



THE GLOBAL FUND GRANT CYCLE SIX

National Aligned HIV/AIDS Initiative (NAHI)

SEARCHING, FINDING AND YET, THE TREATMENT GAP

A TECHNICAL BRIEF ON PREVENTION OF
MOTHER TO CHILD TRANSMISSION OF HIV
(PMTCT) IN THE NAHI GRANT



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1. ACRONYMS

ART	Anti-retroviral Therapy
BISI	Baby Item Shop Initiative
CHAI	Clinton Health Access Initiative
CHIPs	Community Health Influencers, Promoters and Services
COTs	Community Outreach Testers
cPMTCT	Community PMTCT
EID	Early Infant Diagnosis
EIT	Early Initiation on Treatment
eMTCT	Eliminating Mother-to-Child Transmission
GF	Global Fund
HEI	HIV Exposed Infants
HTS	HIV Testing Service
IEC	Information, Education, and Communication
IT	Index Testing
LTFU	Loss to Follow Up
M&E	Monitoring and Evaluation
MM	Mentor Mothers
NASCP	National AIDS, Hepatitis and STIs Control Programme
NEPWHAN	Network of People Living with HIV and AIDS/Nigeria
NTPP	National Treatment and PMTCT Programme
POC	Point-of-Care
PPW	Positive Pregnant Women
TAP	Treatment-Adjusted Prevalence
TAP	Treatment Adjusted Prevalence
TAT	Turn-around Time
TBAs	Traditional Birth Attendants
UNAIDS	Joint United Nations Programme on HIV and AIDS

2. PREFACE

The National Aligned HIV/AIDS Initiative, Global Fund Grant Cycle 6 (GF-NAHI GC-6) commenced implementation at a critical juncture for the Nigerian HIV response as it began immediately following the COVID-19 pandemic. The first year of the grant, 2021, presented significant challenges due to the ongoing impacts of the pandemic. To the credit of FHI 360 as Principal Recipient and the eight sub-recipients, the grant was implemented successfully such that by the end of the grant on December 31, 2023, the grant performance received a B-2 rating by The Global Fund.

The GF-NAHI GC-6 implemented several innovative and pathfinding interventions, including:

- Providing services to key and vulnerable populations.
- Identifying challenges to and developing strategies to improve the Prevention of Mother-to-Child Transmission (PMTCT) of HIV with significant learning on what worked or did not work.
- Removing barriers to service delivery for Adolescent Girls and Young Women (AGYW).
- Implementing harm reduction strategies for People Who Inject Drugs (PWIDs) to reduce the risk of HIV and other blood-borne diseases.
- Distribution of HIV self-test (HIVST) Kits to increase access to HIV testing services as an entry point in receiving HIV treatment and care.

This document is one of a series of products that has recorded the efforts of FHI 360 and its Sub-Recipients, which include the Achieving Health Nigeria Initiative (AHNI), Society for Family Health (SFH), Excellence Community Education Welfare Scheme (ECEWS), Network of People Living with HIV/AIDS in Nigeria (NEPWHAN), National AIDS and STDs Control Program (NASCP), and PEPFAR Implementing Partners such as Heartland Alliance LTD/GTE (HALG), Centre for Integrated Health Programs (CIHP), Institute of Human Virology, Nigeria (IHVN), and Centre for Population Health Initiatives (CPHI). It details the pathfinding services provided, lessons learned, challenges faced, and the innovative actions taken to address these challenges.

We acknowledge the contributions of all other project staff who contributed to the first draft of this report in November 2023. Special mention is made of the following people who worked tirelessly to complete these series of report in the closeout period.

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3. EXECUTIVE SUMMARY

In the Nationally Aligned HIV/AIDS Initiative (NAHI) grant, the Global Fund (GF) prioritized the Prevention of Mother-to-Child Transmission (PMTCT) of HIV as a crucial module. To respond to the importance of this module, FHI 360 increased access and uptake of HIV Testing Services (HTS) for pregnant women through the following interventions:

- Decentralization of services to primary healthcare level
- Greater private sector involvement in PMTCT service delivery
- Integration of PMTCT with other Reproductive Health Services (RHS) including family planning implementation of the Case Manager/Mentor Mothers initiative
- Baby Item Shop Initiative, and
- Active involvement of the Traditional Birth Attendants (TBAs)

These strategies were rooted on the foundation of facility-based and community PMTCT (cPMTCT) intervention. A total of 4,745 Positive Pregnant Women (PPW) were identified with a 0.4% positivity yield, and 4,720 were linked to care, representing a linkage rate of 99%.

With regard to PMTCT and Early Infant Diagnosis (EID), the grant made efforts to ensure that all babies born to PPW received EID and are linked to treatment. The performance of the NAHI grant from 2021 to 2023 demonstrates remarkable success in linking all reactive cases.

However, the positivity rate continues to be very low when compared to programme target. There is therefore a need to review the target for the states especially as more People Living with HIV (PLHIV) are being identified and placed on treatment as the science of the treatment adjusted prevalence informs.

