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Current Epidemiological Scenario of HIV/AIDS in India: National Response; a Rhetoric or Reality

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Abstract

Current state of AIDS Epidemic in the world accounts for 34 million people living with HIV (PLHIV) with 21% falling in emergence of new HIV infections (between 1997 and 2010). Though Asia and, particularly, India accounts for low HIV prevalence regions, it accounts for third highest number of PLHIV. According to National HIV Sentinel Surveillance (UNGASS, 2010), 2.4 million PLHIV with 0.3% adult HIV prevalence. India's epidemic is concentrated within most at-risk populations with prevalence varying dramatically by districts and state. About 60% of PLHIV are in the six high-prevalence states, with rising trends among ANC clinic attendees. Indian Epidemic is shifting from the most vulnerable populations to "bridge" populations and is becoming more common among women (39%) and rural inhabitants (67%). The HIV-TB co-infection rate of adults testing HIV positive among incident TB cases is 6.7% (2010-11). NACP-I focused on HIV surveillance, screening of blood and a public education campaign. NACP-II shifted the focus away from raising awareness towards behavior change interventions. NACP-III was designed to reverse the spread of HIV/AIDS by placing the highest priority on prevention efforts. Over the years the focus has changed to a decentralized approach which had been instrumental in laying down the guidelines for NACP-IV.

Key words: AIDS, People living with HIV/AIDS, NACP

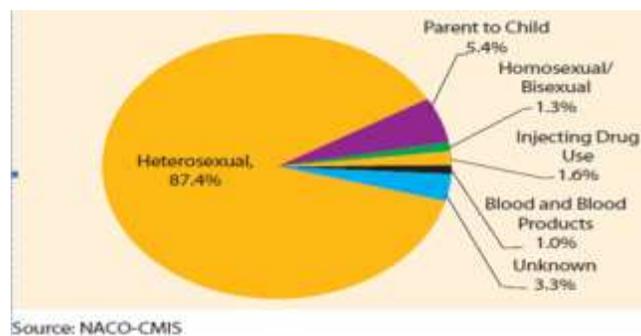
Introduction

Global state of AIDS epidemic accounts for about 34 million people living with HIV (PLHIV) with 2.7 million new infections and 1.8 million deaths in 2010-11¹. Response to HIV Epidemic in India continues to be a major concern and focussed action area with Indian prevalence falling down to 0.28% (2010) from 0.30% (2009). This makes the country third — after South Africa and Nigeria — in the international ranking for numbers of PLHIV in a country. As a signatory to the *Declaration of Commitment on HIV/AIDS 2001*² and the *Political Declaration on HIV/AIDS 2006*³, India remains devoted to AIDS prevention and roll-back thereby reaching universal access targets. The country has striven to proceed and expand its efforts to halt and reverse the HIV epidemic.⁴ India has systematically developed and moulded its National AIDS Control Programme according to the current pattern of AIDS epidemic — taking into account emerging evidence base — and in collaboration with its partners.⁴

Epidemiology of HIV/AIDS: Current Status

HIV/AIDS, a global pandemic has cases reported virtually from every country. Approximately 34 million individuals were living with HIV infection (PLHIV) as of the end of 2010.¹ In the early stages of the pandemic, the majority of patients were male while now about 50% are female (2010) and approx. 3.4 million are children < 15 years. More than 95% of PLHIV reside in low- and middle-income countries. At the end of 2010, Asian estimates account for about 4.8 million PLHIV with approx. 2.39 million people infected with HIV in India (39% female, 4.4% children). Indian HIV epidemic is concentrated in nature and heterogeneous in spread with prevalence among the **High Risk Groups i.e. Female Sex Workers (FSW), Injecting Drug Users (IDU), Men who have Sex with Men (MSM) and Transgenders (TGs)** higher than the general population^{4,5,6}.

Figure 1: Distribution of HIV/AIDS prevalence by various modes of transmission:



Based on Programme data, unprotected sex (87.4% heterosexual and 1.3% homosexual) is the major route of HIV transmission, followed by transmission from Parent to Child (5.4%) and use of infected blood and blood products (1.0%). While IDU (1.6 %) is the predominant route of transmission in north eastern states, it accounts for of HIV infections^{4,6,7}.

