

**Guest Editorial**

## INTEGRATING HUMAN IMMUNE DEFICIENCY VIRUS (HIV) TESTING WITH GENERAL HEALTH SYSTEM (GHS) THROUGH THE MODEL OF FACILITY INTEGRATED COUNSELING AND TESTING CENTRE (F ICTC)

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Demographically India is the second largest country in the world with a population of 1210.2 million<sup>1</sup>; 30 percent of its population lives below poverty line (BPL) and half of its vulnerable populations namely children below 5 years of age and women of child bearing age suffer from under-nutrition and anemia respectively<sup>2</sup>. Such population is already immune compromised and entry of HIV in them further complicates the scenario.

World is beginning to experience the reversal of HIV spread; new HIV infections have fallen by nearly 20 percent<sup>3</sup>. In India during last one decade AIDS related death have shown similar fall and number of new annual infections have declined by more than 50 percent<sup>3</sup>. Currently people living with HIV/AIDS (PLHA) in India are estimated around 2.27 million with an adult HIV sero-prevalence of 0.31%<sup>4</sup> including 39.3 percent women and 3.5 percent children<sup>5</sup>. HIV infection rates in India are low than Africa<sup>6</sup> still India continues to be the third largest pool of PLHA in the world. Epidemic in India is concentrated type whereby the prevalence is high in certain high risk groups (HRGs) like men having sex with men (MSM), injecting drug users (IDUs), female sex workers (FSW) and low in general population such as antenatal care (ANC) cases. Declining trends are across the country, some low prevalence and vulnerable states have shown rising trends warranting focused preventive efforts<sup>4</sup>.

Out of the four possible means of HIV transmission, vertical transmission (from HIV positive mothers to their newborns) maximally accounts for children living with HIV/AIDS (CLHA). It is mother to child transmission (MTCT) but more aptly called parents to child transmission (PTCT). It may happen either during pregnancy, child birth or breast feeding; risk being maximum during child birth followed by ante and post natal periods and together they carry a transmission risk of 30 percent (15–

45%)<sup>7</sup>. Out of total HIV positives, 5.4 percents acquire infection by this route<sup>4</sup>, while amongst new infections in children (< 15 years of age itself accounting for 10 % of total), 90 percent acquire it through this route only<sup>7</sup>. HIV infected children have shorter incubation period and fast clinical progression and if untreated, 35 percent of them may die within 1 year, half by 2 years and 65 percent before celebrating their 3<sup>rd</sup> birthday<sup>8</sup>. All this can change and consequent morbidity and mortality can be reduced if the entire PPTCT package is provided to all pregnant women through a viable and extensive system. In industrialized countries where HIV-infected women receive triple drug Anti Retroviral Therapy (ART), do not breast feed and elective cesarean sections are safe and feasible, rate of PTCT has reduced to less than 2%<sup>7</sup>.

Over the time period, HIV epidemic has undergone feminization, ruralization and a shift from high risk groups (HRGs) to bridge and general population; as a result infection has reached closer to general population enhancing the risk of PTCT. Increasing feminization and ruralization of epidemic are evident as in 2010, at a city based ART centre, 40.7 and 43.9 percent patients accounted for rural and female patients respectively<sup>9</sup>. In India, annually 27 million pregnancies occur including 49000 in HIV positive women<sup>10</sup> and in absence of any intervention may result into the births of 16000 – 18000 infected children. In order to detect and manage HIV positive pregnancies, a program for “prevention of parent to child transmission” (PPTCT) was started in 2001 on pilot basis in 11 hospitals followed by scale up and decentralization. During a period of 4 years (2004 – 08), India could test/ counsel 8.5 million pregnant women and detect 67000 (0.08%) pregnant HIV positive women. Out of them, 52 percent received mother baby (MB) pairs through 2800 centres<sup>10</sup>. These achievements are grossly unsatisfactory; therefore, a further scale up in the form of Facility Integrated Counseling

and Testing Centre (F ICTC) is planned up to the level of CHCs, Primary Health Centres (PHCs) as well as private sector by forging public-private partnerships (PPP).