FHI 360 also aligned with the National PMTCT Scale-up Plan, focusing on four key strategies:

- Organizing all service delivery points for pregnant women using the Hub and Spoke model.
- Strengthening services throughout the PMTCT cascade
- Improving the timeliness of EID services for HIV-exposed infants
- Enhancing data quality and Monitoring and Evaluation (M&E) systems

In Grant Cycle Seven (GC7), the principle of Treatment-Adjusted Prevalence (TAP) which showed that the actual prevalence of HIV-positive pregnant women may be lower than the projected can be explored to ensure more realistic prevalence and targets as depicted by the programme data.

4. OVERVIEW: GLOBAL AND NATIONAL PMTCT CONTEXT

NAIIS 2018 estimates that HIV prevalence amongst pregnant women is 1.3%¹. PMTCT in Nigeria remains poor at 41%. Globally, Nigeria is a major contributor to new infections among children with an estimated 21,000 new cases in 2021. PMTCT and ART coverage for children living with HIV remains low at 41% and 45% respectively according to HIV health sector data for 2021.

Nigeria has one of the highest numbers of new HIV infections among children globally with an estimated 21,000 new infections amongst children in 2021², with Mother-to-child Transmission (MTCT) accounting for 90% of HIV infections in children. Despite extensive efforts to prevent the transmission of HIV from mother to child, PMTCT coverage remains low at 41% in 2021³. In 2022, NASCP conducted a thorough six-year review of PMTCT service delivery nationally, shaping the National PMTCT Scale-up Plan. The plan aims to aid in eliminating MTCT in Nigeria by intensifying service delivery efforts at health facilities and in communities. It also focuses on strengthening state leadership, coordination, and PMTCT programme management, aiming for increased ownership and sustainability of the HIV programme.

In the absence of any preventive measures, the rate of occurrence of MTCT is about 25-40%. This vertical mode of HIV transmission is responsible for most HIV infections in children. Factors associated with increased risk of MTCT in any population include high prevalence of HIV among women of reproductive age and their partners and low contraceptive use resulting in unintended pregnancies among HIV positive women. The risk of MTCT is increased during pregnancy, labour and delivery, and breastfeeding. Thus, if a woman is tested during pregnancy, her HIV status known, she receives timely and quality treatment as well as supervised labour and delivery including during breastfeeding, the chances of MTCT are greatly reduced.

EID and timely initiation of ART are crucial in reducing HIV-related illnesses and deaths amongst infants. In Nigeria, EID coverage was only 31% in 2021³, indicating a significant gap in access to diagnostic services. Long turnaround times (TAT) for test results and challenges in accessing diagnostics contribute to high rates of Loss to Follow Up (LTFU) among HIV exposed babies, posing major obstacles to the effectiveness of PMTCT programmes.

To address these challenges, there is a need for an efficient model of integrated diagnostics that leverages point-of-care (POC) and near point-of-care (nPOC) technologies. This model aims to reduce TAT for test results and improve the linkage to care for HIV-positive infants. By accelerating early diagnosis and treatment initiation, such an approach can enhance the

¹ Federal Ministry of Health, Nigeria. *Nigeria HIV/AIDS Indicator and Impact Survey (NAIIS) 2018: Technical Report*. Abuja, Nigeria. (October 2019). <https://www.naiis.ng/resource/NAIIS-Report-2018.pdf>

² UNAIDS 2021 Report

³ HIV Health Sector data for 2021

outcomes of PMTCT programmes and ultimately improve maternal and child health outcomes related to HIV.

The NAHI project implemented PMTCT in two Nigerian states – Anambra and Ebonyi. The goal of the programme was to contribute to the reduction of the incidence of HIV/AIDS by timely provision of PMTCT and EID services. This technical brief provides details and results of PMTCT implementation in these Nigerian states.

5. PROGRAMME DESCRIPTION

The NAHI PMTCT intervention focused on three key indicators enshrined in the GC-6 Performance Framework namely:

- Identifying the number of pregnant women who were tested for HIV and who received the results (PMTCT 1)
- Tracking the number of HIV Infected women who received antiretroviral drugs to reduce the risk for MTCT (PMTCT-2.1)
- Tracking the number of infants born to HIV-infected women who received an HIV test / PCR test within two months (PMTCT-3.1)

Programme data for the two states of the NAHI grant (Anambra and Ebonyi states) in 2021 showed that the main problem had to do with not testing all pregnant women to identify HIV-positive pregnant women and place them on anti-retroviral therapy. The same also affects exposed babies who will not receive any services to prevent them from getting infected.

