which will improve implementation. This NSP will also emphasize on innovations related to creation of new products and technologies and developing technologies that will enable State/UTs and district implementation managers to understand the contours of the epidemic and its movement.

- Fast track commissioning of already approved studies
- Address HR gaps at NACO and States at accelerated pace
- Dedicated funding from partners and government for operations research
- Collaborate with DST, ICMR and CSIR for improved research and information
- Inculcate a quest for analysis and thinking at State/UTs and district level

#### *Box 7: Fast Tracking Research and Evaluation*

### 3. Establish an efficient system for robust and timely programme evaluation

Procedures for concurrent, mid-term and end-term evaluation of various interventions will be built into the programme, so that timely assessments can be undertaken in a robust and easy manner. These evaluations shall focus on all components such as process evaluation, outcome and impact evaluation, cost-benefit and cost-effectiveness analysis of different intervention strategies and policy scenarios will be undertaken. Impact evaluation studies on each programme component and interventions will be conducted during this plan period.

### 4. Promote operational research at local levels

Greater participation of state level and district level agencies in the research activities will be promoted in the coming years. States will be engaged more actively in programme formulation, data generation, evidence and planning processes. Operations research studies will be taken up for finding localised solutions to programmatic gaps at state and district levels

### 5. Collaborative capacity building initiatives

This NSP will ensure a focus on capacity building for research. However, it will do so collaboratively with other research institutions to leverage economies of scale. This NSP will look to continue the NACO Research Fellowship Scheme, Brown Bag Seminar and expand the Network of Indian Institution for HIV/AIDS Research (NIIHAR).

### 6. Ensuring a robust system for quality control and monitoring

This NSP will establish comprehensive guidelines for research proposals and mechanisms for accelerated technical and ethical clearances; and monitoring of commissioned studies.



## 7. **Development of dissemination plan for research outcomes through research and policy briefs**

This NSP will ensure that the research and evaluation division will develop a two-yearly plan for dissemination of research studies and outcomes.

## 8. **Create an additional pool of funds for research activities**

Ensuring investment in research will be critical to generate India specific evidence. This NSP will explore the possibility of the NACO's research unit working collaboratively for research funds with other stakeholders, in addition with advocacy to generate more funds within the programme. Efforts will also be made to establish a collaborative mechanism and have synergy with the ICMR/DBT/CSIR and private research institutions for HIV/AIDS research. Other Departments/Ministries eg. ICMR will also be engaged to undertake collaborative HIV/AIDS research on behalf of the NACO.

## 6.2 Innovation

Innovation has led India's HIV programme in the initial years of the epidemic. Financing approaches, bringing in communities as a pillar for care and support, using F-ICTC, Link ART centres, Link workers scheme, IT enabled surveys, are all innovations, which have helped strengthen the programme. India demonstrated lot of courage and an ability to innovate when it started reaching out to key populations using the Targeted Intervention approach leading to the adoption of non-traditional distributors, among others, which helped accelerate progress toward programmatic targets.

With adequate resources and innovative approaches, India's response can be fast tracked to ensure the end of the epidemic by 2030. While predictable and sustained AIDS financing and robust service delivery systems will be required, innovation through research and evaluation will be the key. Without new innovative techniques, AIDS funding and services will not be able to go the extra mile required to reach the end of AIDS.

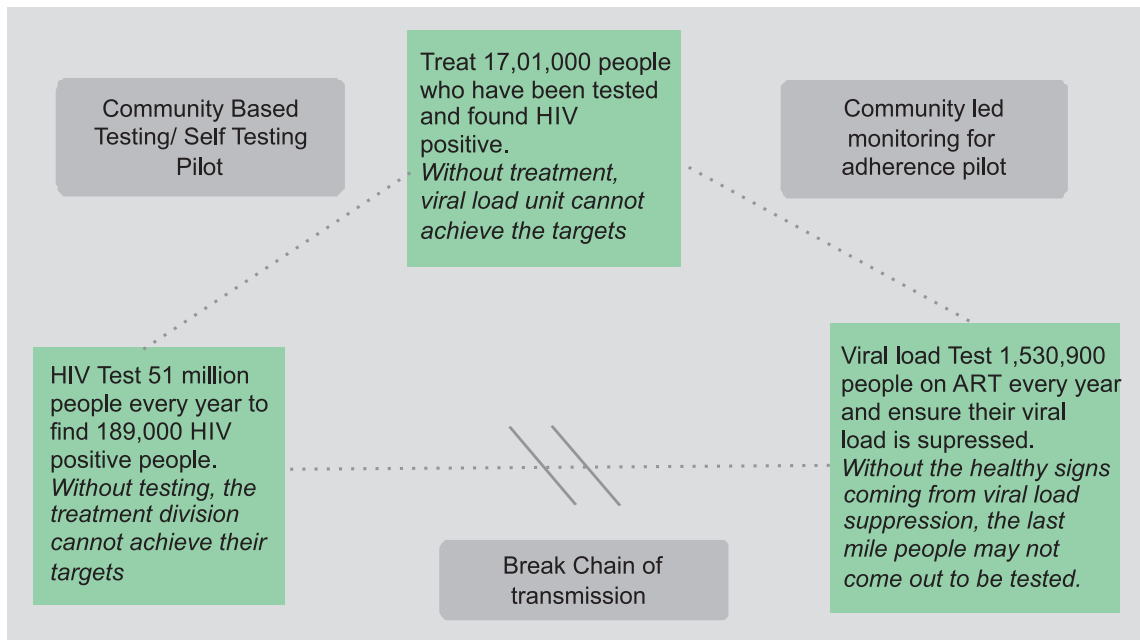
### 6.2.1 Financing

Funding for the NACP-IV has been below what was estimated. Reaching out with prevention, treatment, care and support, and other services to larger populations will require more financial resources than those employed to date. This will require innovative ways to attract financial resources for supporting the implementation, and success of the programme.

This NSP advocates the need for financial investment to end the epidemic and achieve India's HIV/AIDS related targets.

The NSP will explore incentive based funding for the states to accelerate achievement of targets. The modalities of this approach will be developed in the first year of the NSP.

## 6.2.2 Programme



**Figure 32: Suggested Targets and Innovations as a Model**

Programme innovations are the turbo packs for achieving the AIDS related SDG goal by 2030. Innovations are needed in low cost mass coverage communication that will provide the awareness needed for reducing the spread of the epidemic. Similarly, innovations are required to develop handheld-device based reporting and adherence monitoring systems. They will help to locate smaller reservoirs of the virus spread across the population. Innovation is needed to make condom use normal in every sexual act.

## 6.2.3 HIV and Co-morbidity


Innovative TB prevention therapies like three months of Isoniazid and Rifampentine, four months of Rifampin and others, which offer the advantage of shorter duration of therapy, would also be included in the programme after pilot testing. Various means to assess treatment adherence of both TB treatment and TB preventive therapy would also be undertaken.

## 6.2.4 Information systems

Reporting systems that allow tracking of individuals using unique ID, across different service delivery areas including testing and counselling, treatment and care are needed. Innovation is required to make this happen at low cost and in double time. An innovative approach to make this happen may involve benchmarking against standards set by India's software industry. Another would be the use of dedicated telecommunication network for health applications.

## 6.2.5 Reaching newer at-risk populations and youth

In this NSP, efforts will be focused on devising innovative strategies to reach out with prevention effective interventions to newer 'at-risk' populations, including young people aged 15-19 years. IEC and BCC activities will be revamped for creating awareness on the benefits of safe sex and HIV testing and early enrolment in and adherence to treatment. Use of data from various sources, including research and



evaluation, will help guide investment of limited resources in those locations and population groups where most new infections are occurring ensuring the best outcomes and impact of the response.

### 6.2.6 Comprehensive Service Delivery

Stigma and discrimination is an issue in HIV/AIDS related services. To address the stigma and discrimination issues related to HIV/AIDS, it is desirable to design a comprehensive integrated care centre model in few identified facilities. This model facility may cater to services related to HIV, TB, Syphilis, Hep B, Hep C or any other disease. This will address the stigma and discrimination issues related to accessing HIV services.

An expert body with members from PLHIV community, Technical experts, ICMR representatives, development partners, Civil Society representatives; may be constituted for designing the comprehensive service delivery centre model.

#### Differentiated care service delivery model

Differentiated care models will be introduced to decentralise treatment services to peripheral levels leading to decongestion of existing services. Further, reducing frequency of refill of ARV drugs for stable patients will provide improved quality of care. The detail of this model is in **Annexure 4**.

#### Community led comprehensive care model

This community led model will look at a strategic mix of highly effective and integrated facility for HIV testing, services, referral and linkages, ART retention towards viral suppression, syndromic management of STIs, screening of TB, cervical cancer and other essential Non-Communicable Diseases. This model will seek to complement the existing services including outreach services led by community groups/NGOs to saturate coverage of KPs and other vulnerable groups.

The model has the potential to optimize the roles of ANM, ASHA workers beyond Maternal Health and linkages with public health services. The proposed package of interventions will also strengthen linkages with public, private and NGO service providers to improve health outcomes for all those who are key to the epidemic. This will involve capacity building and empower healthcare professionals and different community groups through innovative eLearning approaches beyond conventional training methodologies which are cost intensive in resource constraint settings.

Under this NSP, experiential learnings from the field/local levels where new innovative models have already been implemented will be tested for feasibility, and, scaled up if found viable and cost effective.



# Implementation arrangements

## 7.1 Introduction

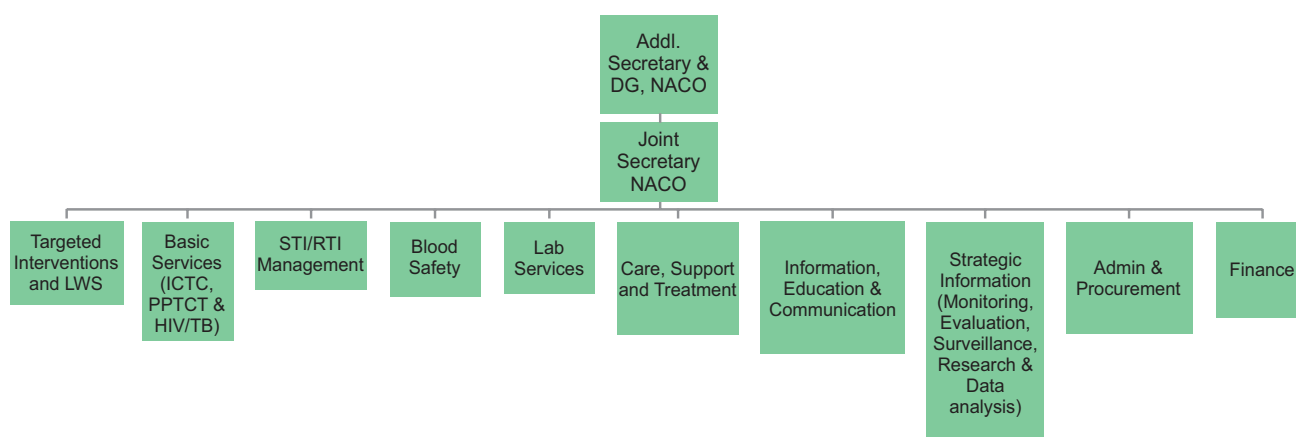
The NACO has implementation arrangements in place to deliver HIV prevention, detection, and treatment services. The NACO, as the central body, set up the State AIDS Control Societies (SACS) to speed up implementation during NACP II. During NACP III, district units (DAPCU) were set up in selected districts. Prevention interventions are supported by civil society organisations, while the counseling, testing and ART services are delivered by the public health system. Care and Support for those on ART is also delivered through civil society and community organisations under the NACP. During NACP II and III, the community played an active role in demand generation, treatment literacy, adherence and reducing loss to follow up.

This section of the NSP is focused on stepping up on the END AIDS pathway by 2024, an ambitious goal. Achieving this goal would require full funding and an accelerated programming involving all stakeholders to maximize impact.

## 7.2 Organisational Structure

### 7.2.1 National AIDS Control Organisation (NACO)

The National AIDS Control Organisation (NACO) is presently established as a division under the Ministry of Health and Family Welfare, headed by the Additional Secretary, Ministry of Health and Director General, NACO, GoI [Figure 33]. The technical divisions are headed by officers at the level of Deputy Director General, DGHS. The finance division is headed by Director-Finance while Admin and Procurement is headed by the Joint Secretary, Ministry of Health.



*Figure 33: NACO organisation structure*



## 7.2.2 State AIDS Control Societies (SACS)

SACS were established at the state level to support planning and implementation of the AIDS response. The state unit is headed by a Project Director (PD), nominated by the State Government. The PD is supported by a technical team led by the Additional Project Director (APD), while finance functions are overseen by the Joint Director (Finance)/Finance Controller. The technical components are coordinated by the Joint/Deputy Directors.