Genesis of National AIDS Control Programme (NACP)⁷

As a national response, **NACPI (1992-99)⁸** was launched with the objective to slow and prevent the spread of HIV through a major effort to prevent HIV transmission and was successful in creating national AIDS response structures with creation and dissemination of national HIV testing policy. Following the success of NACPI, **NACP II (1999-2007)⁹** was launched with the objective to reduce the spread of HIV by focusing on prevention through behaviour change through strategies like Targeted interventions (TIs), Behaviour change communication/peer education, STI treatment, condom promotion/provision, Needle and syringe provision, creation of enabling environment and community mobilization. In 2007, **NACP III (2007-2012)¹⁰** was launched that aimed to reduce new HIV infections and prevent the spread of HIV from HRGs to the general population .It had a unifying credo of the **Three Ones**, which are **one** action framework, **one** national HIV coordinating authority and **one** national M&E system marked with sustained, coordinated support⁴ that seeks to assemble the efforts of all stakeholders.

NACP III: Accomplishments and Critical Analysis: How Far are We?

Fusion of the lessons learnt during NACP-II, NACP III, through a rigorous process of reviewing evidence and consultations with national and international experts, commits to halt and reverse the Indian HIV epidemic through a four pronged strategy to ^{4,11}:

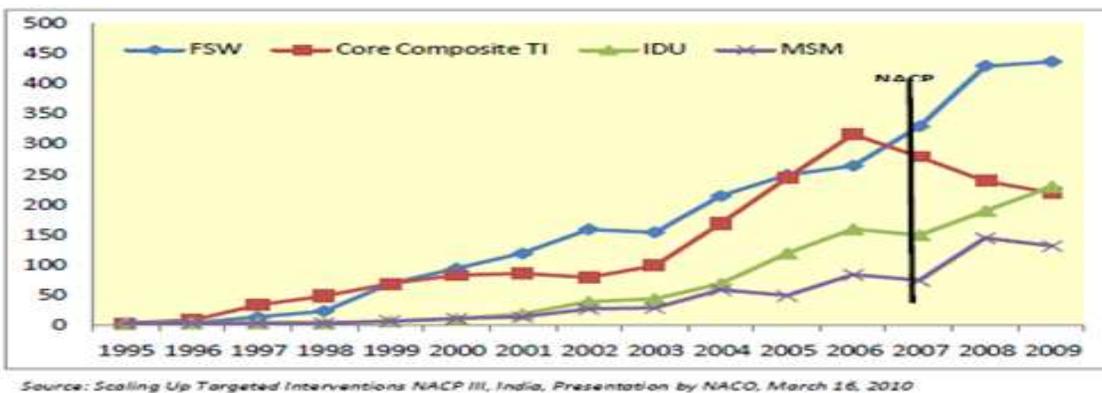
- Prevent new HIV infection through saturation of coverage of high-risk groups with Targeted Interventions (TI), and a scaled up interventions for the general population (**PREVENTION**)
- Provide greater care, support and treatment to a larger number of People Living with HIV/ AIDS (PLHA). Address human rights and ethics issues with focus on fundamental rights of the PLHA and their active involvement (**CARE, SUPPORT AND TREATMENT**).
- Strengthen the human resources and infrastructure systems in prevention, care and support and treatment at the district, state and national levels (**CAPACITY BUILDING**).
- Strategic Information Management System (**SIMS**)

Preventive efforts

(1) Targeted Interventions (TIs) among HRGs (FSW, IDU, MSM) ^{12,13}

A central core strategy under NACP III has been using TIs to focus efforts for containing the epidemic, thereby, increasing the accessibility of HRG to HIV prevention services through NGO and CBO (Community based Organisation). Under NACP III, the aim is saturating coverage of HRG through the TI ¹².