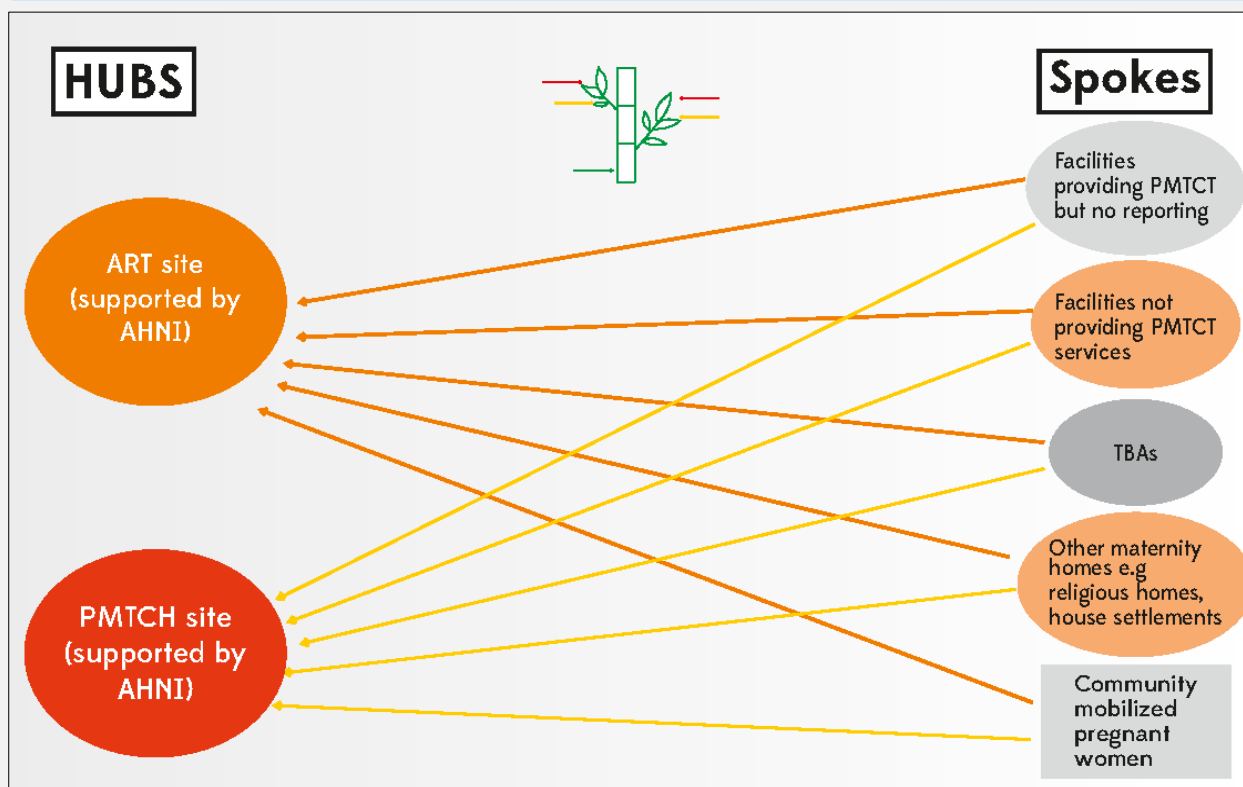
5.1. TESTING AMONG PREGNANT WOMEN

To test comprehensively among pregnant women, different approaches for identifying and testing pregnant women were used and detailed below.

Mapping of Service Delivery Points. In the two states (Anambra and Ebonyi) all service delivery points catering to pregnant women were mapped. These facilities based on the NASCP PMTCT Service Directory were translated into a Hubs and Spokes arrangement – 1,070 facilities for Anambra and 616 facilities for Ebonyi. In Anambra only about 700 of the 1,070 facilities were reporting on the DHIS platform despite their being linked as required by NASCP. In Ebonyi, only 220 of the 616 facilities were reporting to DHIS.

The Community Mobilisers embedded in all implementing LGAs were instrumental in this mapping with a central system to monitor and update the SDPs. This ensured routine process of commodity provision, service delivery optimization (quality HTS-related services), strengthened referral systems and data governance. With the expansion of testing to communities and alternative service delivery points, there was a significant improvement in testing coverage and linkage rates, as highlighted in the sections below.

Figure 5-1: Alignment of PMTCT Services to Hub and Spoke



Demand Creation for PMTCT. Creating demand for PMTCT of HIV is essential for ensuring that pregnant women and their infants receive the necessary interventions and services. The grant engaged Community Health Extension Workers (CHEW) and Mentor Mothers (MM) who were pivotal in creating demand for PMTCT, especially at the community level. They engaged with the community, educating individuals about PMTCT services, addressing stigma and discrimination, and promoting ANC visits for HIV testing and counselling. In 2022, community HIV/AIDS intervention was scaled-up with the engagement of dedicated ART clinicians to man community service delivery teams. The constituted teams further created demands for PMTCT services as they combed communities for HIV testing services. These healthcare professionals leveraged on logistics support available to their teams to sensitize TBAs, religious leaders and other community leaders as they implement in wards and communities for impact.

Decentralization of Services to Primary Healthcare Level: The decentralization of services to the primary healthcare level for PMTCT of HIV is a pivotal strategy in expanding access and improving outcomes. By shifting PMTCT services closer to communities, pregnant women were able to receive comprehensive care, including HIV testing, counselling, ART, and monitoring, within their local healthcare facilities. This approach reduced barriers to access, such as transportation costs and long travel distances, thus increasing the likelihood of pregnant women engaging in PMTCT services. Using the Hub and Spoke approach to decentralize services resulted in the promotion of continuity of care throughout pregnancy, labour, delivery, and postpartum periods, ensuring timely

interventions and support for mothers and their infants. Coordinated responses were established with the health systems strengthened for referrals from spoke to hub. It was also observed that there were varying skills and resources among the PHC/Health posts. Therefore, adequate guidance was provided to the service providers on next steps following on HIV prevention, ART initiation, viral load services at 32-36 weeks, safe labour and delivery practices, safe infant feeding options and postnatal services for HIV-positive mothers.