This NSP envisages leveraging the state health systems for leadership and human resources to plan and implement AIDS response within the state. This will include exploring the possibilities of a joint leadership with the NHM. Further, to be able to achieve the 90-90-90 targets, the SACS will also leverage resources from other sectors like private sector, CSR, CSOs and community organisations.

## 7.2.3 District AIDS Prevention Control Unit (DAPCU)

One of the hallmarks of the India's response to the HIV/AIDS epidemic has been an evidence-based programme planning. Categorizing geographical areas and district level programming has been an effective outcome of this response. The District AIDS Prevention and Control Unit (DAPCUs), established in 188 high priority districts in beginning of NACP III, resulted in institutionalising local planning and management. This enabled sharper targeting of resources for the vulnerable populations within the district. The NSP envisages refining and expanding this institutional mechanism of DAPCU, to strengthen implementation and governance across all districts of the country.

It is envisaged that the DAPCUs structure be innovatively designed to leverage the NHM and other existing health resources in the district. At the sub-district level, this NSP proposes nominating an officer from the general health system as HIV/AIDS nodal officer for monitoring purposes. It is proposed that DAPCU structure will be further expanded to all districts for improved local level planning and implementation of National HIV/AIDS response. The detail of this expansion is in **Annexure 5**.

## 7.3 Human Resources

The scale of the HIV and STI prevention, treatment and care programme requires diverse cadres of human resources. Approximately 60,000 front line workers, including outreach workers and peer educators, are leading the National AIDS response at the grass-root level. However, to be able to respond to NSP's targets, there will be a need for further expansion of human resources.

This NSP proposes improving and streamlining of existing workforce organisation through establishment of a dedicated HR management unit. The unit will be responsible for recruitment, retention and capacity building. Capacity building will be delivered through a blended approach of extensive e-learning, mentoring using phone/web technology and on-site skill building at premier training organisations. The NSP will outsource development of the training material and e-learning systems. To facilitate a seamless delivery of capacity building activity, this NSP will use NACOs dedicated IT cell at the national and state level.

One of the key challenges for the NACP is staff turnover. This NSP will explore wage equivalency as far as possible with the NHM to increase retention and enable two-way mobility of staff including doctors, nurses and technicians.

The NSP proposes expanding the front-line workers by encouraging involvement of community-based staff of the National Health Mission (ASHAs and AWWs) for the prevention, detection as well as treatment services. Incentives for ASHAs will also be provided for this purpose.

## 7.4 National Technical Support Unit (NTSU) and Technical Support Unit (TSU)

The NTSU and TSU were set up during the NACP III to provide technical support to NACO and SACS to complement the management of the programme with specific focus on HIV prevention. This NSP will expand the terms of reference of NTSU and TSU to cover all technical areas of the programme.

## 7.5 Government Institutions

Reaching the pathways to 'END AIDS' will require the engagement of all available institutions especially government health institutions. The government and public sector institutions including Railways and Mining have their own health facilities. However, a large proportion of them are not part of the national MIS under the NACP. This NSP will support and collaborate with all public-sector health services to ensure a complete care continuum under national AIDS response.

## 7.6 Integration with the NHM


The NACP has been implemented by Government of India as a fully centrally sponsored scheme through the State AIDS Control Societies for prevention and control of HIV/AIDS. The focus has been on key populations which has shown results and a decline in prevalence in key populations in high prevalence states. However, there are emerging pockets which are hard to reach.

Additionally, there are unreached 'at-risk' populations, many of whom are spread across traditionally low prevalent states. Integration with the National Health Mission (NHM) will provide synergies of scale, increased reach and continuum of care within the health systems. This NSP will advance integration with the NHM in a phased approach through a time-bound systematic plan divided into two phases - medium and long term. The NSP envisages transition of medical services beginning in the medium term and prevention services in the long term.

### Medium Term

Blood safety is an example of medical services, which can be integrated, in the medium term. Blood safety has been one of the foremost prevention strategies against HIV, launched in India in late eighties. Due to the high levels of HIV transmission through contaminated blood and blood products in the early stages of epidemic, responsibility of ensuring access to safe blood fell under the gambit of National AIDS Control Programme. The NACO has been the coordinating agency to ensure provision of safe blood in the country. To ensure better coordination, efficiency and maintaining quality standards, NSP envisions the phased transitioning of blood transfusion services as a first step towards the integration into the general health systems.

To achieve the target of elimination of EMTCT by 2020, further expansion of services integrated under the NHM is envisaged through sharing of human resources-task sharing/task shifting, universal counseling



and screening of pregnant women for HIV/Syphilis, single window testing for routine pregnancy tests/HIV/Syphilis among pregnant women, single window testing for STI/HIV among general population, leveraging finances, training, drugs, supply chain, kits, consumables, and joint monitoring and evaluation. This is another example of medium term integration.

### Long Term

In the longer term, prevention activities will need to be integrated within the national health services. The time will allow innovative approaches being developed to provide effective services using existing human resources of the NHM. It will also provide the NHM an opportunity to explore employing key population members to provide wider health services in the national health services. This NSP envisages the development of pilots and scaling up of successful pilots within the NHM for integration of preventive services. A more detailed plan, feasibility of programme areas, specific pilots, scale up plans, timelines and budgets will be developed to support smooth integration in a phased manner by 2024.

### Coordination for integration

Institutional mechanisms for coordination between the NACO and the NHM may be established at the national, state and district level to ensure complementarity, joint working and integration of services in a phased manner. Coordination meetings at the national and state level may be held on a quarterly basis between the NHM and the NACO/SACS to plan, implement and jointly monitor programmes on the ground.

## 7.7 Community System Strengthening (CSS)

The role of communities in the HIV response in India has been strengthened over the years. Community's involvement in programme planning, delivery of services and monitoring outcomes is not new. Communities have the unique advantage of being close to their peers, understanding the issues and field reality as well the ability to communicate and articulate their needs. This ability is critical for the HIV response and needs to be sustained.

Community systems strengthening (CSS) is about defining a definite role for key affected populations and communities, community organisations and networks in design, service delivery monitoring and evaluation and contributing to achieving overall programme results. However, this is not possible without strengthening the capacity of communities to play an effective role and make resources available for them to contribute to the response.

The NACO has been able to, with support of stakeholders, put in place a strong prevention and care support treatment programme with active engagement of civil society and communities. The HIV programme can share the model with other programmes including the NHM and bring synergies between programmes.

The role foreseen for communities in strengthening the response includes:

- Support an enabling environment including moving towards zero stigma and discrimination.
- Demand generation for prevention and increasing testing.
- Care and support for those on ART including social protection, treatment literacy, adherence.
- Community monitoring and ensuring effective and quality programme delivery including of civil society and community organisation.

To achieve the 95-95-95, the role of community becomes even more critical to generate demand for testing including community based testing. Expanded testing will require both demand generation and support for those who are negative and positive. With Test and Treat rolled out there will be an increased need for better adherence, treatment literacy, and supportive care.

The community may be included in the cadre of the health delivery system, placed both at the NACO and at all the SACS, after adequate training is provided, for them to be able to play the specific role of increasing demand, improving adherence and extensively expanding treatment literacy; and establishing linkages with social protection schemes. All new recruitment at states and district level to give preference to communities representing people living with HIV and key populations. With an intensive expansion, the community workers as a workforce will focus on comprehensive health and include TB and hepatitis in their outreach.

## 7.8 Private sector

Private sector is a major player in health care delivery in India. According to National Health Systems Research Centre (NHSRC) and National Sample Survey Organisation (NSSO), about 61% of health care is being rolled out by the private sector for general and specialised health services. Active engagement with the private sector needs to be pursued. This NSP identifies this as a major priority and overarching strategy for path to 'END AIDS'. A multi- pronged approach using legislation, advocacy and active engagement with major players and professional bodies will result in active engagement and routine reporting. Some of the implementation arrangements planned are as follows:

- Incentives and benefits for engagement – either through tax savings or material benefits.
- Use of policy to ensure private sector reporting of HIV, STI and co-morbidities and use of technology to make this easier.
- Use of corporate sector funds to co-finance this initiative.
- Use last mile reach of corporates to provide information, replenish drug stocks, transport samples.
- Leverage support from other health programmes in getting access to private sector such as TB, Maternal and Child health etc.



# Chapter 8

## Financing the National Strategic Plan

### 8.1 Introduction

India has embarked on an ambitious target of ending AIDS by 2030. There is considerable political will as well as policy impetus to achieve this, as is evidenced by recent developments:

- i) passing of the HIV Act in both houses of parliament and
- ii) the 'Test and Treat' policy which permits all individuals with HIV to be put on free and lifelong ART.

To achieve these ambitious goals, the national programme has developed a strategic document that lays out the goals and targets to be achieved over the next seven years (April 2017 to March 2024). These are clearly detailed out in the previous chapters. This chapter estimates the budgetary requirements to achieve the goals and targets as envisioned under NSP.

### 8.2 Method

The NSP cost estimates are based on the following set of activities and assumptions.

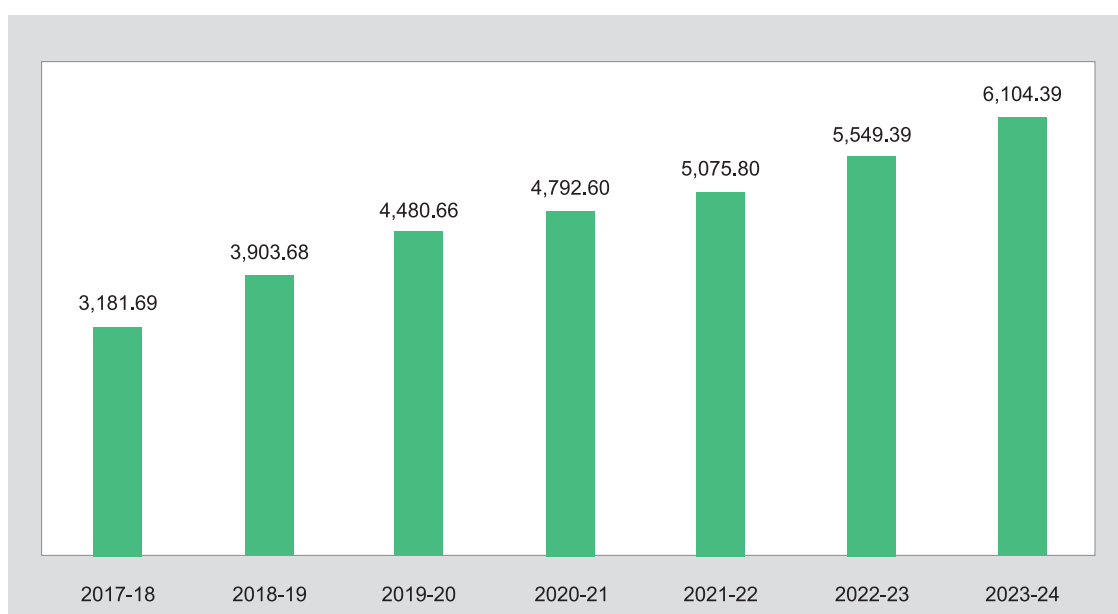
1. A series of consultative meetings with a broad range of stakeholders to arrive at a consensus on the target to be achieved in the next seven years considering the current burden of the disease, the Country commitment towards END AIDS, the Sustainable Development Goals and the implementation capacity of the programme.
2. A list of activities year wise was defined for each thematic areas and each activity was budgeted considering the current costs and assuming an inflation of 5% for each subsequent year.
3. Each thematic group also defined additional human and material resources required to sustain the activities articulated above.
4. The estimated cost of human resources is considered taking into account parity with the NHM and assuming an increment of 5% each year.
5. The additional human resources have been rationalised to bare minimum and wherever possible the NSP has leveraged on already existing human resources in the general health system.
6. The major equipment has been budgeted at current costs assuming a life of 7 years. Replacements of equipment which are more than 7 years old have also been considered in this NSP. Further, an annual maintenance of 10 % for each year has also been considered.
7. Consumables have been budgeted based upon successive targets each year and trends observed in prices in the last 5 years.
8. Budgeting for innovations is based on considered judgements of experts.

## 8.3 Cost

The total budget envelope for implementing the NSP for seven years, to meet envisioned goals and targets is estimated at Rs. 33,088.19/- Crores (Table 11). NSP cost estimate is lowest in year one (Rs. 3,181.69 crores) when the existing activities are maintained while new activities are either in conceptualisation stage or in early phases of the roll out. The budget in year 2 and 3 increased by 23% and 15% respectively from previous year when the new activities are envisaged to be full fledged in operations. The budget in subsequent years increased by 5-10% than the preceding years which is largely attributed to inflation factor, but is also contributed by scale-up and/or consolidation of existing as well as newer activities [Figure 34].