Figure 2: Coverage of HRG through TI:



Currently, there are 1,385 TIs providing prevention services to overall 31.32 lakh population covering 78 % FSW, 76 % IDU, 69 % MSM, 32 % Migrants and 33 % Truckers. A new migrant strategy has been launched to provide HIV prevention services to migrants in 108 source districts and 47 transit districts, besides TI projects working in destination districts. Other initiatives include contracting 52 Opioid Substitution Therapy (OST) centres after NABH accreditation and piloting OST provision in public health care settings in Punjab. TI projects cover different typologies of sex workers namely, brothel based, street based, home based, lodge based, dhaba based, bar girls etc. with specific intervention strategies. There are 26 TI projects implemented by CBO.

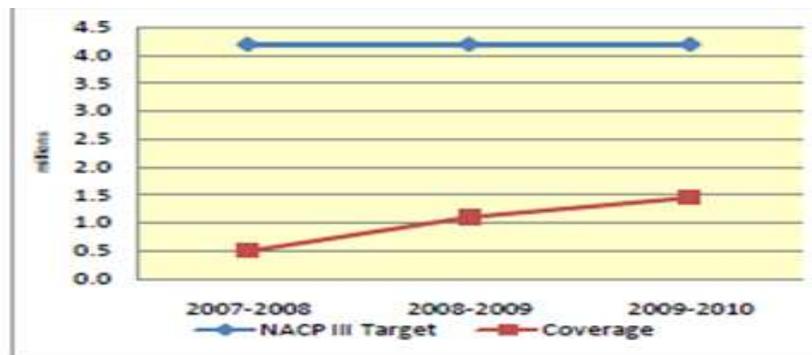
There is harmonization of services with increasing number of persons tested (7.6 million in 2007 to 13 million in 2009) with a concomitant increase in the referral of persons belonging to the HRG from 20,000 to 300,000 (CMIS data). Henceforth, approx. district coverage had been scaled upto 95% from 2000 to 2009.

An early impact of the TI is substantiated from the Integrated Biological and Behavioural Surveillance (IBBS) 2009 that has found 91% of FSW and 86% of MSM reporting condom use with their most recent clients that in turn shows a significant increase against the reported figures of 50% for FSW and 20% for MSM (BSS 2006) respectively. Moreover, the percentage of IDU who adopted behaviours for reducing HIV transmission (as measured by those who avoid both sharing injecting equipment during the last month and report using a condom with their most recent partner) has jumped from 30% to 62% in 2009.

Realization of services for bridge population ¹⁴

Based on evidence generated through pilot programmes with migrant groups, NACP III has made a strategic move on short stay migrants numbering approximately 9 million out of 200 million. Based on review of the programme (2008-2009), the approach has been revised to focus on contacting migrants at hot spots through high-intensity BCC and mid-media education. Furthermore, maximizing condom supply through increased outlet coverage and retail visibility in districts with high in-migration and high HIV prevalence amongst ANC clinic attendees has expanded the coverage of migrants in NACP III to 34 %

Figure 3: Coverage of Migrants in NACP III:



Source: NACO Annual Report 2009-2010

Micro-level planning and feasibility assessment studies have informed the selection of 131 sites as per the monthly volume of truckers in these sites. The coverage of bridge population in NACP III is low (34 % for Migrants and 30 % for truckers) given that TI for truckers terminated after a recent mapping report found the number of truckers reduced from 3.5 million (NACP III) to 2 million long distance truckers.

Efforts for general population ¹⁵

NACP III interventions have been initiated for breaking the chain of HIV transmission through infected blood; ensuring that those at higher risk are aware of their HIV status; from mother to child during delivery; treatment for STI and RTI; provision of condoms and education for youth and the general public.

