



## IMPACT OF CHANGED HIV TESTING STRATEGY IN PPTCT PROGRAMME AT TERTIARY HOSPITAL.

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### ABSTRACT

#### Background

**Aim:** To compare impact of changed HIV testing strategy in PPTCT Programme at tertiary hospital. **Methodology:** The study was carried out at institute H B T Medical College and Dr. R N. Cooper Hospital Mumbai from 2017 to 2020. A total of 16913 patients' were included. All ANC cases presenting at our hospital over 4 years (2017 to 2020), sero-positive women delivering at our institute in this period, and newborns screened for HIV by DBS as per NACO Guidelines were reviewed. **Result:** Total no. of 8254 ANC women were screened for HIV in 2017 & 2018. Out of them 40 (0.4%) women were screened positive by old method. Total no. of 8659 ANC women were screened for HIV in 2019 & 2020. Out of which 71 (0.8%) women were screened positive by new (FICTC) method. It is easy, convenient for patients as same day registration and ART starts on same day for positive patients. No. of losses to follow up patients are markedly reduced as ANC women don't have to visit often. **Conclusion:** The new strategy of Testing is convenient, makes immediate reporting possible, however has significantly changed the tracking or follow up of seropositive cases.

**KEYWORDS :** HIV in Pregnancy, FICTC, Prevention of parent to child transmission, MTCT

#### Introduction

The National AIDS Control Organization (NACO) has meticulously updated and brought out these "National HIV Counselling and Testing Services Guidelines, 2016" incorporating newer strategies to maximize access to HIV counselling and testing services across the country, then linking individuals to necessary care, support and treatment services<sup>(1)</sup> HIV infection in young children is mostly due to mother to child transmission and prevention of MTCT will greatly reduce the infection in young generations. Nevirapine (NVP) therapy given as single dose to mother just before delivery and to newborn within 72 hours of birth was being done at our centre till 2013. WHO recommends ART in all HIV positive women in pregnancy which was accepted by NACO in 2013 and implemented from 2014.<sup>(2,3)</sup>

Identifying women living with HIV, initiating them on lifelong antiretroviral treatment (ART), and retaining them in care are among the important challenges facing this generation of health care managers and public health researchers. The development of antiretroviral treatment (ART) that effectively suppresses HIV viral load has fundamentally transformed the tragedy that HIV/AIDS has represented for mothers and children living in high prevalence settings<sup>(4)</sup>

#### Aim & Objective:

To compare impact of changed HIV testing strategy in PPTCT programme at tertiary hospital.

#### Material & Method:

Here we are comparing 4 years data of HIV screening in tertiary institute of HBTMC&RNCH which includes 2 years data of old method HIV testing and 2 years data of new FICTC (Facility Integrated Counseling & Testing Center) method of HIV testing.

A total of 16913 patients' were included. All ANC cases presenting at our hospital over 4 years (2017 to 2020), sero-positive women delivering at our institute in this period, and newborns screened for HIV by DBS as per NACO Guidelines were reviewed.

#### Result:

The study was carried out from 2017 to 2020 at the Department of Obstetrics and Gynaecology at HBT Medical College and Dr. R N. Cooper Hospital Mumbai

Total no. of 8254 ANC women were screened for HIV in 2017 & 2018. Out of them 40 (0.4%) women were screened positive by old method. Total no. of 8659 ANC women were screened for HIV in 2019 & 2020. Out of which 71 (0.8%) women were screened positive by new

(FICTC) method. Table 1 shows increasing trend in percentage of registered ANC patients screened for HIV from 0.65 to 0.87 over period of 3 years.

Overall 111 cases i.e. 0.65% was detected to be HIV positive at our center.

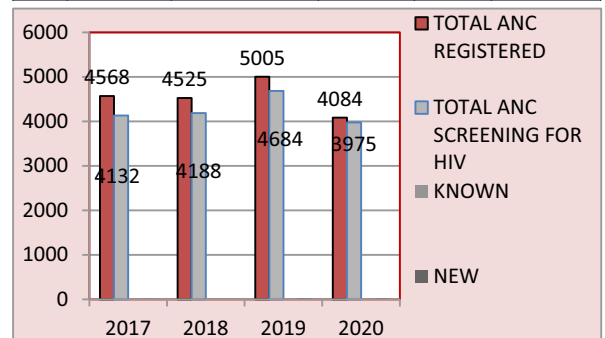
Table 2 shows that we had delivered total 81 seropositive patients.

Table 3 shows Infant Status from HIV Positive Delivery with MSB 8, NO FSB and NND with total live 73 births.