**Table 11: NSP year wise and division wise summary budget estimates (In Rs. Crores), 2017-24**

DIVISION	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Grand Total	In %
TI	523.25	580.69	638.93	665.04	697.84	732.52	768.96	4,607.23	14.0
STI	70.04	83.80	82.28	85.38	83.68	82.61	86.74	574.52	2.0
BSD	629.97	883.32	991.05	1,133.06	1,255.74	1,412.50	1,670.39	7,976.03	24.0
BTS	236.33	286.68	425.50	405.74	349.73	425.99	446.07	2,576.03	8.0
IEC	226.18	204.34	243.56	229.22	265.68	252.72	290.06	1,711.76	5.0
LAB	212.19	180.46	244.28	282.74	314.64	333.71	353.06	1,921.08	6.0
CST	904.82	1,261.43	1,412.09	1,523.48	1,649.29	1,798.21	1,962.58	10,511.90	32.0
MES	28.01	45.12	65.86	62.77	30.58	63.85	54.40	350.60	1.0
Research	37.94	44.11	24.54	37.31	39.17	41.13	43.19	267.38	1.0
PSM	17.99	24.64	26.13	27.57	29.65	30.98	32.40	189.36	1.0
IS	294.98	309.10	326.45	340.28	359.78	375.16	396.53	2,402.28	7.0
Grand Total	3,181.70	3,903.68	4,486.67	4,792.60	5,075.78	5,549.38	6,104.60	33,088.19	100.0

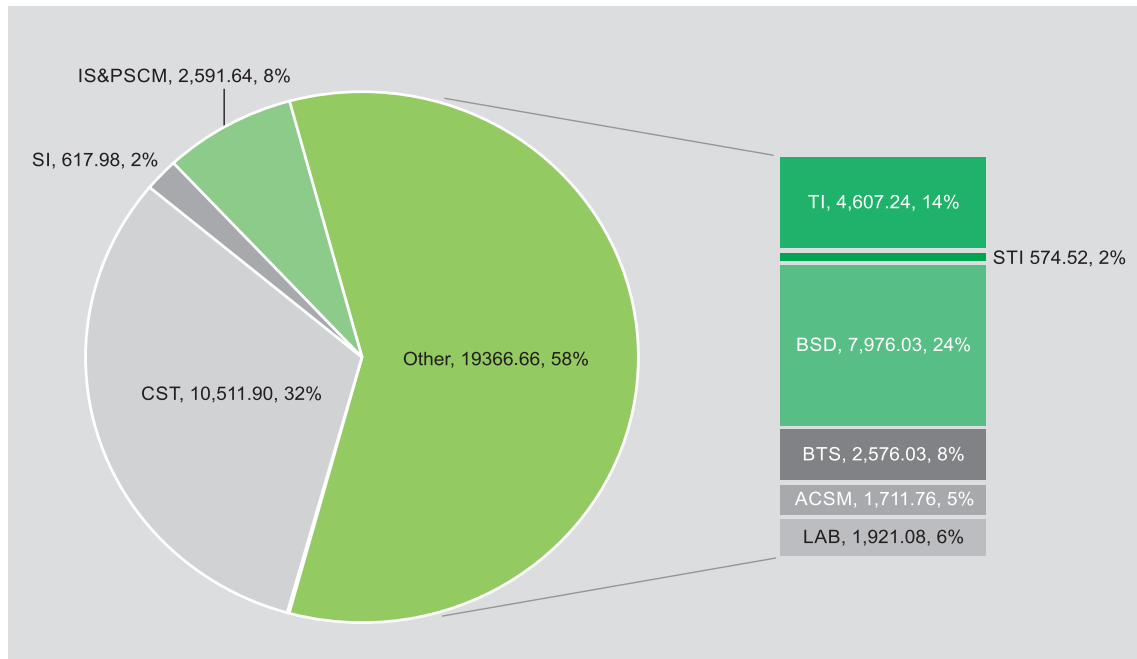


**Figure 34: NSP (Year wise) summary budget estimates (In Rs. Crores), 2017-24**





Overall, 58% of budget need is for prevention functions while one third (32%) of the same is to meet the care, support and treatment functions. The prevention budget comprises 14% for TI, 2% for STI, 25% for BSD, 8% for BTS, 5% for ACSM and 6% for laboratories. Around 8% of the total budget estimates is towards the management functions (inclusive of PSCM) while remaining 2% of the total estimates is for strategic information management [Figure 35]. Function wise detailed budget has been presented at **Annexure 6**.



**Figure 35: Function wise budget distribution under NSP, 2017-24**

## 8.4 Funding Arrangements

It is expected that the above funding would be available from domestic budgetary sources and support from development partners like World Bank, PEPFAR, Global Fund and others. The programme will also leverage the resources from CSR funds, other ministries and development partners.

The programme is also cognisant of the fact that it is difficult to predict activities, resources and targets over a long-time period of seven years. An initial review of programmatic and financial targets and resources will be carried out in the second half of the year 2019, and mid-course corrections in terms of activities and budget estimates will be carried out for the remaining period 2020 - 2024.



## Annexure 1. Addressing HIV prevention among 'At risk' population with timelines

Activity	Deliverable	Timelines	Comments/Remarks
Do in-depth analysis of ICTC data with special focus on the socio-demographic and self-reported risk behaviour information that counsellors collect	Testing data analysis to produce preliminary results and data quality assessments to ascertain to which degree 'belonging to a KP' is under- or misreported	Jul 2017 – Jun 2018	This needs to be done at ICTCs in key states/districts
Conduct rapid follow up assessments on linking the HIV Positives with their occupation and/or socio-economic status	Defined 'At risk group' of population who could be covered with HIV prevention interventions	Jul – Dec 2018	This can be done from the PLHIV profile of PALS data
Design and demonstrate appropriate HIV prevention intervention based on the in-depth analysis and rapid assessments	Operational guidelines for 'At risk group' pilot for HIV Prevention interventions are available	Jul – Dec 2018	
Evaluate the demonstration interventions and assess their outcomes	Pilot studies are evaluated and scale up plan based on the assessment is available	Jan – Dec 2019 – Pilot Jan – Mar 2020 – Evaluation of Pilot	

## Annexure 2. NSP Core Indicator framework for measuring progress towards programme outcome and impacts

S No	Indicator	Measurement Method and Periodicity	Numerator/Denominator	Disaggregation	Relevance
<b>Impact Indicators</b>					
1	Number and percentage of people with HIV	Globally consistent estimation method using survey, surveillance, national demographic and programme data; biennial measurement	N: Estimated number of people living with HIV. D: Population.	Sex, age (<15, 15+, 15-24, 15-49), key population, states	Key to understanding the epidemic level and trend; basis for determining size of epidemic as well as HIV treatment needs; denominator for treatment cascade
2	Number of people newly infected with HIV in the reporting period per 1,000 uninfected population	Globally consistent estimation method using survey, surveillance and national demographic and programme data; biennial measurement	N: Estimated number of people newly infected with HIV D: Uninfected Population.	Sex, age (<15, 15+, 15-24, 15-49), key population, states	Key to understand the direction of epidemic; basis for determining impact of prevention component of HIV interventions
3	AIDS-related deaths per 100,000 population	Globally consistent estimation method using survey, surveillance and national demographic and programme data; biennial measurement	N: Estimated number of people who have died of AIDS-related illness in the reporting period D: Total Population.	Sex, age (<15, 15+, 15-24, 15-49), key population, states	Key to understand the direction of epidemic; basis for determining impact of treatment and care component of HIV interventions
<b>Prevention Indicators</b>					
4	Percentage of FSW reporting using a condom t with their most recent client	Collected through behavioural surveillance or other surveys, to be done during 2019-20	N: Number of sex workers who reported using a condom during last sex act with a client. D: Number of sex workers who reported having commercial sex in last twelve months	Age (< 25 and 25+ yrs.), states	Measures the outcome of prevention interventions in key populations towards control of prevention risks as well as prevention of new infections.
5	Percentage of MSM reporting using a condom the last time they had anal sex with a male partner	As above	N: Number of MSM who reported using a condom the last time they had anal sex D: Number of MSM who reported having anal sex with a male partner in the past six months	Age (< 25 and 25+ yrs.), states	

S No	Indicator	Measurement Method and Periodicity	Numerator/Denominator	Disaggregation	Relevance
6	Percentage IDU who did not share injecting equipment during the last injecting act		N: Number of IDU who reported non-sharing of injecting equipment during the last injecting act D: Number of IDU		
Treatment cascade indicators					
7	Percentage of people living with HIV who know their status (annual)	Based on facility data with denominator from estimation methods; to be triangulated periodically with surveillance /survey data; annual measurement	<b>Facility based</b> N: Cumulative number of PLHIV registered at ART centres (minus deaths –reported and assumed); D: Estimated number of people living with HIV (Indicator 1)	Sex, age (<15, 15+), Key population, states	First indicator to measure the progress on treatment cascade as it will provide the proportion of people living with HIV who know their HIV status.
8	Number and percentage of people living with HIV who are currently receiving ART	Based on facility data with denominator from estimation; to be triangulated periodically with surveillance /survey data; annual measurement	N: Number of people who are currently receiving ART at end of reporting period D: Estimated number of people living with HIV (Indicator 1)	Sex, age (<15, 15+), Key population, states	Measures the extents to which needs for ART are met.
9	Percentage of adults and children living with HIV known to be on ART 12 months after starting (annual)	Based on facility data (IMS cohort data)	N: Number of adults and children alive and on ART at 12 months after initiating ART D: Number of all adults and children PLHIV initiating ART up to 12 months before the beginning of the reporting year.	Sex, age (<15, 15+), Key population, states	Key to understanding progress in increasing survival among adults and children living with HIV by maintaining them on ART. Measure the quality of treatment programme in terms of retention and subsequent progress on viral suppression
10	Number and percentage of people living with HIV who have suppressed viral loads among those who have been tested	Based on facility data; to be triangulated periodically with HIV surveillance /survey data; annual measurement. The denominator is from estimation model (Spectrum model).	N: Number of people living with HIV in the reporting period with suppressed viral load ( $\leq 1000$ copies/mL) D: Estimated number of people living with HIV	Sex, age (<15, 15+), Key population, states	Measures the success of ART treatment and reduced potential for Transmission.






S No	Indicator	Measurement Method and Periodicity	Numerator/Denominator	Disaggregation	Relevance
<b>Elimination of Parent to Child Transmission</b>					
11	Percentage of pregnant women with known HIV status	Based on facility data; to be triangulated periodically with National family health survey data; annual measurement	<b>Facility based</b> N: Number of pregnant women attending ANC clinic who were tested for HIV during pregnancy or already knew they were HIV positive in the reporting period. D: Pregnant women registered under NHM	States	Measures coverage of first step in elimination of parents to child transmission. High coverage enables early initiation of treatment for HIV-infected mothers.
12	Percentage of HIV-positive pregnant women who received ARV drugs to reduce risk of MTCT (annual)	Based on facility data; to be triangulated periodically with HIV surveillance / survey data; annual measurement	N: Number of pregnant women living with HIV who delivered and received antiretroviral medicines during the past 12 months to reduce the risk of the mother-to-child transmission of HIV during pregnancy and delivery. D: Estimated number of women living with HIV who delivered in past 12 months	States	Measures the success of PPTCT programme and reduced potential for vertical transmission.
13	Mother-to-child transmission rate of HIV among breastfeeding populations	Globally consistent estimation methods; to be triangulated with Programme cohort data collected at selected facilities; biennial measurement	N: Number of HIV exposed infants born within the past 12 months who were infected during the MTCT risk period. D: Number of HIV positive women who delivered within the past 12 months.	None	Measures the elimination of mother to child transmission.
14	Percentage of pregnant women with known their Syphilis status	Based on facility data; to be triangulated periodically with National family health survey data; annual measurement	<b>Facility based</b> N: Number of pregnant women attending ANC clinic who were tested for Syphilis during current pregnancy D: Pregnant women registered under NHM	States	Measures coverage of first step in elimination of parents to child transmission. High coverage enables early initiation of treatment for Syphilis-infected mothers.