Entire package of PPTCT largely delivered at counseling and testing centres (gateway to care of HIV positives) includes Pre- test counseling (group counseling), HIV testing & delivery of test result with post test counseling

➤ **If negative**

Provide knowledge about HIV and to stay negative and

➤ **If positive**

- Provide/ reinforce knowledge about HIV given in pre test counseling (positive prevention, safe sex, condom promotion)
- Explore if the pregnancy wanted? MTP counseling.
- Partner notification/ testing, family counseling for psychosocial crisis and linking with positive networks for psycho social and legal support
- Referral for screening for tuberculosis and sexually transmitted infections
- (STI) and ART centre,
- Follow up (FU) visits during antenatal period for institutional delivery, administration of MB pair, maternal nutrition & infant feeding
- FU visits during post natal period for child nutrition, immunization and future needs for contraception
- Extending services of early infant diagnosis (EID) & Cotrimoxazole prophylactic therapy (CPT)

This package is currently being provided largely through - stand alone Integrated Counseling and Testing Centres (SA ICTCs) provided by National AIDS Control Organization (NACO) and concerned State AIDS Control Society (SACS). These were established during National AIDS Control Program (NACP) phase II and III based on the client load and concentration of HRG population. Accordingly SA ICTCs were established mostly in medical colleges, district/ sub district hospitals, Community Health Centres (CHCs) in category "A" districts; usually located in big cities and towns. Thus the rural population (67% of total) including scattered HRGs and number of pregnant women remained largely unattended.

As on November 2010, country had total 7617 testing facilities (5,233 SA ICTCs, 1,632 F ICTCs

at PHCs, 668 F ICTCs under PPP model & 84 mobile ICTCs) which in 2010 - 11(till December 2010), could counsel/ test 10.65 million clients (including 4.58 million pregnant women) and detect 0.208 million (including 12429 pregnant women) HIV positives. HIV sero prevalence rates in general clients (HRG population & referral from health facilities) and pregnant women were around 3.11 and 0.27 percents respectively; 11.5 times less in pregnant women<sup>11</sup>. In 2011 - 12, number of facilities increased to 9459 mainly an increase in F ICTCs. Till Jan 2012, more general clients and pregnant women were tested (than previous year); the prevalence rates were even less being 2.5 and 0.19 percents respectively. Prevalence in pregnant women was less than general clients by more than 13 times<sup>12</sup>. Obviously such poor client load and consequent low case detection does not justify the running of a SA ICTC. Average numbers of SA ICTCs per million populations in India is 6 (1 - 35) depending upon the risk categorization of state/ district<sup>13</sup>. SA ICTC is cost intensive in terms of one time and recurring expenditure. It requires one time grant of infra structure development, procurement of equipments (refrigerator, centrifuge, TV & DVD, computer with printer and internet connection etc.) and recurring expenditure in terms of salaries/ travel etc. for 1 counsellor and 1 lab technician, purchase of consumables, testing kits, glassware etc and repair/ maintenance of equipments. Therefore opening of new SA ICTCs has to be decided judiciously. Moreover this being a vertical structure hampers the integration of the program with general health system (GHS). It also slows down the removal of stigma and discrimination which is still widely prevalent in GHS as mentioned in one of the report "its decline (stigma against HIV) has been very slow and far from satisfactory"<sup>14</sup>.

In view of this gap in the workload and availability of services, NACO proposed the concept of Facility integrated counselling and testing centre (F ICTC). F ICTC does not have full-time staff and provides HIV counselling and testing services along with other services and existing staff such as the Auxiliary Nurse Midwife (ANM), Staff Nurse, Health Visitor, Laboratory Technician (LT) or Pharmacist undertake HIV counselling and testing. They are usually established in facilities that do not have large client load and where it would be uneconomical to establish a SA ICTC. Typically, they include 24 X 7 PHCs as well as private

sector/ not for profit hospitals, private laboratories, public sector organization/ NGO - run facilities. F ICTCs are supported by NACO/ SACS to the extent of supply of testing kits, training of staff, quality assurance, supply of protective kits and prophylactic drugs for post-exposure prophylaxis (PEP) for staff, supply of

Information, Education and Communication (IEC) material such as Flip charts, Posters, etc<sup>11-12</sup>. Usually 3 rapid tests in series are required to identify HIV positives. In case of F ICTC, the first test is done at the facility and if found positive the sample is sent to the nearest SA ICTC for remaining 2<sup>nd</sup> and 3<sup>rd</sup> tests.

**Table 1: ICTC Data (2011- 12) for Gujarat**

Type of ICTC	ICTC	Tested		New Client load/ centre	Positive		New HIV +ves/ centre	% Positivity	
		General PPTCT			General PPTCT			General PPTCT	
Stand Alone	305	641015	365072	3299	12398	735	43.0	1.9	0.20
FICTC (Govt.)	769	40904	189896	300	321	106	0.6	0.8	0.05
FICTC (PPP)	132	73389	52776	956	472	40	3.9	0.6	0.08
Mobile ICTC	3	13724	3843	5856	52	0	17.0	0.4	-
<b>Total</b>	<b>1209</b>	<b>769032</b>	<b>611587</b>	<b>1142</b>	<b>13243</b>	<b>881</b>	<b>11.7</b>	<b>1.7</b>	<b>0.1</b>