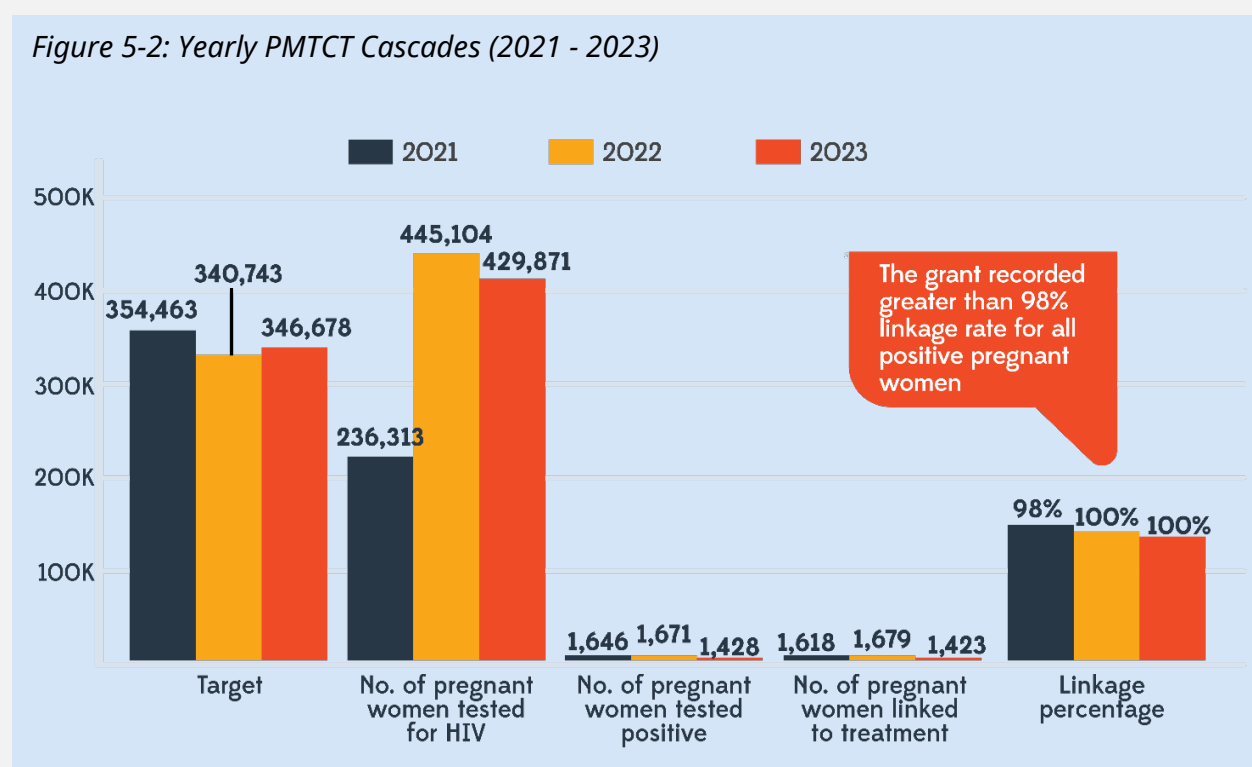
Greater Private Sector Involvement in PMTCT Service Delivery. Private sector involvement in PMTCT of HIV service delivery is a valuable partnership that can significantly enhance access, quality, and efficiency of care. Private healthcare providers, including clinics, hospitals, and laboratories, can play a crucial role in expanding the reach of PMTCT services, particularly in areas where public healthcare infrastructure may be limited. In the two states of implementation, religion is an important factor in women's reproductive health, fertility, and access to SRH. The grant identified some faith-based organizations and other private sector entities. Furthermore, FHI360 collaborated with them to enable the integration of PMTCT services into existing healthcare networks, offering pregnant women a broader range of options for HIV testing, counselling, ART, and follow-up care. Leveraging on the knowledge of the health-seeking behaviour of many in both urban and rural areas to visit local pharmacies and laboratories as the first point for health intervention, service providers on the NAHI grant collaborated effectively with them serving as a point of contact when they identify newly reactive clients. The community teams are subsequently deployed to these laboratories or pharmacies for HIV retesting and follow-up.

Community Engagement. Community engagement plays a vital role in the prevention of mother-to-child transmission (PMTCT) of HIV by fostering awareness, education, and support within local communities. Through targeted outreach programmes, community leaders, healthcare workers, and volunteers can educate individuals about the importance of HIV testing during pregnancy, adherence to ART, and safe delivery practices. The Ward Health Committee, traditional leaders and other relevant community gatekeepers were engaged to support the work at PHC level through the engagement of Community Health Influencers, Promoters and Services (CHIPs).