S No	Indicator	Measurement Method and Periodicity	Numerator/Denominator	Disaggregation	Relevance
15	Percentage of Syphilis positive pregnant women who received drugs to reduce risk of MTCT	Based on facility data; to be triangulated periodically with HIV surveillance / survey data; annual measurement	N: Number of Syphilis positive pregnant women who were treated with at least one dose of intramuscular benzathine penicillin or other effective regimens to reduce the risk of the mother-to-child transmission of Syphilis during reporting period. D: Estimated number of Syphilis positive pregnant women in past 12 months		Measures the success of programme and reduced potential for vertical transmission of Syphilis
16	Congenital Syphilis case rate	Given the difficulties in diagnosing congenital Syphilis, a national case definition and measurement method will be agreed upon. Further, historical trends will be examined.			
<b>Elimination of HIV related stigma and discrimination</b>					
17	Percentage of women and men aged 15-49 years who report discriminatory attitudes towards people living with HIV/AIDS	National Family Health Survey	N: Number of people aged 15-49 years who respond "No" or "it depends" to either of two survey questions ("Would you buy fresh vegetables from a shopkeeper or vendor if you knew that this person had HIV?" and "Do you think children living with HIV should be able to attend school with children who are HIV-negative?") on stigma against people with HIV. D: Number of all women and men aged 15-49 years who have heard of HIV.	Age, Sex, States	Measures the background level of stigma held by the general population against people living with HIV.
18	Percentage of people from key populations who have experienced discrimination by health workers	Sample survey	N: Number of people from key population who experienced discriminatory actions towards them by health workers within the past 12 months. D: Number of people from key population who sought clinical services within the past 12 months.	Age, Sex, States	Measures discrimination in health care against key population, which may inhibit future use of health sector services and discourage people's participation in programme activities







## Annexure 3. List of Priority areas for evidence generation under NSP 2017-24

1. Understanding HIV discordant/ concordant relationship in familial, societal & programmatic context in India– a multi-site qualitative study to inform intervention development.
2. Early infant diagnosis (EID) of HIV infection in India: Assessment of EID programme– coverage, penetration, implementation process, quality of services including linkages with care support and treatment, loss to follow up (LFU) and clinical outcomes.
3. Assessing effectiveness of LACs in executing Care, Support and Treatment Services.
4. Survival analysis of PLHA with adult and paediatric HIV Progression Model.
5. Prevalence of select sexually transmitted infections/reproductive tract infections among subpopulations at high risk of HIV in India: FSW, MSM, IDU and Migrants.
6. Assessing the burden of HIV infection and the access to HIV services among transgendered persons in India.
7. Assessments of implementation of Airborne Infection Control (AIC) Measures in HIV care settings in India.
8. Assessment of transmission rates of HIV from mother to child during antenatal, intrapartum and postpartum period with Option B Plus prophylaxis under PPTCT programme and evaluation of survival and growth of affected children: A multi-centric study.
9. Implementing linked services between HIV (ICTC/ART/PPTCT)/ STI and family planning at district level in Maharashtra to improve use of dual protection among HIV positive people.
10. An assessment of feasibility of operationalisation of ‘Early or Immediate ART’ to HIV infected partner as a combination intervention among HIV sero-discordant couples in India.
11. Validation of the national syndromic protocol with or without minimal laboratory support among attendees of STI/RTI healthcare facilities in Delhi.
12. Dose related pharmacokinetics of rifabutin during concomitant ritonavir administration in HIV–infected TB patients.
13. Multi Centre Cluster Randomised Trial Comparing Rapid Plasma Reagin and Point of Care Test for Syphilis Case Detection and Treatment among pregnant women attending Ante-Natal Clinics in selected districts of Tamil Nadu, India.
14. Assessment of ARTCs: coverage, penetration, implementation process, quality of services.
15. Assessing effectiveness of Care Support Centres.
16. Drug Resistance Survey.
17. Qualitative test: VL, Gene expert machine.
18. Self Testing – feasibility and implementation models.
19. Feasibility of PCR testing at birth.



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20. Feasibility of ART initiation at ANC clinic.
  21. To prioritise key sub-populations by their size, presence in epidemiologically critical states, programme coverage, accessibility to enhance cost-effectiveness.
  22. To develop a comprehensive holistic intervention package for reducing vulnerability to HIV infection and maintain virologic suppressed status among transgenders.
  23. To identify approaches to sustaining focussed HIV prevention programmes through social empowerment, self-efficacy and expanding scope of empowerment.
  24. To identify strategies to enhance programme coverage for currently 'invisible' key sub-populations using traditional and technology based interventions.
  25. To document IDU intervention strategies that have worked or not worked. Develop a prevention package and that to sustain linkage in treatment cascade among injecting drug users.
  26. To identify effective strategies to reaching the female partners of bisexual males.
  27. To develop stochastic modelling based on prevention and treatment interventions along with cost-effectiveness for HIV program.
  28. To develop cohorts to ascertain achievements of zero new HIV infections in known epicentres of HIV and by drivers of the epidemic.
  29. To identify approaches and feasibility of rolling out viral load testing in different programme settings i.e. HIV-Hep C setting; HIV-TB setting and low patient load settings.
  30. To develop a field model based on effective strategies to strengthen HIV prevention, PPTCT and SRH intervention in at source in a district where migration is a driver of epidemic.
  31. To develop a model to identify districts requiring introduction of PrEP.
  32. To identify effective strategies to reduce mortality in HIV-TB co-infection.
  33. To identify cost-effective approaches to enhance access to HIV testing including community based testing and self-testing.
  34. To identify enablers for retention of asymptomatic HIV infected individuals in treatment cascade.
  35. To assess the burden of chronic morbidities among individuals receiving ART for over 10 years and those over 60 years of age to assess their treatment needs.
  36. Understanding declining coverage of key & bridge population through targeted interventions.
  37. Strategies to reach out to informal labour through employer led model and scale up of OST.
  38. Identification of sub-groups in general population from where rest of the 90% of infections are occurring.
  39. Understanding contribution of distal networks to the epidemic in places where rising trends and higher levels of HIV prevalence are seen among general population while the HIV prevalence among high risk groups, especially FSW, is very low. Are there any other local general population networks and behavioural patterns that are responsible for such epidemic patterns?

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40. Epidemiology of new infections and characterization of at-risk groups.
  41. Understanding dynamics of epidemic with higher levels in GP than KP.
  42. Understanding sustained high prevalence among ANC, FSW & MSM in certain pockets despite long-standing interventions.
  43. Approaches and strategies to capturing mobile populations and their vulnerabilities. Strategies to address the issue of sustained high prevalence among FSW in high prevalence states.
  44. What strategies should be put in place to improve the yield of detection of HIV positives and bring them into the fold of care & treatment. How to ensure that they are adopting prevention tools and preventing further transmission.
  45. Emerging drug resistance in patients on first line ART.
  46. Emerging viral STIs among GP and high risk populations.
  47. Emerging vulnerabilities among high risk populations and use of new technologies.
  48. Cascade studies: PPTCT-EID cascade, CLHIV cascade.
  49. Identifying hard-to-reach populations & their network dynamics.
  50. Effectiveness of existing LFU prevention & tracking system.
  51. Cost effectiveness studies on new prevention models.
  52. Cohort studies to assess long-term consequences of treatment.
  53. Incidence studies.
  54. Feasibility studies on HIV viral load testing in CBNAAT machines under RNTCP.
  55. Feasibility studies on Rifampentine-Isoniazid based TB preventive therapy.

*\*The list is only indicative and not exhaustive*

## Annexure 4. Differentiated Care Model

### Enhancing Quality of Care through Differentiated Care

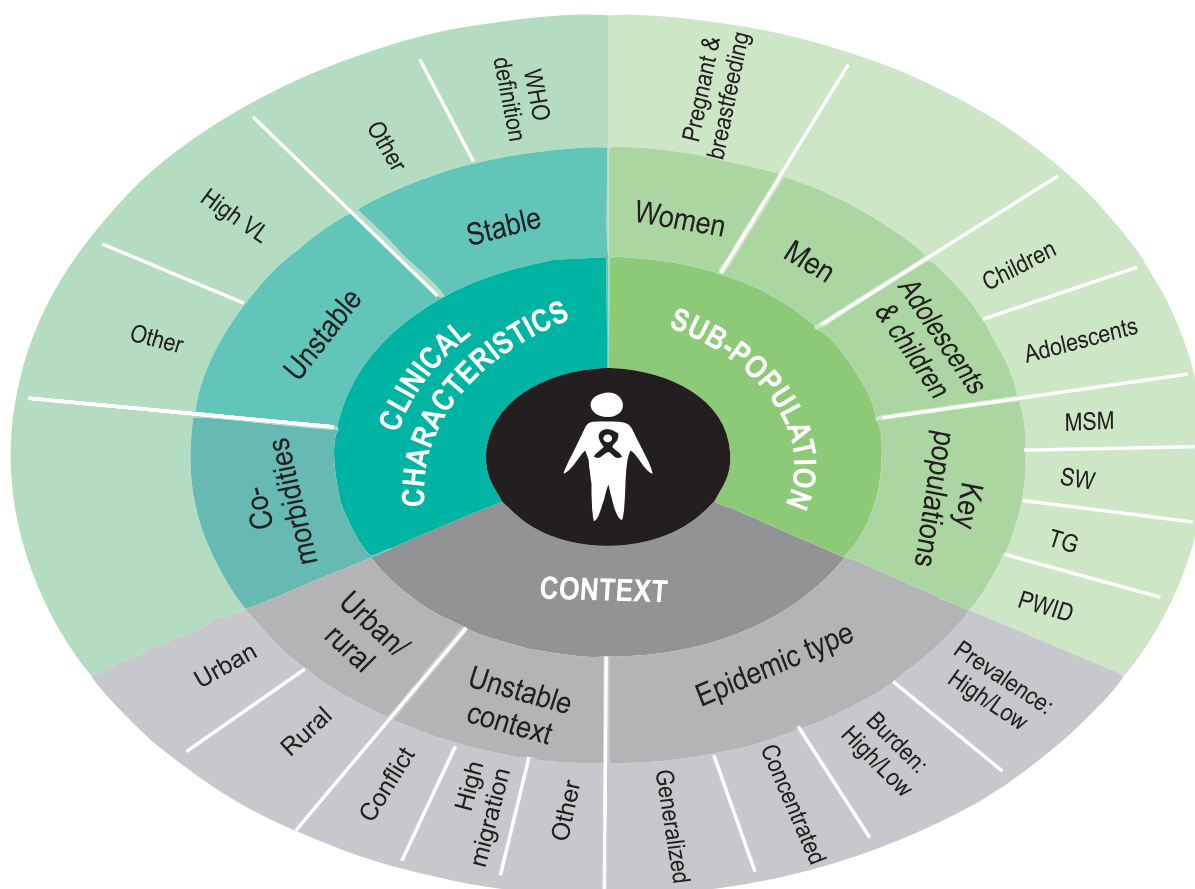
The ART services under the National AIDS Control Programme have expanded from 8 centres in 2004 to 531 centres in 2017. Currently, the national HIV programme provides free first line, second line and third line ARVs to more than ten lakh patients through these ART Centres.

India is a signatory to the UNAIDS's 90-90-90 by 2020 targets which means that India would have 17 lakh patients on ART by 2020. Hence, India only has 61% of its 2020 target PLHIV on ART today and needs to prepare for additional 40% PLHIV which would come under its care in next 3 years. However, the second 90 coverage is not uniform across the country and it varies significantly with some States reaching to only up to 20%.

India has taken a significant step by adopting the WHO 2016 guidelines and announcing ART for all, irrespective of CD4 / clinical stage / age / population. This is expected to increase the ART coverage significantly but at the same time there are concerns of overcrowding which may hamper quality of care.

It has also been realised that “one size cannot fit all” and approach of differentiated care is required for:

- A client centric approach to simplify and adapt HIV services.
- To meet preferences and expectations of different groups of communities.
- To reduce avoidable burden on health system.



The National AIDS Control Organisation plans to expand its ART infrastructure while enhancing quality of care through differentiated care interventions. The NACO plans to have a 2-pronged approach of decentralisation and decongestion to revamp its ART services to be ready to handle the increased burden while maintaining and even improving quality of care.

## Decentralisation

### Decentralisation of ART initiation

Decentralisation is required to increase access and retention to care. It is important that client receive quality treatment and care as near as possible to his/her residence. Programme has recently analysed data of address's in line list of 2.1 million ever registered clients since Apr-2014 till Sep-2015.

The starting cohort was 21,06,175. From these records, 31,268 records were removed as they were blank or had incorrect format filled in the address field (date, house number only etc.). 'String Matching' was conducted for address field of the remaining 20,74,907 records to map them to the districts of the country. The matching exercise was performed at sub-district level to ensure higher accuracy of results. Only the patients which were under care i.e. having status On-ART Alive, On-ART MIS, On-ART LFU, Pre-ART Alive, Pre-ART MIS and Pre-ART LFU were retained. 11,87,910 PLHIV having the above statuses were successfully mapped to districts so far and exercise is on-going.

With interim results, 236 districts are identified where substantial number of PLHIV reside however do not have facility for ART initialisation. It planned to have newer models of service delivery in these districts by establishing facility integrated ART Centres. Most of the districts are in challenging States, the list of which is provided below. It is proposed that we may provide support to the district level institute with medical officer, staff nurse and one peer counsellor along with leveraging existing institutional human resource of specialists / counsellor / lab technicians.