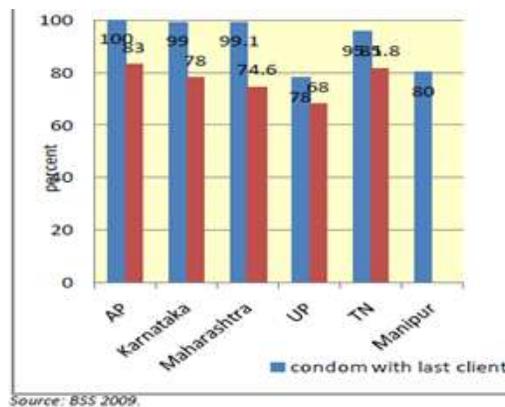
Responding rural HIV Epidemic: Link Worker Scheme (LWS)¹⁶

As a national response to substantially emerging rural HIV epidemic, Link Worker Scheme (LWS) was launched in July 2006. LWS has been successful in the establishment of comprehensive HIV rural intervention programme in 219 districts covering over 1,50,000 HRGs (FSWs, MSMs and IDUs), 3,00,000 Bridge Population members (truckers and migrants) and 20,00,000 Vulnerable Population members (including, but not limited to, at-risk women, spouses of HRGs, and out-of-school youth).

Condom Promotion¹⁷

NACP III had a comprehensive strategic scaffold with audience specific strategies and milestones for condom promotion. With an overall objective of increasing condom distribution from 1.6 billion pieces (2006-07) to 3.5 billion pieces (2010-11); the strategy focuses on three channels of condom supply — free, social marketing and commercial scale — to work in a complementary manner for catering to different target groups. The condom social marketing programme has been successfully implemented in 194 districts in 15 states during phase-I (2008-2009) followed by new initiatives such as Condom Vending Machines and Female condom (FC) programme to enhance the user-friendliness of condoms and female population empowerment. The condom social marketing programme (2009-10) has been successfully scaled up to 294 districts.¹⁸

Figure 4: Condom Use with client FSW 2009



Under NACP III Technical Support Group (TSG) evolved a systematic system to monitor the national condom social marketing programme such as: Central web based online monitoring system, Continuously tracking condom market dynamics, Periodic reviews of Social Marketing Organisations. Despite all these efforts, there has been irregular gaps in supply and demand which NACP IV envisages to fulfill.

Strategic Behaviour Change Communication¹⁹ & Mass Media²⁰

NACP III had a well defined Communication Strategic Framework for Information, Education and Communication (IEC) that focussed on i) motivating behavior change in identified at risk populations, including HRG and Bridge populations, ii) raising awareness level on risk and the need for behavior change and use of condoms among youth

and women in general population, iii) generating demand for health services; and iv) creating an enabling environment for prevention as well as institutional and community care support.

During 2007-2009 there was a shift in IEC from awareness generation to a creation of a more comprehensive understanding of strategic communication with its 3 complementary and mutually reinforcing approaches of BCC, social mobilization and advocacy. There has also been a clear plan to link demand creation with services. Synchronized roll out of mass media campaigns with IEC materials to cover different programme components, notable initiatives at the state levels including *Dillu Dura* and *Ilavattam* in Tamil Nadu to sensitize youth on HIV/AIDS issues, *Be Bold* and *Me Namaste* in Andhra Pradesh to promote HIV/AIDS services, Special episodes on HIV/AIDS aired in Kalyani Health Magazine and a part of the DD serial “*Kyunki Jeena Isi Kaa Naam Hai*” *Zindagi Zindabad* on HIV/AIDS complemented by **Red ribbon express project** and innovative use of radio. These national campaigns are supplemented by advertisements in the provincial newspapers (in regional languages) and ground level activities such as rallies, poster and essay competitions, partnerships with the youth groups (*Nehru Yuva Kendra*) and other community based groups. Condom promotion campaigns such as *Jo Bola/Samjha Wohi Sikander* helped in establishing a social norm for condom use. A campaign has been subsequently launched —using creative spot messages —for downloading a condom ring-tone for mobile phone users. Reflecting the success of this particular campaign nearly 500,000 requests for downloading the ring-tone were from within India; whilst 160,000 requests from abroad were received at the website for the ring-tone. Supportive activities have been coordinated through the SACS.