Integration Of PMTCT With Other Reproductive Health Services Including Family Planning. Integrating the PMTCT of HIV with other reproductive health services, such as family planning, is a strategic approach that maximizes healthcare impact and efficiency. This integration ensures that HIV-positive pregnant women receive comprehensive care that addresses both their HIV status and their family planning needs. The ANC clinics, family planning clinics and post-partum clinics were explored to ensure that the grant was integrating services at those points. This holistic approach not only promotes healthier pregnancies and reduces the risk of vertical HIV transmission but also empowers women to take control of their reproductive choices, contributing to improved maternal and child health outcomes.

5.2. CASE FINDING: SEARCHING FOR POSITIVE PREGNANT WOMEN AND FINDING THEM

The grant was to test a total of 1,059,884 pregnant women in three years and achieved a testing of 1,111,288 pregnant women representing a 105% achievement in the two states. Of the tested pregnant women, 4,745 were positive for HIV while 4,720 were linked to treatment representing a 99.5% linkage rate. A yearly breakdown of the achievements along the PMTCT cascade is shown in the chart (Figure 5-2). The grant recorded a linkage rate of 98% and above across all three years of implementation.



Initially, testing for pregnant women was limited to comprehensive sites and a few designated stand-alone facilities under the grant. However, data indicated low performance in meeting testing targets. To address this, several additional strategies were introduced. These included targeting women at non-formal service delivery points they visit during pregnancy and implementing community interventions for testing pregnant women.

As part of these efforts, optimization of HIV testing services (HTS) for pregnant women was expanded to include labour and delivery units, postnatal units, and engagement with community outreach teams (COT), traditional birth attendants (TBAs), and other non-formal antenatal care providers. Community outreach programmes were also conducted to provide pregnant women with essential PMTCT messages and Information, Education, and Communication (IEC) materials.

FHI 360 aligned with the national PMTCT scale-up plan, focusing on four key strategies: organizing all service delivery points for pregnant women using the Hub and Spoke model,

strengthening services throughout the PMTCT cascade, improving the timeliness of Early Infant Diagnosis (EID) services for exposed infants, and enhancing data quality and monitoring and evaluation (M&E) systems. As a result of these efforts, all service delivery points catering to pregnant women in every state have been mapped. With the expansion of testing in communities and alternative service delivery points, there was a significant improvement in testing coverage and linkage rates, as depicted in the chart above. Two key factors that contributed to the high linkage rate are as follows:

Implementation of the Case Manager/Mentor Mothers initiative: The Mentor Mothers (MM) line listed all PPW assigned to them, diligently tracking them throughout their pregnancy, labour, and delivery phases. The engaged Case Managers/Mentor Mothers actively played a crucial role in executing various processes in the PMTCT programme. The processes included expanding differentiated service delivery methods, synchronizing ARV refills with ANC visits, enhancing viral load services for PPW, offering additional community-based ARV delivery options for PPW to avoid treatment interruptions.

They did all these while emphasizing on appointment compliance for facility drug pickup and strengthening the mother-baby pair appointment system to prevent missed opportunities for either the mother or baby. The MM were greatly involved in providing quality counselling being able to demonstrate the success they achieved with PMTCT themselves. The counselling was not limited to the importance of good treatment adherence (meaning maximum of 0-1 missed doses in a month), choice of delivery including the important of intra-hospital delivery or earlier signs of labour. Counselling also included how to prevent their infants from being high risk HIV-exposed infant and the significance of adhering to decided feeding option for the newborn as well as the importance of avoiding mixed feeding.

A robust accountability system was also instituted for the MM at facility level across key programme indicators beginning with a target to link 100% of PPW identified to sustain ART and achieving a MTCT-rate of 0%.

To ensure that the capacity of the mentor mothers is adequately built, a strong collaboration exists with the GoN staff especially the ART coordinators, seasoned nurses at the ANC clinic, health facility clinicians and other healthcare workers. These collaboration and integration of PMTCT services were evident in the secondary and tertiary centres in Anambra and Ebonyi states.

Baby Item Shop Initiative. This strategy was piloted in Anambra State to improve achievement in the PMTCT 2.1 indicator. This was a fallout from the TQLA support (documented in a separate standalone report) where it was recognized that most pregnant women visit shops that sell baby items at some point during pregnancy. By leveraging the willing traders to distribute HIVST to these pregnant women who hitherto have not been tested for HIV will be one way to identify positive pregnant women.

It was also expected to further create awareness about HIV testing services in the community. HIVST information, education and communication materials were deployed at the shops as a means of sensitization too. There were periodic (weekly) visits by the screening facilitators to the shops for capacity building, data management and commodity reconciliation.