State/UT	Number of districts identified	State/UT	Number of districts identified
Assam	19	Meghalaya	3
Bihar	23	Mizoram	3
Chhattisgarh	12	Nagaland	2
Delhi	2	Odisha	16
Gujarat	2	Punjab	9
Haryana	20	Rajasthan	10
Himachal Pradesh	4	Sikkim	1
J & K	7	Tripura	1
Jharkhand	14	Uttar Pradesh	38
Kerala	4	Uttarakhand	8
Madhya Pradesh	32	West Bengal	5
Maharashtra	1	Total	236

## Decentralisation of ART maintenance

Since 2008, concept of link ART centres has been introduced to decentralised services where without any additional human resources ART maintenance for stable clients was provided. Currently 1,106 link ART centres are functional. Additionally, 131 districts in India are identified which still do not have any service even for ART maintenance. NACO plans to operationalise Link ART Centres in all these districts to ensure accessibility to free HIV care in all geographies.

## Decongestion

NACO's operational guidelines allow for a maximum of 2000 patients under care in an ART Centre to ensure high quality of care. But there many centres which exceed that patient load with a few centres even having more than 10,000 PLHIV under active care. If the programme grows to meet its second 90 target of 17 Lakh PLHIV on ART with the same number of ART centres, then average patient load at an ART Centre would exceed significantly. This would have a detrimental effect on the quality of care provided by counsellors and medical officers due to extreme paucity of time.

Hence, it is essential for the NACO to adopt differentiated care interventions to ensure an optimal daily OPD/patient load at the ART Centres. The NACO is planning the following interventions:

## Multi-month Dispensations (MMD)

In the MMD model, stable patients would receive refills of antiretroviral (ARV) medications for two months instead of one month at a time, so stable patients have six clinic visits per year instead of 12, to reduce burden on facilities and patients.

A patient would be considered stable if he/she:

- Has been on-ART for more than 1 year
- Has good adherence
- Is not suffering from any OI
- Is not suffering from any ARV related side effect
- Is currently on a first line regimen

Successful implementation of 2 month MMD would reduce the average daily OPD by 30-40%.

The NACO is planning to implement MMD. The following aspects of implementing the MMD model would be designed and refined prior to roll out:

- Definition of a stable patient
- Process flow for a stable patient in an ART Centre
- Virtual Training of counsellor, medical officer and pharmacist
- Ensuring Optimal buffer stock for the supply chain
- Need for additional storage within SACS warehouses and ART centres



## Community led ART Refill Groups (CAGRs)

The NACO is also exploring to leverage the 350 CSC strong infrastructure of the Vihaan programme which has deep roots within the local PLHIV communities. The nature of utilisation of the CSC would depend on the geography. The NACO is considering:

- Community Led dispensations in high prevalence districts with highly overloaded ART Centres

The CSCs associated with high load centres can also dispense medicines to stable patients who have been initiated on treatment for atleast six months. These clients can collect ART drugs from CSC which do not have long lines. Even the timings can be adjustable/ flexible like evening / Sunday dispensation which will be suitable for working class and students. A staff nurse or pharmacist or a trained peer can be utilised for this.

- Community ART Refill Groups (CAGRs) in difficult terrain geographies and improving service uptake at LAC

CAGRs are self-forming groups of **stable** PLHIV from the same geographical area. All members must be willing to disclose their status to each other. In the conventional model, one member is nominated by the group and he/she collects the ARVs for the whole group.

But the NACO plans to customize this model by hiring a peer counsellor at Link ART centre or block level who would be responsible for community level dispensation to these CAGRs and ensuring adherence of all members of the group.

The NACO proposes to place 1500 such peers across the country with focus on difficult to reach areas to enhance retention.

CAGRs were adapted from a pilot in Mozambique and based on consultations with Ministry of Health, healthcare workers and PLHIV. In the Mozambique pilot, over 4 years, more than 5,500 PLHIV joined CAGRs with retention rates of 98% and 96% in 12 and 24 months respectively. Similar models have been implemented in Malawi, Swaziland and South Africa.

335 ART centres have been identified for implementation of above mentioned intervention like MMD, community led dispensation, etc. However, there will still be need of new ART centres in high prevalence districts to decongest existing ART service delivery sites.



## Annexure 5. District AIDS Prevention & Control Unit (DAPCU)

### Introduction

India is committed to the end AIDS epidemic by 2030 as part of the Sustainable Development Goals. Responses till now has been extremely successful; India has not only achieved the Millennium development goals of halting and reversing the AIDS epidemic but exceeded the global average. However, as the landscape of HIV commitment has changed, there is no place for complacency. Achieving the end of AIDS epidemic will require multiprong responses that will require efficient investment in the responses, prioritisation of locations and populations, scale up of services as well as expansion of the best practices.

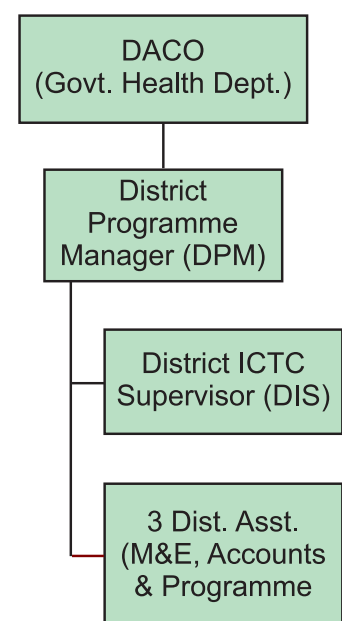
In NACP-III, the management of HIV prevention and control programme was decentralised to district level as a major structural reform. Using the HIV Sentinel Surveillance data (2004-2006), all the districts in the country were divided into four categories (Category A, B, C and D) based on the disease burden. As per this, there were 156 Category A and 39 Category B districts (total 195 districts) across the country that required priority attention. The NACO established DAPCUs in 188 of the 195 districts to provide programmatic oversight through decentralised facilitation, monitoring and coordination of HIV/AIDS programme activities in the district<sup>57</sup>.

### Current structure


The DAPCU is the primary management unit of the National AIDS response. The DAPCU is headed by a medical health officer of the rank of Deputy Chief Medical and Health Officer known as District AIDS Control Officer. S/he is supported by a team of five people hired on a contractual basis as shown in the diagram. The major responsibility of DAPCU is facilitation, monitoring and coordinating NACP activities at the district and sub-district level by integrating with the health system to the extent possible for better synergy and optimal results. DAPCUs, through active engagement of the district administration engages allied line departments and private sector in mainstreaming the programme and advocates district-specific initiatives even by leveraging local resources. This helps in linking vulnerable population with various social entitlement and welfare schemes. DAPCU staff builds the capacity of the facility staff, monitor the referrals and linkages through regular supervisory visits to HIV facilities and monthly review meetings, addresses supply chain management issues through inter and intra-district transfers and make troubleshooting visits, wherever necessary.

### DAPCU Management

The NACO has been managing the DAPCU programme portfolio with technical and funding support from Centers for Disease Control and Prevention (CDC). The CDC helped NACO in developing a standardised training programme for the DAPCU staff and their training during 2010-11 through their grantee. Subsequently, the NACO constituted a DAPCU National Resource Team (DNRT) for continuous mentoring and management of DAPCU activities. The DNRT has experienced professionals with diverse experience in managing public health programmes and has been functioning under the continuous



57. For details, refer Annexure-1



guidance of the NACO. The team has a sanctioned strength of 12 members who are regionally placed for providing effective oversight to the states and districts. DNRT supports 22 SACS and mentor 188 DAPCUs. The presence of DAPCUs in high prevalent districts have proved to be pivotal in management of NACP activities at the field level.

Each state is responsible for managing the DAPCUs, which includes hiring and retention of staff, capacity building and providing supportive supervision and day-to-day management. One of the senior officers of SACS, preferably, the Additional Project Director (APD), or in case, the APD position is vacant, the Joint Director- Basic Services is designated as the DAPCU Nodal Officer (DNO). The NACO conducts periodical review of the programme using various forums. With the expansion of service delivery under the NACP, expectations from these units have grown multi-fold.

To capacitate the staff to meet with the growing demands of the programme, the DNRT in close coordination with the NACO and CDC have developed training modules. All the staffs were trained in FY 2014-15 by the respective SACS using these standard training modules. DNRT, in close coordination with the DNOs in SACS also makes need-based visits to the DAPCUs. The visits are focused on mentoring the staff and motivating them to continue with their challenging task of involving district administration, thereby improving the governance, coordinating and monitoring of NACP activities, addressing the programmatic gaps to realise the programme goals and objectives. In addition to this, the NACO has also developed various mechanisms to monitor the functioning of DAPCUs as mentioned below:

- National level review meetings
- State level review meetings
- Score card based on the performance indicators mentioned in DAPCU monthly report and SACS performance on certain key indicators
- Frequent field visits by the state nodal officers and regional coordinators from DNRT.

The fact that more than 70% of the total HIV facilities in the country are located in the high-burden districts provides scope for a positive impact on the NACP through optimal and effective engagement of the DAPCUs.

## Knowledge sharing

To promote wider sharing of knowledge within the districts, different platforms have been created. One of them has been the identification of successful approaches and models, documenting them as case studies and sharing them widely with all the DAPCU staff in the form of “DAPCU Series”. This practice has encouraged many DAPCUs to document and present their achievements to SACS and NACO through DAPCU Series. While it is difficult to include all the experiences through this mode, the need for a larger space was felt. “DAPCU SPEAK” (<http://dapcuspeak.blogspot.in/>), is another initiative that has emerged from this experience. A moderated blog started in February 2012, to promote sharing of DAPCUs experiences. This helps in peer learning and gradual building of knowledge in the field staff, if used appropriately.

## Way forward

One of the hall mark of the India’s response to the HIV/AIDS epidemic has been an intelligent and integrated use of data on HIV/AIDS for an evidence-based response. Categorising geographical areas



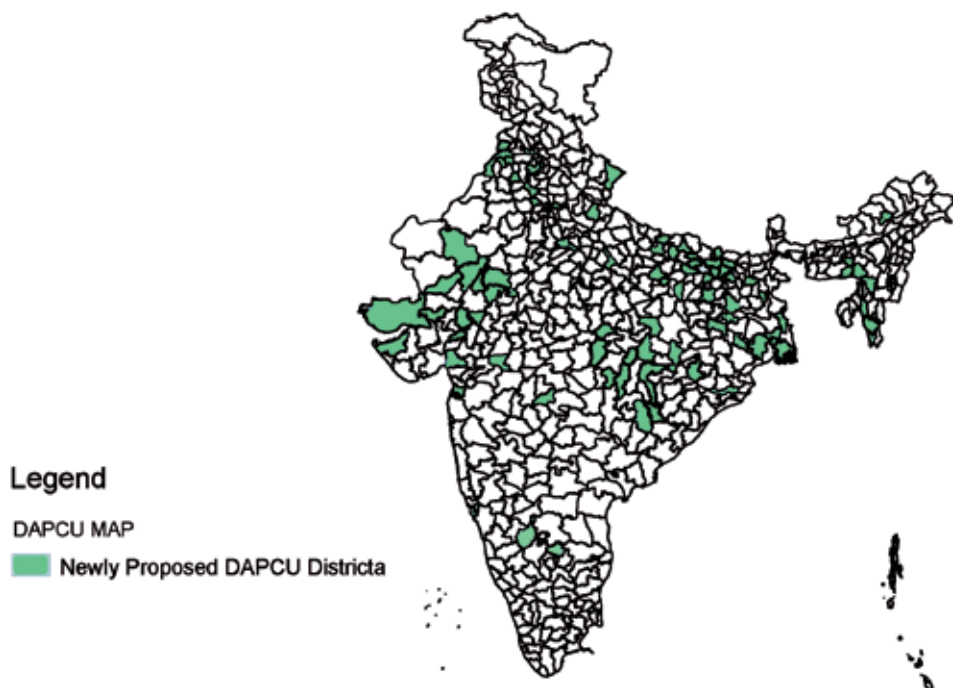
and increasingly district level programming has been an effective outcome of this response. Establishment of the DAPCUs in 188 high priority districts of India in the beginning of NACP III, resulted into institutionalisation of local planning and management unit that led to putting right resources and covering the right population at geographically relevant places.

Over the years, there has been a growing need for expansion of DAPCU in the newer emerging pockets. District prioritisation in NACP-III was done using data from the HIV surveillance. Analysis of updated epidemiological data from the HIV sentinel surveillance (HSS), Integrated Biological and Behavioural Surveillance (IBBS) and Integrated Counselling and Testing Centre (ICTC) data, has revealed that there are 90 new districts that require prioritisation and district units for local level planning and management to boost the HIV/AIDS response in these districts (Box 1).