Table 4 shows trend of DBS Positive among live birth of seropositive mothers. In this study 81 seropositive mothers delivered and out of which 71 live babies underwent DBS testing. Remaining 2 live babies tested at respective centers and traced reports which were negative. In this study in last 4 years there was not a single HIV positive baby (100% prevention MTCT)

**Table 1: PPTCT Testing with Result**

Year	Total ANC Registered	Total ANC Screening for HIV	ANC Detection for HIV		Percentage
			Known	New	
2017	4568	4132	11	16	0.65
2018	4525	4188	3	10	0.31
2019	5005	4684	12	29	0.87
2020	4084	3975	2	28	0.75



**Figure 1: Cooper Hospital PPTCT Testing**

**Table 2: Mode of deliveries in HIV Patients**

YEAR	PTVD	FTND	PTLSCS	FTLSCS	TOTAL
2017	0	17	0	4	21

2018	0	6	0	6	12
2019	5	8	1	8	22
2020	2	14	0	10	26
	7	45	1	28	81

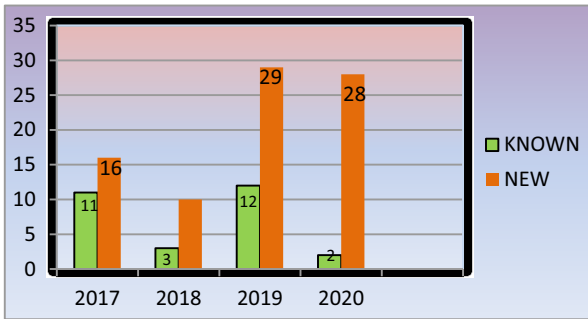


Figure 2: Cooper Hospital PPTCT Testing

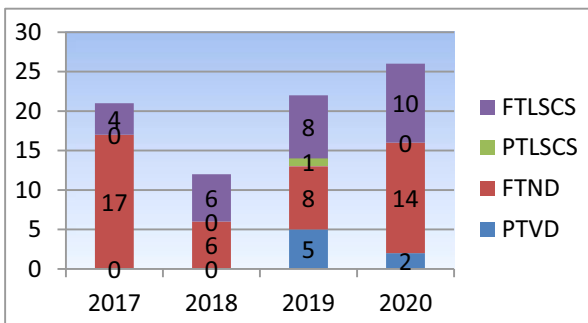


Figure 3: Mode of deliveries in HIV Patients

Table 3: Infant Status from HIV Positive Delivery

YEAR	MSB	FSB	DEATH	LIVE	TOTAL
2017	0	0	0	21	21
2018	2	0	0	10	12
2019	4	0	0	18	22
2020	2	0	0	24	26

Table 4: Results of Dried Blood Spot Testing

YEAR	DBS POSITIVE	DBS NEGATIVE	TOTAL
2017	0	19	19
2018	0	9	9
2019	0	18	18
2020	0	25	25

**Discussion**

A total 16979 ANC patients were included who presented at our hospital over 4 years.

According to WHO, UNICEF, Clinton Health Access Initiative and National AIDS Control Organization all ANC cases should be screened for sero-positive status.<sup>(5,6)</sup>

At our center all ANC cases are undergoing Counseling and then HIV screening by opt-out policy. Table 1 and graph 1 show that number of ANC Counseling and percentage of ANC screening is increasing. But slight decrease is seen in 2020, it may be due to lockdown. Total no. of 8254 ANC women were screened for HIV in 2017 & 2018. Out of them 40 (0.4%) women were screened positive by old method. Total no. of 8659 ANC women were screened for HIV in 2019 & 2020. Out of which 71(0.8%) women were screened positive by new (FICTC) method.

It is easy, convenient for patients as same day registration and ART starts on same day for positive patients. No. of loss to follow up patients are markedly reduced as ANC women don't have to visit often.

In our study many seropositive mothers delivered vaginally without any complication. Percentage of normal vaginal deliveries increased from 52.4% to 67.9%.

We had 73 live births and few MSB and FSB. { Table 3}

According to the UNAIDS report on the global AIDS 2013, the number

of newly infected children has been declining since 2003 due to increasing access to prevention of parent to child transmission (PPTCT) services..<sup>(6,7)</sup>

Of the 73 live births, 71 newborns (97.26%) were screened for HIV by DBS testing neonates underwent DBS (dried blood spot) testing according to NACO guidelines and the other 2 babies were tested at mother's respective centers.<sup>(7,8)</sup>

At our centre PPTCT Transmission rate is 0% (2017, 2018, 2019 and 2020).

Thus there has been ZERO sero positive baby that is 100% prevention of MTCT of HIV in our institute after implementing new triple-drug regime. The rate of MTCT can be reduced to zero by antenatal screening, highly active anti-retroviral therapy (HAART) during antenatal and intra-natal period and treating new-borns with ART as per revised NACO Guidelines.

**Conclusion:**

The new strategy of Testing is convenient, makes immediate reporting possible, however has significantly changed the tracking or follow up of seropositive cases.

**Compliance with Ethical standards**

Conflict of interest all authors hereby declare that there is no conflict of interest

Ethical standard the study was approved by the ethics committee, HBT & RNCH Hospital juhu Mumbai.

Informed consent was obtained from all individual participants included in study.

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