The identified loopholes during NACP III have been discrepancies in knowledge levels between men and women, and between rural and urban areas, wide variations in awareness levels among the states on different indicators (for e.g. awareness of either heard of HIV or AIDS in Tamil Nadu is 99.5% while in UP it is 79%, mini-BSS, 2009), lack of a sustained programmatic approach for >15 yrs that need to be addressed in NACP IV.

Promotion of Blood Safety ²¹

The objective of the Blood Safety programme is ensuring provision of safe, quality blood — even in geographically remote areas of the country — in the shortest possible time through a well-coordinated National Blood Transfusion Service. During the course of NACP III, the total blood collection increased from 4.4 million units in 2007 to 7.9 million units in 2011, against an estimated requirement of 10 million units per year. Voluntary blood donation increased from 52% to 79.5% and HIV seroreactivity declined from 1.2% to 0.2%. 73 blood component separation facilities (CSU) were added to 82 existing ones, to ensure appropriate clinical use of blood. 18 district level blood banks and 685 blood storage centres were established to ensure blood availability in some uncovered districts and sub-district level facilities. Blood mobile and blood transport vans were provided to augment voluntary blood collection and transportation of blood from Blood Banks to Blood Storage Centres.

However, there still remains a gap in availability and accessibility of blood at peripheral level. There are still some districts in the country with no government supported blood centre. The voluntary blood donation is still less than expected with lack of human resources, capacity building and adequate quality management systems in majority of

blood banks. There are still issues of regulation, ownership and coordination between Centre, State and regulatory authorities for proper implementation of the programme.

Hence, it is envisaged that NACP IV will address augmentation of activities as per the identified gaps and challenges of the programme.

Lab services²²

Laboratory services form a significant foundation for NACP. NACP III implementation had no defined focus on laboratory services as a distinct area in the program. Therefore, a separate laboratory services division was created in 2008. Following this, there was nearly a two-fold increase in HIV testing centres (from 2815 to 5246) and a ten-fold increase in CD4 testing laboratories (from 23 to 211). Several quality initiatives were taken during NACP III like HIV viral load testing for those failing first line ART, DNA PCR for infant and child diagnosis of HIV, Formation of a consortium of select laboratories for evaluation of HIV, HCV and HBV test kits. Capacity building and setting up testing facilities for HIV drug resistance testing was also carried out. The challenges that need to be addressed include structured approach for capacity building, financial resources, reviewing HIV testing policy and developing partnerships with quality management systems.

STI /RTI Prevention²³

NACP III initiated with 544 STI clinics, subsequently merged department of Obstetrics and gynaecology and Dermato- Venereology to give rise to clinics that were named as Designated STI/RTI clinics (DSRC) that scaled up success to 1033 DSRC by 2011. NACP III introduced pre-specified colour coded STI/RTI drug kits for introducing standardization and ensuring compliance to treatment. Consequently, the physical target achievement has been dramatically enhanced from 66.7% (2008) to 100.2% (2011). Moreover, strengthening the infrastructure, convergence with NRHM and branding of STI/RTI services as “Suraksha Clinic” further scaled up achievements.

The realized gaps during NACP III were vacant posts of STI focal person, deputed candidates lacking programme management skills, about 40% of pregnant women reaching facilities missing syphilis screening, inadequate quality services through preferred providers, poor coordination between clinical departments (skin –VD and Gynaecology). Moreover, effective partnership with private sector, lack of country representative disease burden, inability to culture and isolate gonococci and lack of laboratory based STI surveillance posed further challenge.

Integrated Counselling and Testing Centres^{24,25}

During NACP III, the number of stand alone ICTCs increased from 2185 ICTCs to 5246 ICTCs (up to March 2011) with 1632 facility integrated ICTCs (FICTCs) in public health settings as well as 670 ICTCs under PPP model. This enhanced programme coverage to rural areas with ICTC facilities made available at 24x7 PHCs in high prevalence states and up to CHC/ sub district level in other vulnerable states with inclusion of 135 mobile ICTCs for regions with difficult terrain. Some significant initiatives in NACP III included developing a standard National policy for Counseling & Testing at all facilities, linkages with TI NGOs, Provider initiated testing and counseling (PITC), convergence with NRHM and implementation of strong quality assurance systems.