Sixty-eight, out of total 90 districts, are in state of Bihar, Chhattisgarh, Gujarat, Jharkhand, Meghalaya, Mizoram, Odisha, Punjab, Rajasthan and Uttar Pradesh (Figure-1). Gujarat, Uttar Pradesh and Bihar are top three states in terms of HIV new infections (HIV Estimations 2015). Together, these 10 states contribute 57% of total adult new HIV infections. Clearly, expansion of DAPCU in the 90 priority districts is required for increasing focus on smaller geographical units (sub-districts) to capture heterogeneity in the epidemic and enable locally relevant programming.

**Box 1. Districts Categorization**  
**Methodology**

- ✓ Step 1: Definition of district categorization consistent with definitions used in previous categorization; Based on epidemiological rationale of HIV prevalence coming from updated HIV Surveillance results during 2010-15, highest value among the three rounds considered
- ✓ Step 2: Comparison of results with positivity data from ICTC (Apr'15-Jan'16) to check the validity of results; identification of category A and B districts supported by both of HIV Surveillance and ICTC positivity data (concordant districts category)
- ✓ Step 3: Review of HSS, IBBS, ANC-ICTC and GC-ICTC data for the discordant districts category; classification into category after review of each data source with more stringent rules
- ✓ Step 4: Final compilation of district category



*Figure A: Location of the newly proposed DAPCU districts*



Based on the above, following is proposed towards strengthening the governance at district level especially for HIV programme in the country:

- The HR in existing 188 DAPCU districts may be rationalised to enhance the efficiency and efficacy of the units and restricting the number of contractual staff to three- DPM, DIS (to be renamed as District Supervisor) and District Assistant- M&E (to be renamed as District M&E Officer).
- The newly identified 90 districts<sup>58</sup> with higher HIV prevalence may also be given a district level unit in the form of DAPCU with District AIDS Control Officer (regular medical health officer), District Supervisor and District M&E Officer.
- An officer of the rank of Deputy CMHO or District Tuberculosis Officer (DTO) may be named as the District AIDS Control Officer in remaining (429) non-DAPCU districts. At the same time, a position may be created as “HIV Coordinator” at the district level under existing DPMU of NHM. District Assistant- Programme and Accounts from DAPCU districts may be given preference for these positions along with the network community. This will ensure use of investments on building the capacity of above mentioned positions.

The above mentioned proposals will help in achieving the monitoring of HIV programme in each and every district of the country.

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58. Annexure-2



**Table A: Category A and B District based on HIV Sentinel Surveillance 2004-06**

<b>Category A</b>			
<b>Andhra Pradesh (23/23)</b>	<b>Haryana (1/20)</b>	Beed	<b>Nagaland (10/11)</b>
Adilabad	Bhiwani	Buldhana	Dimapur
Ananthapur	<b>Karnataka (28/27)</b>	Chandrapur	Kohima
Chittoor	Banglore City	Dhule	Mokokchung
East Godavari	Banglore Rural	Gondia	Mon
Guntur	Belgaum	Hingoli	Phek
Hyderabad	Bellary	Jalgaon	Tuansang
Kadapa	Bidar	Jalna	Wokha
Karimnagar	Bijapur	Kolhapur	Peren
Khammam	Chamraj Nagar	Latur	Zunheboto
Krishna	Chick Manglur	Nagpur Rural	<b>Orrisa (4/30)</b>
Kurnool	Chitradurga	Nanded	Angul
Mahabubnagar	Devangere	Nandurbar	Balangir
Medak	Dharwad	Nashik	Bhadark
Nalgonda	Gadag	Osmanabad	Ganjam
Nellore	Gulbarga	Parbhani	<b>Punjab (1/17)</b>
Nizamabad	Hashan	Pune	Ludhiana
Prakasham	Haveri	Raigad MH	<b>Rajasthan (1/32)</b>
Rangareddy	Kodagu	Ratnagiri	Shri Ganganagar
Srikakulam	Kolar	Sangli	<b>Tamilnadu (22/30)</b>
	Kopal	Satara	Coimbotare
Vizianagaram	Mandya	Solapur	Cuddalore
Warangal	Mysore	Thane	Dharmapuri
West Godavari	Raichur	Wardha	Erode
<b>Arunachal Pradesh (1/16)</b>	Shimoga	Yevatmal	Kanyakumari
Lohit	North Kannada	<b>Manipur (8/8)</b>	Karoor
<b>Bihar (2/38)</b>	<b>Madhya Pradesh (4/48)</b>	Bishnupur	Krishna giri
Araria	Balaghat	Chandel	Mudarai
Lakhisarai	Dewas	Churachnadrapur	Namakkal
<b>Chattishgarh (1/18)</b>	Harda	Imphal West	Perampalur
Durg	Panna	Senapati	Pudukkottai
<b>Gujarat (8/26)</b>	Rewa	Tamenglong	Ramnathapuram
Banaskantha	<b>Maharashtra (32/35)</b>	Thobal	Salem
Dahod	Ahmednagar	Ukhrul	Sivaganga
Mehsana	Akola	Imphal West	Theni
Navsad	Amravati Rural	<b>Mizoram (2/2)</b>	The Nilgiris
Surat	Aurangabad MH	Aizol	Tiruvallur
Surendra Nagar	Bhandara	Champai	Tiruvannamalai
Tiruchirappalli			

Thoothukudi			
Vellore			
Virudhunagar			
<b>Uttar Pradesh (5/70)</b>			
Allahabad			
Banda			
Deoria			
Etawah			
Mau			
<b>West Bengal (4/19)</b>			
Kolkata			
Purulia			
Bardhaman			
Utter Dinajpur			
<b>Category B</b>			
<b>Assam (1/23)</b>	Vadodara	Korapaut	Tirunelveli
Sonitpur	<b>Kerala (2/14)</b>	<b>Punjab (1/17)</b>	Thanjavur
<b>Bihar (1/38)</b>	Ernakulam	Bhatinda	Villupuram
Khagaria	Kozhikode	<b>Rajasthan (6/32)</b>	<b>Tripura(1/4)</b>
<b>Delhi (4/8)</b>	<b>Madhya Pradesh (3/48)</b>	Ajmer	North Tripura
Delhi central	Indore	Alwar	<b>West Bengal (4/19)</b>
Delhi East	Mandsaur	Balmar	Darjeeling
Delhi North	Bhopal	Jaipur	Jalpaiguri
Delhi North East	<b>Mizoram (1/8)</b>	Udaipur	Medinipur East
<b>Gujarat (4/26)</b>	Kolasiv	Tonk	Murshidabad
Ahmedabad	<b>Orissa (3/30)</b>	<b>Tamil Nadu (6/30)</b>	
Bhavnagar	Balasore	Chennai	
Rajkot	Khordha	Kancheepuram	

Note: The NACP activities in the districts of Durg, Pondicherry, Chandigarh, Goa, Mumbai are coordinated through the respective SACS/DACS.

**Table B: List of newly proposed DAPCU districts**

State	District
Arunachal Pradesh	Lower Subansiri
Assam	Cachar
	Karimganj
Bihar	Begusarai
	Bhagalpur
	Darbhanga
	Gaya
	Gopalganj
	Jehanabad
	Kaimur (Bhabua)
	Muzaffarpur
	Patna
	Samastipur
	Saran
	Sitamarhi
	Siwan
	Vaishali
Chhattisgarh	Baster
	Bilaspur
	Kawardha
	Koriya
	Raigarh
	Raipur
	Rajnandgaon
Delhi	New Delhi
	West
Goa	South Goa
Gujarat	Bharuch
	Jamnagar
	Kachchh
	Kheda
	Patan

State	District
	SabarKantha
	Valsad
Haryana	Jind
	Rohtak
Jharkhand	Bokaro
	Giridih
	Pakur
	PurbiSinghbhum
	Ranchi
Karnataka	Chikballapur
	Chitradurga
Madhya Pradesh	Barwani
	Jabalpur
	Seoni
Maharashtra	Gondiya
	Washim
Meghalaya	East Khasi Hills
	Jaintia Hills
	RiBhoi
Mizoram	Lawngtlai
	Lunglei
	Mamit
	Serchhip
Nagaland	Longleng
Orissa	Cuttack
	Nabarangapur
	Sambalpur
Punjab	Faridkot
	Firozpur
	Mansa
	Moga
	Nawanshahr



State	District
	Patiala
	Tarn taran
Rajasthan	Bhilwara
	Chittaurgarh
	Dungarpur
	Jalor
	Jodhpur
	Pali
	Rajsamand
Uttar Pradesh	Agra
	Ballia
	Bareilly
	Basti
	Ghaziabad
	Gorakhpur
	Jaunpur
	Kanpur Nagar
	Kushinagar
	Siddharthnagar
	Varanasi
Uttrakhand	Pithoragarh
West Bengal	Haora
	Hugli
	Nadia
	PaschimMedinipur
	South Twenty Four Parganas

## Annexure 6. NACP Component-wise Budget for NSP 2017-24

### NSP BUDGET FOR BASIC SERVICES DIVISION (BSD)

BSD	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Grand Total
( in Rs. Crores)								
ADVOCACY	0.19	0.50	0.69	1.39	4.18	17.36	82.55	<b>106.84</b>
CONSUMABLES	62.15	77.82	99.83	121.85	143.89	155.00	155.18	<b>815.72</b>
EQUIP	24.02	73.64	95.15	48.56	51.75	40.25	28.76	<b>362.13</b>
HR	395.74	504.98	595.43	691.98	787.98	843.82	967.51	<b>4,787.44</b>
IEC	5.39	4.00	0.97	1.93	6.73	30.37	150.00	<b>199.41</b>
KITS	60.68	77.40	84.72	95.71	133.50	136.21	138.00	<b>726.21</b>
MAINTENANCE	5.36	6.46	8.34	10.63	12.33	14.04	15.17	<b>72.32</b>
MEDICINES	0.40	0.42	0.45	0.47	0.49	0.52	0.54	<b>3.29</b>
MONITORING	53.24	64.94	65.82	72.13	72.57	79.37	83.34	<b>491.41</b>
NEW FACILITY	-	-	10.80	-	-	-	-	<b>10.80</b>
OP.COST	3.48	3.34	4.30	5.25	6.21	6.68	7.02	<b>36.27</b>
TRAINING	19.32	69.81	24.56	83.14	36.13	88.90	42.33	<b>364.18</b>
<b>Grand Total</b>	<b>629.97</b>	<b>883.32</b>	<b>991.05</b>	<b>1,133.06</b>	<b>1,255.74</b>	<b>1,412.50</b>	<b>1,670.39</b>	<b>7,976.03</b>

### NSP BUDGET FOR CARE SUPPORT DIVISION (CST)

CST	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Grand Total
( in Rs. Crores)								
CONSUMABLES	6.01	7.45	7.82	8.21	8.62	9.05	9.50	<b>56.65</b>
EQUIP	1.66	11.25	7.01	1.83	1.92	2.02	2.12	<b>27.82</b>
GRANT	3.83	4.02	4.22	4.43	4.65	4.88	5.13	<b>31.15</b>
HR	124.33	156.64	184.43	193.65	203.34	213.50	224.18	<b>1,300.07</b>
LOGISTICS	1.94	4.31	6.85	8.14	9.43	10.09	10.75	<b>51.50</b>
MAINTENANCE	-	-	0.45	0.47	0.49	0.52	0.54	<b>2.48</b>
MEDICINES	730.11	1,035.99	1,138.96	1,251.87	1,374.81	1,509.82	1,659.60	<b>8,701.16</b>
OP.COST	17.60	21.57	22.43	24.51	25.74	27.03	28.38	<b>167.26</b>
TRAINING	19.35	20.22	39.92	30.35	20.29	21.31	22.37	<b>173.81</b>
<b>Grand Total</b>	<b>904.82</b>	<b>1,261.43</b>	<b>1,412.09</b>	<b>1,523.48</b>	<b>1,649.29</b>	<b>1,798.21</b>	<b>1,962.58</b>	<b>10,511.90</b>

### NSP BUDGET FOR INSTITUTIONAL STRENGTHENING DIVISION

IS	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Grand Total
( in Rs. Crores)								
EQUIP	0.45	0.45	-	-	-	-	-	0.90
HR	137.09	145.65	152.93	160.58	168.61	177.04	185.89	1,127.79
MONITORING	27.00	28.35	29.77	31.26	32.82	34.46	36.18	219.83
OP.COST	127.67	134.06	140.76	147.80	155.19	162.95	171.09	1,039.51
REVIEW MEET	0.10	0.17	0.18	0.19	0.20	0.21	0.22	1.27
TRAINING	2.26	-	2.37	-	2.49	-	2.61	9.72
WORKSHOP/SEMINAR	0.40	0.42	0.44	0.46	0.49	0.51	0.54	3.26
<b>Grand Total</b>	<b>294.98</b>	<b>309.10</b>	<b>326.45</b>	<b>340.28</b>	<b>359.78</b>	<b>375.16</b>	<b>396.53</b>	<b>2,402.28</b>