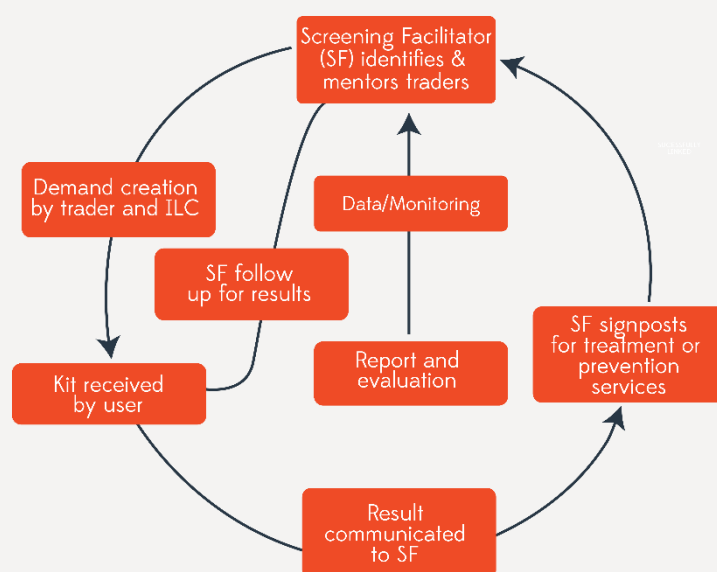


Figure 5-3: Service Flow for BISI

Table 4: The Onitsha cluster which probably has a higher number of markets had the greatest number of shops accepting the initiative and with Nnewi cluster had 100% result retrieval rates. A total of 15 PPW were identified by the initiative, and all were linked to care.

S/No	Item	Onitsha Cluster	Awka Cluster	Nnewi Cluster
1.	Number of Baby item shops mapped for support	187	36	46
2.	Number of HIVST kits distributed to PW	241	1604	832
3.	Number directly assisted	214	436	601
4.	Number unassisted	27	1168	231
5.	Result Received (%)	241 (100%)	1236 (77%)	832 (100%)
6.	Number of Reactive HIVST test results	2	15	4
7.	Number confirmed positive	1	10	4
8.	Number of PPW placed on ART from BIS Initiative	1	10	4

Key Findings in Piloting Baby Item Shop Initiative (BISI)

- A lot of pregnant women visiting these shops have been tested at various ANC visits.
- The market leaders are not against the idea.
- Some pregnant women were reluctant to accept the services.
- The initiative is accepted more in urban areas than rural areas.

- Resistance by some of the identified baby shops to participate due to fear of losing their customers on account of stigmatization.
- Some of the stores require a formal letter as well as incentives/financial compensation to participate in the initiative.

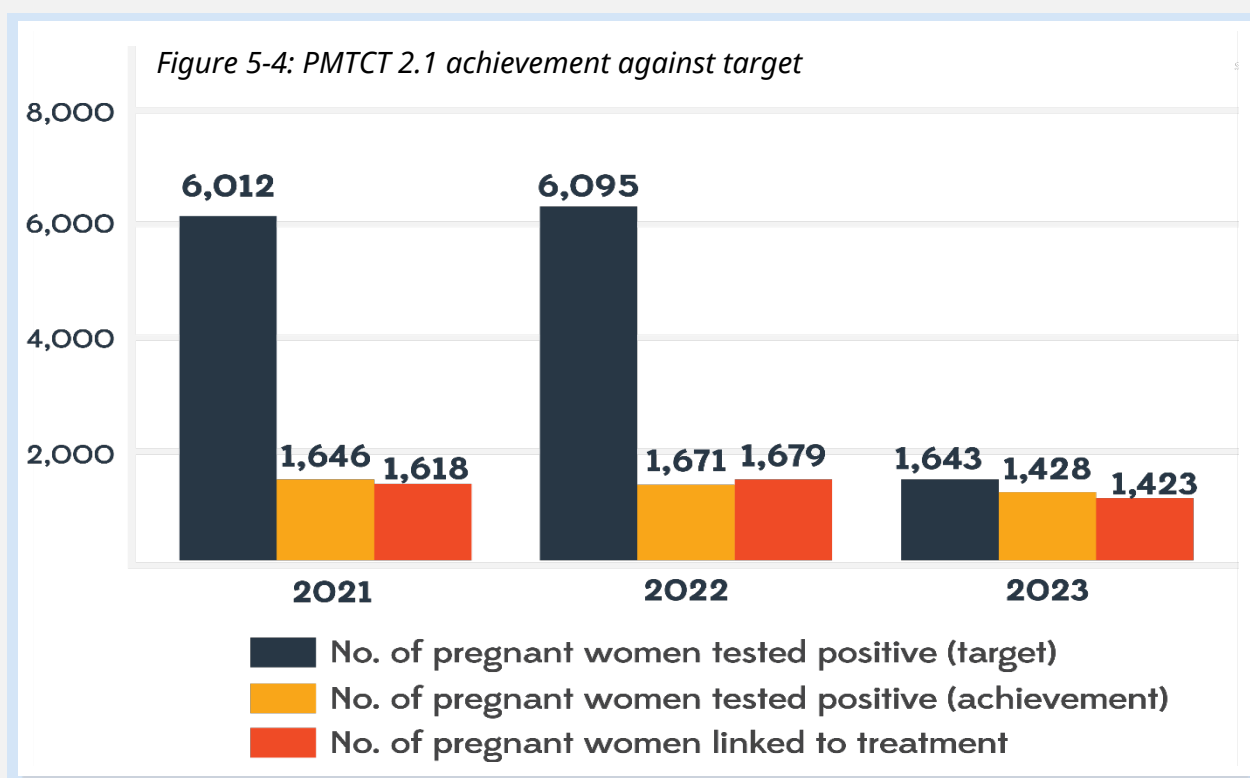
Recommendations for BISI implementation

- awareness creation on media channels including radio and television stations.
- Incentivize pregnant women with non-antenatal items e.g. recharge cards.
- Continuous sensitization of gatekeepers in the markets where BISI is implemented.
- Maintain a constant supply of HIVST throughout the grant cycle.
- Ensure routine capacity building for the shop owners.
- Have a dedicated day of the week the team goes to get the results of the tests to avoid bugging the shop owners.