Rolling out of EID through ICTCs and Intensified TB – HIV package ²⁶ has made a significant contribution by increasing number of persons with HIV-TB co-infection under care, support and treatment (CST). Establishment of Saksham - GFATM R7 training institutes across the country.

While there has been a dramatic scale up in number of TB patients detected with HIV, there remains gaps in terms of limited coverage of pregnant women, access of services by high risk groups, limited outreach of ICTC services to the vast geography of the country, inadequate linkages between TB clinics and ICTC, follow up of HIV+ individuals including pregnant women for continuum of care, linkages with CST services, quality of testing and counseling, quality of trainings, procurement and Supply chain management, Inadequacies in public health infrastructure, including training facilities and weak Public Private Partnerships.

Stigma, Gender discrimination and Social protection ^{27,28}

Stigma & discrimination has been both a cause and result of HIV. NACP III initiated efforts at mainstreaming response involving other government ministries/ departments in addressing these critical issues for women living with & affected by HIV. Some of the key achievements have been:

- Availability of legal aids in some states for legal suits related to property, insurance claims etc.
- Widow pension scheme for providing financial support.
- Positive Women Networks at national/ state / district levels to advocate and promote access and utilization of HIV related services for women.
- Grievance redressal mechanisms at the state levels
- Linkages of WLHIV and CLHIV to shelter homes and care homes under Ministry of Women and Child Development or the Ministry of Social Justice & Empowerment.

The impact of the epidemic has been invariably greater on women than men because of the inherent intra household inequalities. A survey covering 2668 HIV households and 6,224 non-HIV households found that more than one-third of the women living with HIV (WLHIV) were widows and facing the double burden as compared to widowers that were much lower at 4%. Only 10% were living with their husband's family and 79% of the widows complained that they were denied their share in their husband's property.

Breach areas in NACP III included influential local social norms, fear, myths and misconceptions, shame, blame and judgments related to HIV that reinforce negative behaviours, weak Grievance redressal mechanism, inadequate mainstreaming initiatives to sensitize grassroots functionaries and an unmet need for holistic approach to eliminate stigma at all levels.

Capacity Building ²⁹

NACP III recognized the significance of well trained human resource and had, therefore, developed plans for building capacity of programme managers and health personnel at the various levels. A total number of 972,844 health personnel including doctors, counselors and community level workers have been trained in NACP-III so far. About 14 STRC, designed to provide training and develop the capacity of TI projects, have been established and 7 more are being formed. On the other hand, for training, mentoring and operations research 10 CoE (Centre of Excellence) and 7 Regional Paediatric ART Centres are functioning.

Financial Allocations and Expenditure³⁰

Total outlay for NACP III is INR 115,850 million which includes support from the World Bank, DFID and Government of India contributions (Pool fund), GFATM, and contributions from 2bilateral agencies and private initiatives such as Bill and Melinda Gates Foundation .The main sources of funds for NACP III are below: **Direct Budgetary Support** (funds allocated under NRHM), **External Aid Component (EAC)** including includes GFATM grants, funds from the World Bank, DFID and Government of India), USAID, Bilateral and UNDP.

Despite all these efforts, there still exist a funding gap of 10% with a paucity of formal capacity building institutional structures at NACO level. There also exists an impending need to review the quality of capacity building activities and training programmes and strengthen M&E systems at state and district levels.

Information flow³¹

CMIS (Computerised Management Information System) used previously had certain pitfalls like not capturing individual data, problems in data transmission, issues over data quality, inadequate use of inf2ormation generated through the CMIS, faulty feedback mechanisms between different units such as NACO, SACS, DAPCUs & reporting units. Consequently, NACP III rolled out web based application **SIMS (Strategic Information Management System)**, in August 2010, that aids in data analysis and integrates data sources that will replace existing CMIS and Integrate with CPFMS and Smart Card thereby ensuring system transparency i.e. single version of Data made available for NACO/SACS/DAPCU/ Reporting Units . SIMS , thereby, aims to achieve better decision making through data triangulation, facilitating returns to higher formations providing ease of evaluation, monitoring and policy decision making at strategic level and improving overall management.