### NSP BUDGET FOR MONITORING, EVALUATION AND SURVEILLANCE DIVISION

MES	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Grand Total
( in Rs. Crores)								
CONSUMABLES	0.37	0.39	0.41	0.43	0.45	0.47	0.50	3.01
EQUIP	0.20	2.38	0.22	0.23	0.24	0.26	0.27	3.79
IT/ SOFTWARE/ INFO SYSTEM	1.40	10.52	16.43	6.92	1.70	1.79	1.88	40.64
MAINTENANCE	0.57	0.60	0.63	0.66	0.69	0.73	0.76	4.64
MONITORING	0.50	0.53	0.55	0.58	0.61	0.64	0.67	4.07
OP.COST	1.43	1.50	1.58	1.66	1.74	1.83	1.92	11.66
REVIEW MEET	0.06	0.06	0.07	0.07	0.07	0.08	0.08	0.49
SURVEILLANCE	15.53	20.79	37.21	43.02	15.41	47.92	37.67	217.56
TRAINING	7.95	8.35	8.76	9.20	9.66	10.15	10.65	64.73
<b>Grand Total</b>	<b>28.01</b>	<b>45.12</b>	<b>65.86</b>	<b>62.77</b>	<b>30.58</b>	<b>63.85</b>	<b>54.40</b>	<b>350.60</b>



### NSP BUDGET FOR BLOOD TRANSFUSION DIVISION

BTS	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Grand Total
( in Rs. Crores)								
EQUIP	-	2.00	3.00	-	-	-	-	5.00
ESTB.COST & EQUIP	-	15.00	50.00	90.00	-	-	-	155.00
GRANT	143.80	161.09	179.82	188.59	197.80	207.47	217.62	1,296.19
KITS	76.34	91.10	101.64	106.72	112.06	117.66	123.54	729.07
MAINTENANCE	1.76	1.92	2.05	2.15	2.26	2.37	2.49	15.00
MONITORING	2.60	2.76	2.97	3.12	3.28	3.44	3.62	21.80
NEW FACILITY	-	1.00	1.50	1.50	20.00	20.00	20.00	64.00
OP.COST	-	-	72.00	-	-	60.00	63.00	195.00
TRAINING	11.82	11.82	12.51	13.65	14.33	15.05	15.80	94.98
<b>Grand Total</b>	<b>236.33</b>	<b>286.68</b>	<b>425.50</b>	<b>405.74</b>	<b>349.73</b>	<b>425.99</b>	<b>446.07</b>	<b>2,576.03</b>

### NSP BUDGET FOR IEC DIVISION

IEC	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Grand Total
( in Rs. Crores)								
ADVOCACY	7.00	7.10	7.46	7.83	8.22	8.63	9.06	55.29
CAMPAIGN / AWARENESS PROG	185.38	183.10	201.26	205.81	216.10	226.90	237.96	1,456.49
EQUIP	1.00	1.05	1.10	1.16	1.22	1.28	1.34	8.14
EVALUATION	1.00	1.05	1.10	1.16	1.22	1.28	1.34	8.14
INNOVATION	3.00	3.05	3.20	3.36	3.53	3.71	3.89	23.75
IT/ SOFTWARE/ INFO SYSTEM	3.00	3.15	3.31	3.47	3.65	3.83	4.02	24.43
MAINTENANCE	20.00	-	20.00	-	25.00	-	25.00	90.00
TRAINING	5.80	5.84	6.13	6.44	6.76	7.10	7.45	45.52
<b>Grand Total</b>	<b>226.18</b>	<b>204.34</b>	<b>243.56</b>	<b>229.22</b>	<b>265.68</b>	<b>252.72</b>	<b>290.06</b>	<b>1,711.76</b>

### NSP BUDGET FOR LAB DIVISION

LAB	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Grand Total
( in Rs. Crores)								
CONSUMABLES	1.48	2.29	2.40	2.52	2.65	2.78	2.92	17.03
EQUIP	127.60	12.31	12.93	13.57	14.25	14.96	15.71	211.34
HR	9.84	14.07	14.78	15.52	16.29	17.11	17.96	105.57
INNOVATION	2.50	2.63	2.76	2.89	3.04	3.19	3.35	20.36
IT /SOFTWARE / INFO SYSTEM	1.10	1.16	1.21	1.27	1.34	1.40	1.47	8.96
KITS	60.44	133.54	186.46	222.04	251.51	268.03	284.71	1,406.73
MAINTENANCE	0.39	4.04	12.78	13.42	13.49	13.55	13.62	71.29
MEETINGS	0.09	0.09	0.10	0.10	0.11	0.11	0.12	0.73
OP.COST	4.08	4.69	4.92	5.17	5.43	5.70	5.98	35.97
QUALITY ASSURANCE	4.68	5.65	5.93	6.23	6.54	6.87	7.21	43.10
<b>Grand Total</b>	<b>212.19</b>	<b>180.46</b>	<b>244.28</b>	<b>282.74</b>	<b>314.64</b>	<b>333.71</b>	<b>353.06</b>	<b>1,921.08</b>

### NSP BUDGET FOR PROCUREMENT DIVISION

PSM	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Grand Total
( in Rs. Crores)								
LOGISTICS	17.99	24.64	26.13	27.57	29.65	30.98	32.40	189.36
<b>Grand Total</b>	<b>17.99</b>	<b>24.64</b>	<b>26.13</b>	<b>27.57</b>	<b>29.65</b>	<b>30.98</b>	<b>32.40</b>	<b>189.36</b>

### NSP BUDGET FOR STI DIVISION

STI	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Grand Total
( in Rs. Crores)								
EQUIP	4.88	4.88	0.38	0.38	-	-	-	10.50
GRANT	8.00	8.40	8.82	9.26	9.72	10.21	10.72	65.14
HR	22.75	24.39	24.90	25.40	21.34	22.40	23.52	164.71
IEC	5.00	5.25	5.51	5.79	6.08	6.38	6.70	40.71
INNOVATION	-	5.00	5.00	5.00	5.00	-	-	20.00
KITS	21.84	22.94	24.08	25.29	26.55	27.88	29.27	177.85
MONITORING	3.49	3.67	3.85	4.04	4.24	4.46	4.68	28.43
OP.COST	-	5.00	5.25	5.51	5.79	6.08	6.38	34.01
TRAINING	4.07	4.28	4.49	4.72	4.95	5.20	5.46	33.17
<b>Grand Total</b>	<b>70.04</b>	<b>83.80</b>	<b>82.28</b>	<b>85.38</b>	<b>83.68</b>	<b>82.61</b>	<b>86.74</b>	<b>574.52</b>

### NSP BUDGET FOR RESEARCH DIVISION

Research	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Grand Total
( in Rs. Crores)								
INNOVATION	5.00	7.00	5.00	-	-	-	-	17.00
MONITORING	0.05	0.05	0.05	-	-	-	-	0.14
RESEARCH	31.37	35.50	17.91	37.31	39.17	41.13	43.19	245.57
WORKSHOP/ SEMINAR	1.52	1.56	1.58	-	-	-	-	4.67
<b>Grand Total</b>	<b>37.94</b>	<b>44.11</b>	<b>24.54</b>	<b>37.31</b>	<b>39.17</b>	<b>41.13</b>	<b>43.19</b>	<b>267.38</b>

### NSP BUDGET FOR TARGETED INTERVENTION DIVISION

TI	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Grand Total
( in Rs. Crores)								
HEP C	-	4.48	8.96	3.73	3.73	3.73	3.73	<b>28.38</b>
PROGRAM	478.76	527.16	576.21	605.02	635.27	667.04	700.39	<b>4,189.84</b>
TEST&TREAT	35.49	39.03	42.93	45.08	47.33	49.70	52.18	<b>311.74</b>
TRAINING	9.00	10.02	10.83	11.21	11.51	12.05	12.66	<b>77.28</b>
<b>Grand Total</b>	<b>523.25</b>	<b>580.69</b>	<b>638.93</b>	<b>665.04</b>	<b>697.84</b>	<b>732.52</b>	<b>768.96</b>	<b>4,607.24</b>

# Glossary of Terms<sup>59</sup>



**Accountability:** Accountability is the obligation of people and organisations to live up to what is expected of them and to report on the use of resources; it also is the assumption of responsibility for one's actions and the consequences of such actions.

**Antiretroviral medicines/antiretroviral (ARVs)/antiretroviral therapy (ART)/ HIV treatment:** These are medicines that are used for treating HIV infection. They are highly effective in suppressing HIV virus and slowing the progress of HIV disease. ART has three or more drug combination such as tenofovir + Lamivudine and Efavirenz/Nevirapine or Zidovudine + Lamivudine and Efavirenz/Nevirapine.

**Behaviour Change Communication (May now be referred as Social Change Communication):** Targeted and tailored messages that are provided to groups or individuals and are expected to bring about a transformational change in person's behaviour as well as society.

**Bisexual:** A person who is attracted to as well as have sexual relation with both men and women. This is a cultural identity and is usually self-identified.

**Combination HIV prevention:** The combination prevention approach seeks to achieve maximum impact on HIV prevention by combining behavioural, biomedical and structural strategies that are human rights-based and evidence-informed, in the context of a well-researched and understood local epidemic.

**Comprehensive sexuality education:** Sexuality education is defined as “an age-appropriate, culturally relevant approach to teaching about sex and relationships by providing scientifically accurate, realistic and non-judgmental information.” “Sexuality education provides opportunities to explore one's own values and attitudes and to build decision-making, communication and risk reduction skills about many aspects of sexuality” (United Nations Educational, Scientific and Cultural Organisation (UNESCO)).


**Concurrent sexual partnerships/ concurrency:** People with multiple sexual relationships where intercourse with one partner occurs between two acts of intercourse with another partner. Usual time is within past six months for any surveillance purposes.

**Condom less sex:** In condom less sex, the sex act is not protected by male or female condoms. Previously known as unprotected sex, this is now increasingly referred to as condom less sex; this is done to avoid confusion with the protection from pregnancy that is provided by other means of contraception.

**Country Coordinating Mechanism:** The coordinating body in any country set up by the Global fund to fulfil its commitment towards local ownership and participatory decision making.

**Coverage rate:** Coverage rate is the proportion of individuals accessing and receiving a service or commodity at a point in time. The numerator is the number of people who receive the service and the denominator

<sup>59</sup> Adopted from UNAIDS Terminology Guidelines, 2015. Available at [http://www.unaids.org/en/resources/documents/2015/2015\\_terminology\\_guidelines](http://www.unaids.org/en/resources/documents/2015/2015_terminology_guidelines). Accessed on 10 Dec 2016.



is the number of individuals who are eligible to receive the service at the same point in time. This is typically measured in surveys, but it also may be measured using service data (e.g. receiving basic service package for MSM or FSW or antiretroviral therapy).

**Enabling environment:** There are different kinds of enabling environment in the context of HIV. For instance, an enabling legal environment would not only have laws and policies against discrimination based on sex, health status (including HIV status), age, disability, social status, sexual orientation, gender identity and other relevant grounds, but they would be enforced. In such an environment, people would also have access to justice—that is, a process and remedy if they are aggrieved. An enabling social environment is one in which social protection strategies (e.g. economic empowerment) are in place, and where social norms support knowledge, awareness and healthy behaviour choices.

**Gender equality:** Gender equality—or equality between men and women—is a recognised human right, and it reflects the idea that all human beings, both men and women, are free to develop their personal abilities and make choices without any limitations set by stereotypes, rigid gender roles or prejudices. Gender equality means that the different behaviours, aspirations and needs of women and men are considered, valued and favoured equally. It also signifies that there is no discrimination on the grounds of a person's gender in the allocation of resources or benefits, or in access to services. Gender equality may be measured in terms of whether there is equality of opportunity or equality of results.

**Global AIDS Response Progress Reporting (GARPR):** Global AIDS Response Progress Reporting (GARPR) is a process whereby countries report progress annually on an established set of GARPR indicators (previously, UNGASS indicators). The indicators are designed to assist countries assess the current state of their national HIV response and progress in achieving their national HIV targets. They will contribute to a better understanding of the global HIV response to the AIDS epidemic, including progress towards the global targets set in the 2011 United Nations Political Declaration on HIV and AIDS and the Millennium Development Goals.