**Intensified Package of HIV/TB Collaborative activities:** Prevalence of tuberculosis infection in general population is 40 percent and is even high in PLHA. Increasing incidence of co-infections and rising trends of multi drug resistant (MDR) tuberculosis has made it important to integrate two programs at the periphery whereby the clients of one program get the services of other program automatically through a system. This package pertains to the following set of activities

- Offering HIV testing to all TB patients registered under Revised National Tuberculosis Control Program (RNTCP),
- Decentralised provision of CPT to all HIV infected TB patients and their linkages to HIV care, support and treatment
- Systematic recording and reporting of above activities in Health Management Information System (HMIS) of RNTCP
- Additional and regular referrals of HIV positives to RNTCP for detection of tuberculosis

Establishment of F ICTC at PHC which is also the Designated Microscopy Centre (DMC) under the RNTCP ensures better coordination of two programs. Actually speaking the lab technician for two programs will be the same. The cross-referrals improve and chances of losing a patient while being referred from one to other facility are minimized.

Due to the successful implementation of this package largely through F ICTC, in 2010 India had more than 800000 cross referrals (from both sides) and detection of 42505 co infected cases<sup>11</sup>, these numbers in 2011 increased to more than 1.2 million and 45000 respectively<sup>12</sup>.

There has been an extensive scaling up of ICTCs in recent time for all four types of ICTCs namely (1) stand alone type where case load is maximum in Medical Colleges, CHCs (2) Mobile to cover hard to reach scattered population in tribal/ remote areas and (3) F ICTCs (Govt.) at 24 x 7 PHCs, to cover general population and (4) F ICTCs under PPP at private health facilities. This scale up has been across the country including Gujarat<sup>15</sup>. A look at the recent data from the Gujarat state (table 1) reveals that in 2011 - 12 a total 1.38 million persons including 0.611 million pregnant women were tested at 1209 facilities. Total 14124 including 881 pregnant HIV positives were detected; 939 (6.7%) of them were detected through F ICTC. This proportion of 6.7 percent in 2011 - 12 is up from the 5.6 percent in 2010 - 11. Average annual client load and new HIV positives detected per year per F ICTC (govt.) were 300 (< 1 /day) and 0.6 respectively. Obviously such a small load can be handled by PHC staff easily and does not justify posting a separate lab technician or going for a costly mechanism of SA ICTC. Similarly the yield of <1 case per F ICTC per year can easily ensure its complete tracking by the health staff of PHC. At national level too, number of F ICTCs increased from 2010 -11 to 2011 - 12. Despite shifting to F ICTC mode, coverage of MB pair increased from 68.3 percent (2010 - 11) to 83.8 percent (2011 - 12); increase was evident in terms of absolute number too; from 8492 (2010 - 11) to 11074 (2011 - 12)<sup>16</sup>.

Some additional advantages of F ICTC over SA ICTC are listed below.

1. Working for HIV related services; sensitize the health staff about HIV related issues. It reduces the stigma and discrimination towards PLHA otherwise prevalent in GHS mainly due to the current vertical programming of HIV related activities.
2. The working of F ICTC at PHC, fully managed by local health staff, leads to their active participation and an institutional ownership. It also fulfills the long term goal of integrating the HIV related services with GHS
3. F ICTCs are for tracking the HIV positives who are either pregnant women or tuberculosis patients; both come to the PHCs otherwise also for antenatal care and treatment of tuberculosis. Therefore with this model HIV testing of both pregnant women and tubercular cases becomes more feasible.
4. Better uptake of other services such as referrals for tuberculosis, sexually transmitted infections, condom promotion, medical termination of pregnancies (MTP), institutional deliveries post natal care, infant feeding/ immunization postnatal care etc. This will not only improve the treatment seeking behavior of community but also reduce the workload and need of multiple workers.

Looking to the data of last two years it is evident that despite more reliance being placed on F ICTCs, the services for HIV testing in pregnant women and tuberculosis patients have shown improvement in terms of more coverage (testing), more detection (of HIV positives/ tubercular cases) and linkages with services (giving MB pair & putting on treatment for tuberculosis or HIV/ AIDS). It can be concluded that the F ICTC is the appropriate model for places which have low/ nil concentration of HRGs and the prevalence in general population is low. The important requisite is the coordination at all levels and motivation of existing staff to shoulder this additional yet fully manageable responsibility by completely integrating this with their other activities.

**Acknowledgement:** I am grateful to Mr. PP Gupta, M& E Officer at Gujarat State AIDS Control Society (GSACS), Ahmadabad 380016 for providing the necessary information.

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