Care Support and Treatment services^{32,33}

NACP III targeted 3 significant levels for provision of ART i.e. Centre of Excellence (CoE) & ART Plus Centres, ART Centres, Link ART Centres & Link ART Plus Centre .ART Centres have also been linked with Community Care Centres(CCC) run by NGOs for a comprehensive package of services. There were 306 fully functional ART Centres (March 2011) against the target of 250 wherein nearly 12.5 lakh PLHIV are registered and 4,20, 000 patients are currently on ART. In addition, 612 Link ART centre (LAC) have been established wherein, 26023 PLHIV are taking services. Also, there are 10 Center of Excellence and 7 functional Regional Pediatrics centres with 259 Community Care Centres (CCC) across the Country.

Gaps encountered during NACP III included inadequate linkages between ICTC & ART Services, Geographical barriers, Late entry into ART services, insufficient Pediatric Facilities, poor Supply chain management, Shortage of Skilled staff, Poor ownership of ART Centres and irrational prescriptions.

To address these, NACP IV envisages to continue, expand and strengthen ART services, provision of alternative first and second line drugs, expanding drug resistance testing, strengthening supply chain management & regularizing follow-up. Also, special focus would be 2on to strengthen linkages, coordination and flow of information between ART, ICTC, PPTCT, RNTCP, STI, CCC, DIC and TI.

HIV / TB LINKAGE IN CST^{26,34}

HIV-infection is strongest known risk factor for progression of latent TB infection to active TB disease. HIV infection M.TB positive patients is associated with massive increase in risk of TB disease from about 10% lifetime risk to more than 10% annual risk. NACP III achieved Intensified TB case finding (ICF) at all ICTC and ART centres with remarkable performance over last 4 years with referral of 3.5% in 2007 to 7.4% in 2010. ICF has contributed about 6% to TB cases notification under RNTCP. ICF at ART centres was started in 2010 and is showing excellent results with diagnosis of about 11000 TB patients in 2010.

Unfortunately, there still exist barriers in TB/HIV coordination with insufficient implementation of activities in HIV care settings like LACs, CCCs; Limitations in diagnostic tools for TB and MDR-TB among PLHIV, Limited access of HIV testing for TB patients, poor linkage of HIV infected TB patients to ART.

Henceforth, NACP IV envisages in Early detection of HIV/TB, Early institution of care for HIV-infected TB patients, Prevention of TB among PLHIV by early initiation of ART in “all PLHIV” (CD4 count less than 350), adoption of Isoniazid Preventive Therapy policy based on evidence , implementation of Airborne Infection Control measures like administrative, environmental and personal protection at ART centres /LAC etc.

Conclusion

NACO foresee an India where every PLHIV has access to quality care and treatment with proficient prevention, care and support in an environment with respect for human rights and life without stigma and discrimination. By fostering partnerships with NGOs, self-help groups and community based organisations, NACO hopes to enhance access and quality of the services. It commits to build an enabling environment wherein those infected and affected by HIV play a central role in all responses to the epidemic - at state, district, and grassroots level. NACO is thus dedicated to contain the spread of HIV Epidemic by building an all-encompassing response reaching out to diverse populations. NACP III, thus, endeavoured to provide people with precise, comprehensive and reliable information on HIV, promoting condom use and timely management of STDs. NACP III has worked to motivate men and women for a responsible sexual behaviour. NACP IV promises to fill the gaps and breach the barriers left by NACP III thereby achieving the unaccomplished in target areas like capacity building at all levels, strengthening M&E system, lack of training of TI staff, inadequate consolidation between best practices in different areas and insufficient convergence with NRHM. It is thus hoped that anyone can be saved from the HIV infection with apposite knowledge on prevention. NACP IV envisages to consistently mount strategic responses for combating HIV/AIDS situation in India.

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