**HIV Testing Services (HTS):** HIV testing is the gateway to HIV treatment and care, and it is critical in the scale-up of universal access to HIV prevention, including in the context of male circumcision, elimination of new infections among children and antiretroviral medicine based prevention approaches (including pre-exposure prophylaxis or post-exposure prophylaxis). The term HIV testing services (HTS) is used to embrace the full range of services that should be provided together with HIV testing. HIV testing should be undertaken within the framework of the 5Cs: consent, confidentiality, counselling, correct test results and connection/linkage to prevention, care and treatment.

**HIV Treatment Cascade:** The term HIV treatment cascade is used to refer to the chain of events that are involved in an HIV -positive person receiving treatment until his or her viral load is suppressed to undetectable levels. Each step in the cascade is marked by an assessment of the number of people who have reached that stage, making it possible to determine where gaps might exist in the treatment of people living with HIV. It emphasizes the need to focus on all the required steps to suppress the virus in the cohort of people living with HIV. The stages of the HIV treatment cascade are as follows: the number of people living with HIV; the number who are linked to medical care; the number who start HIV treatment; the number who adhere to their treatment regimen; and, finally, the number who suppress HIV to undetectable levels in their blood.

**Catalytic Funding:** Catalytic funding is a term introduced by the Global Fund to define a separate reserve of funding that rewards high-impact, well-performing programmes and encourages ambitious but feasible requests that make a particularly strong case for investment.

**Incidence:** HIV incidence is expressed as the number of new HIV infections over the number of people susceptible to infection in a specified time. Cumulative incidence may be expressed as the number of new cases arising in each period in a specified population. UNAIDS reports the estimated number of incident cases that occurred in the past year among people aged 15–49 years and 0–14 years.

**Intimate partner transmission:** The term intimate partner transmission (also known by its full name, HIV transmission in intimate partner relationships) describes the transmission of HIV to individuals from their regular partners who inject drugs, who have sex with other people, including with sex workers, people who inject drugs, or gay men and other men who have sex with men.

**Intimate partner violence:** Intimate partner violence is “behaviour within an intimate relationship that causes physical, sexual or psychological harm, including acts of physical aggression, sexual coercion, psychological abuse and controlling behaviours” (WHO and UNAIDS, 2013).

**Investment approach:** An investment approach maximizes the returns on investment in the HIV response. It allocates resources towards combinations of interventions that will achieve the greatest impact, and it enhances equity and impact by focusing efforts on key locations and populations with the greatest needs.


An investment approach also improves the efficiency of HIV prevention, treatment, care and support programmes. It does this by using empirical evidence and modelling to identify priorities and gaps, as well as enabling countries to secure sustainable funding for HIV programmes.

Finally, an investment approach provides the framework to align government domestic funding strategies for the medium and long term with donor-supported efforts.

**Investment case:** An investment case is a document that makes the case for optimized HIV investments. At its core, it is a description of returns on investment in a country’s optimized HIV response over the long term (typically more than 10 years). It summarises the state of the epidemic and the response, describing the prioritised interventions to be implemented and the populations and geographic areas that should be focused on—in order to achieve the greatest impact, indicating the resources required. It also outlines the main access, delivery, quality and efficiency issues to be addressed in order to improve HIV services, and it describes what will be done to address these issues. Finally, it includes an analysis of (and plan for) realistic and more sustainable financing of the HIV response, incorporating increases in domestic financing where relevant.

An investment case is a means of demonstrating national leadership in the response. It has the capacity to unite diverse stakeholders, including the ministries of finance, health, development and planning, civil society, people living with HIV and international partners. It articulates a common effort to identify programmatic gaps and bottlenecks, and to create a road map for action. An investment case can be different from a national strategic plan, which often includes an extensive and aspirational articulation of needs and is constrained by set time frames.

**Key population:** UNAIDS considers gay men and other men who have sex with men, sex workers and their clients, transgender people, people who inject drugs and prisoners and other incarcerated people as the main key population groups. These populations often suffer from punitive laws or stigmatising policies, and they are among the most likely to be exposed to HIV. Their engagement is critical to a successful HIV response everywhere—they are key to the epidemic and key to the response. Countries should define the specific populations that are key to their epidemic and response based on



the epidemiological and social context. In India, in addition to the expressed group, the single male migrants and long distance truckers are also considered as a high-risk population.

**Parent (Mother) to child transmission:** MTCT is the abbreviation for mother-to-child transmission. PPTCT, the abbreviation for prevention of mother-to-child transmission, refers to a four-pronged strategy for stopping new HIV infections among children and keeping their mothers alive and families healthy. The four prongs are: helping reproductive-age women avoid HIV (prong. 1); reducing unmet need for family planning (prong. 2); providing antiretroviral medicine prophylaxis to prevent HIV transmission during pregnancy, labour and delivery, and breastfeeding (prong. 3); and providing care, treatment and support for mothers and their families (prong. 4). India is classified as ‘Concentrated Epidemic’ for HIV/AIDS. PPTCT often is mistakenly used to refer to only prong. 3— the provision of antiretroviral medicine prophylaxis. India prefers to use the terms parent-to-child transmission or vertical transmission as more inclusive terms to avoid stigmatising pregnant women, to acknowledge the role of the father/male sexual partner in transmitting HIV to the woman and to encourage male involvement in HIV prevention. Still other countries and organisations use the term elimination of mother-to-child transmission (eMTCT). The UNAIDS preferred terminology for the four programmatic prongs is eliminating (or stopping/ending) new HIV infections among children and keeping their mothers alive. It has no abbreviation.

**Multipurpose technologies:** Multipurpose technologies are devices or approaches that protect against both HIV and other sexual-related consequences (such as other sexually transmitted infection or pregnancy). Male and female condoms are two examples, but others are in development, including intravaginal rings containing both contraceptives and antiretroviral medicines to prevent HIV infection. In India, male and female condoms are available for use.


**National AIDS spending assessment (NASA):** NASA describes the flow of resources spent in the HIV response from their origin to the beneficiary populations. It provides decision-makers with strategic information that allow countries to mobilise resources, and have a stronger accountability and a more efficient and effective programme implementation. NASA is a tool within the national monitoring and evaluation framework and is a recommended measurement tool to track HIV spending at the country level.

**Post exposure prophylaxis (PEP):** Post-exposure prophylaxis refers to antiretroviral medicines that are taken after exposure (or possible exposure) to HIV. The exposure may be occupational (e.g. a needle stick injury) or non-occupational (e.g. condom less sex with a seropositive partner). The latter is sometimes referred to as non-occupational post-exposure prophylaxis (N-PEP).

**Pre-exposure prophylaxis (PrEP):** Pre-exposure prophylaxis (PrEP) refers to antiretroviral medicines prescribed before exposure (or possible exposure) to HIV. Several studies have demonstrated that a daily oral dose of appropriate antiretroviral medicines is effective in both men and women for reducing the risk of acquiring HIV infection through sexual or injection transmission.

**Prison and other closed settings:** Prisons and other closed settings refers to places of detention that hold people who are awaiting trial, who have been convicted or who are subject to other conditions of security. These settings may differ in some jurisdictions, and they can include jails, prisons, police detention, juvenile detention, remand/pretrial detention, forced labor camps and penitentiaries. There is a need to be inclusive in the language used to describe prisoners and other incarcerated people. Universal access to HIV prevention, treatment, care and support ideally should extend to these settings.





**Second generation surveillance:** Second generation surveillance for HIV is the regular and systematic collection, analysis, interpretation, reporting and use of information to track and describe changes in the HIV epidemic over time. In addition to HIV surveillance and AIDS case reporting, second generation surveillance includes behavioural surveillance to track trends in risk behaviours over time to identify or explain changes in levels of infection and the monitoring of sexually transmissible infections in populations at risk of acquiring HIV. These different components achieve greater or lesser significance depending on the surveillance needs of a country, as determined by the nature of the epidemic it is facing.

**Sex:** The term sex refers to biologically determined differences that are used to label individuals as males or females. The bases for this classification are reproductive organs and functions.

**Sexual and reproductive health package:** This term refers to programmes, supplies and multi-integrated services to ensure that people can have not only a responsible, satisfying and safer sex life, but also the capability to reproduce and the freedom to decide if, when and how often to do so. It is particularly important that this decision be free of any inequality based on socioeconomic status, education level, age, ethnicity, religion or resources available in their environment.

A sexual and reproductive health package aims to guarantee that men and women are informed of (and to have access to) the following resources: safe, effective, affordable and voluntary acceptable methods of birth control; access to appropriate health-care services for sexual and reproductive care, treatment and support; and access to comprehensive sexuality education. A package also includes (but is not limited to): pregnancy related services (and skilled attendance and delivery), as well as emergency obstetric and post-abortion care; STI and HIV prevention, diagnosis and treatment; prevention and early diagnosis of breast and cervical cancers; and prevention of gender-based violence and care for survivors of gender-based violence.

**Sexual health:** Sexual health is “not merely the absence of disease, dysfunction or infirmity—it is a state of physical, emotional, mental and social well-being in relation to sexuality. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences that are free of coercion, discrimination, and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled” (WHO Geneva, 2002)

**Sexual orientation:** The term sexual orientation refers to each person’s capacity for profound emotional, affectional and sexual attraction to (and intimate and sexual relations with) individuals of any sex. SOGI, an often-used abbreviation, stands for sexual orientation, gender identity.

**Sexual rights:** Sexual rights embrace a “human right that already are recognised in many national laws, international human rights documents and other consensus statements: the right of all persons to the highest attainable standard of sexual health, free of coercion, discrimination and violence. This includes the following: accessing sexual and reproductive health-care services; seeking, receiving and imparting information related to sexuality; obtaining sexuality education; enjoying respect for bodily integrity; choosing a partner; deciding to be sexually active or not; participating in consensual sexual relations; engaging in consensual marriage; determining whether (and when) to have children; and pursuing a satisfying, safe and pleasurable sexual life” (WHO Geneva, 2002).

**Social change communication:** Social change communication is the strategic use of advocacy, communication and social mobilisation to systematically facilitate and accelerate change in the



underlying determinants of HIV risk, vulnerability and impact. It enables communities and national AIDS programmes to tackle structural barriers to effective AIDS responses, such as gender inequality, violation of human rights and HIV-related stigma. Social change communication programmes act as catalysts for action at the individual, community and policy levels.

**Stigma and discrimination:** Stigma is derived from a Greek word meaning a mark or stain, and it refers to beliefs and/or attitudes. Stigma can be described as a dynamic process of devaluation that significantly discredits an individual in the eyes of others, such as when certain attributes are seized upon within cultures or settings and defined as discreditable or unworthy. When stigma is acted upon, the result is discrimination. Discrimination refers to any form of arbitrary distinction, exclusion or restriction affecting a person, usually (but not only) because of an inherent personal characteristic or perceived membership of a group. It is a human rights violation. In the case of HIV, this can be a person's confirmed or suspected HIV-positive status, irrespective of whether there is any justification for these measures. The terms stigmatisation and discrimination have been accepted in everyday speech and writing, and they may be treated as plural.

**Structural interventions:** Structural interventions are those that seek to alter the physical, legal and social environment in which individual behaviour takes place. They also can aim to remove barriers to protective action or to create constraints to risk-taking.

**Sustainable Development Goals:** The agreement of Member States to launch a process to develop a set of sustainable development goals (SDGs) was one of the main outcomes of the Rio+20 Conference. The SDGs will build upon the MDGs and provide a framework for the post-2015 development agenda. The outcome document of the Open Working Group (OWG) on the SDGs proposes 17 goals, of which the third is: "Ensure healthy lives and promote well-being at all ages". Specifically, target 3.3 states: "by 2030, end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases".

**Test and treat:** Test and treat is sometimes used as a way of referring to voluntary HIV testing and the offer of antiretroviral therapy after diagnosis, irrespective of WHO clinical stage or CD4 cell count. The voluntary nature of both testing and treatment should be emphasized to ensure that individual autonomy is respected. Where test and treat is offered, it is necessary to establish strong support for adherence to keep people on lifelong treatment. In addition, test and treat strategies always should be supplemented by strong combination HIV prevention, including risk reduction counselling, condom provision and/or PrEP. In settings where it is recommended, test and treat also can include referral to male circumcision services for men who test negative for HIV.

**Three 'I's for HIV/TB:** The three 'I's for HIV/TB—isoniazid preventive treatment, intensified case finding for active tuberculosis and tuberculosis infection control and early antiretroviral therapy (per national guidelines) and for active TB (irrespective of CD4 count)—are key public health strategies to decrease the impact of tuberculosis on people living with HIV, their partners and family, and the community.

**Unfunded quality demand:** Unfunded quality demand is a term introduced by the Global Fund to define funding requested through a concept note that is considered by the Technical Review Panel to be technically sound but beyond the funding amount available (indicative funding and any additional incentive funding awarded). An unfunded quality demand is registered for up to three years for possible funding by the Global Fund or other donors when (and if) new resources become available.

# Acknowledgement

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