5.3. TREATMENT GAP & TREATMENT ADJUSTED PREVALENCE (TAP) IN PMTCT: CASE STUDY OF THE NAHI GRANT

All efforts were made to test all the pregnant women in the two states of implementation (Anambra and Ebonyi) and this was achieved as seen in **Section 5.2** above. However, achieving the PMTCT 2.1 target (Number of positive pregnant women who received ART to reduce risk of mother to child transmission of HIV) remained a herculean task as shown in the chart.

As seen from the chart (Figure 5-4), it was targeted based on NAIIS 2018 prevalence among pregnant women for Anambra and Ebonyi states that 18,250 positive pregnant women be found on the grant as disaggregated yearly. However, only 4,745 positive pregnant women were identified despite the testing of all pregnant women in the two states giving a treatment gap of 74%.



The project team then sought to answer the following questions:

1. If all pregnant women have been tested in a particular population e.g. Anambra State, why will the estimated number of positive pregnant women found be low compared to the target?
2. If one considers those currently on treatment and factor in new clients added, the expectation is that there should be a reduction in prevalence in that population. Is this truly the case?

Treatment Adjusted Prevalence. FHI360 has advocated that the country should review the current way of estimating prevalence and subsequently adjust the denominator for calculating prevalence. In this paper, FHI360 introduces the Science of Treatment Adjusted Prevalence.

Treatment-adjusted HIV prevalence is a practical and simple indicator constructed from readily available data, which could guide the selection of national HIV testing algorithms and hence improve programme management and monitoring. This indicator, adopted by WHO⁴, provides a lower bound for expected HIV testing yield in settings where coverage of ART is high. The adjustment may result in more appropriate HIV testing services and treatment targets and may help evaluate performance in heterogeneous populations. The following equation is a way of removing those already receiving ART from the numerator

⁴ Consolidated HIV strategic information guidelines. Driving impact through programme monitoring and management. Geneva: World Health Organization; 2020. Available from: <https://www.who.int/publications/i/item/9789240000735> [cited 2021 Aug 22]. Consolidated guidelines on HIV testing services, 2019. Geneva: World Health Organization; 2019. Available from: <https://www.who.int/publications/i/item/978-92-4-155058-1> [cited 2021 Aug 22].

and denominator of HIV prevalence and can be readily estimated from existing programme data and population estimates:

$$TAP = \frac{H - A}{P - A} * 100$$

Where:

TAP = Treatment Adjusted Prevalence

H = Estimated Number of Adult PLHIV

A = Number of Adult PLHIV on ART

P = Total Adult Population

$$TAP = \frac{(\text{Estimated Number of Adult PLHIV (H)} - \text{Number of Adult PLHIV on ART (A)})}{\text{Total Adult Population (P)} - \text{Number of Adult PLHIV on ART (A)}} * 100$$

Applying the principle of Treatment-Adjusted Prevalence (TAP) showed that the actual prevalence of HIV-positive pregnant women may be lower than earlier projected.

Where H=80051 (Total Number of people living with HIV in Anambra State (July 2023 Spectrum estimate))

A= 41,087 (Number of Adult PLHIV on ART in Anambra State. NAHI programme data and AHF (IP implementing in Anambra), as of Dec 2022)

P= 5,953,500 (adult population (>15year,) projected from 2022 from 2006 census, National Bureau of Statistics)

$$TAP = \frac{(80051 - 41,087)}{(5953500 - 41,087)} * 100 = 0.66\%$$

The calculated TAP shows that, based on the number of persons who have been placed on treatment, the prevalence is now 0.7%. This goes to show the possible reason for the suboptimal achievement in the PMTCT 2.1 target on the NAHI grant is that the denominator based on the 2.2 prevalence is very high and should be calculated by the 0.7% prevalence. If we assume 0.7% prevalence and we calculate number of PPW, as a subset of the PMTCT testing target, the PMTCT 2.1 target should be:

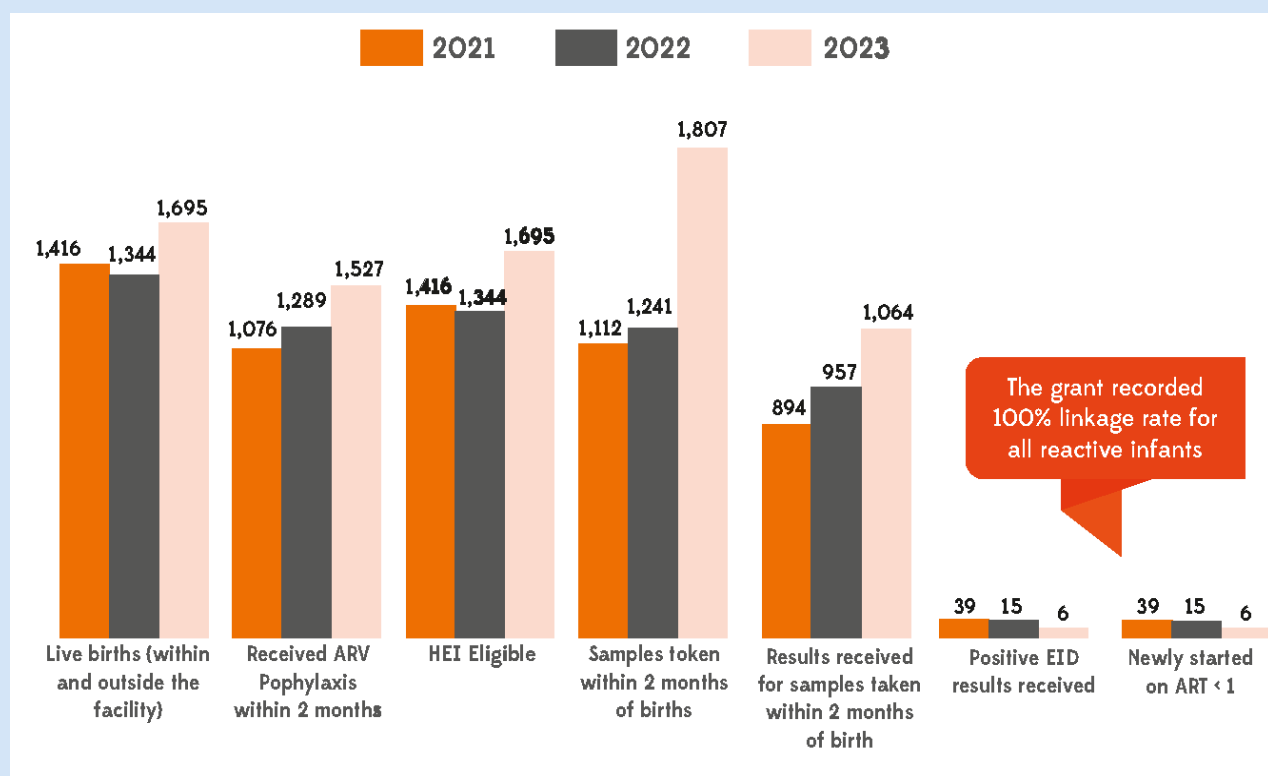
Period	PMTCT 1.1 Target	No of Pregnant women tested	Positive Target	No Positive	Achievement	Positive target (TAP)	Achievement based on TAP
2023	364,678	429,871	6,143	1,428	23.2%	2,407	59.3%

This grant has demonstrated with the application of treatment-adjusted HIV prevalence, that this simple indicator constructed from readily available data, could guide the selection of national HIV testing algorithms and hence improve programme management and monitoring. The adjustment may result in more appropriate HIV testing services and treatment targets and may help evaluate performance better.

5.4. EID CASCADE

With regard to PMTCT EID, the grant made efforts to ensure that all babies born to PPW received Early Infant Diagnosis (EID). The performance of the NAHI grant from 2021 to 2023 demonstrates remarkable success in linking reactive HIV Exposed Infants (HEI) to treatment.

Figure 5-5: EID Cascade - Overall (2021 - 2023)



In 2021, out of 1,416 eligible HEI, 894 results were received within two months of birth. Among these, 36 were reactive, and all of them were swiftly initiated on Antiretroviral Therapy (ART) within a month, showcasing a 100% initiation rate (Figure 5-5).

Moving to Year-3 of the grant (2023), the number of eligible HEI increased to 1,695. Results were received for 1,064 EID samples, and six were reactive. Notably, all six reactive cases were successfully linked to treatment, as indicated in the attached chart. This performance underscores the grant's outstanding achievement with a consistent 100% linkage rate across all three years of implementation.

Case Management and Surveillance approach using Mentor Mothers. The Case Management and Surveillance approach using MM has immensely improved adherence counselling and the linkage of identified PPW in both health facility and community to care and their retention on treatment. The grant worked with the MM to optimize EID services. They provided support to the pregnant women right from the time of being identified as HIV positive and followed up with them all through the pregnancy period until delivery. The

MM ensured that the exposed babies received postnatal prophylaxis and were also brought back for EID services at sixth week (or <2months of age). There was also the deployment of point of care (POC) machines in hard-to-reach areas. However, only Anambra State had two mPIMA machines while Ebonyi had none. The mPIMA machine utilization was also not optimal due to the occasional stockout of cartridges. Infants were following till their final outcomes were determined at 18 months of age.

5.5. PAEDIATRIC ART

GF-NAHI improved pediatric Viral Load (VL) coverage from 28% in 2021 to 90% by December 2023 and suppression rate from 18% in 2021 to 81% by December 2023. The grant strengthened pediatrics HIV services with a particular focus on genealogy testing, pediatrics ART retention, pediatrics ART-regimen optimization, and adherence to ART. The grant also achieved a 95% pediatrics DTG transition within the last quarter of 2022 in line with the national targets for pediatrics ART.

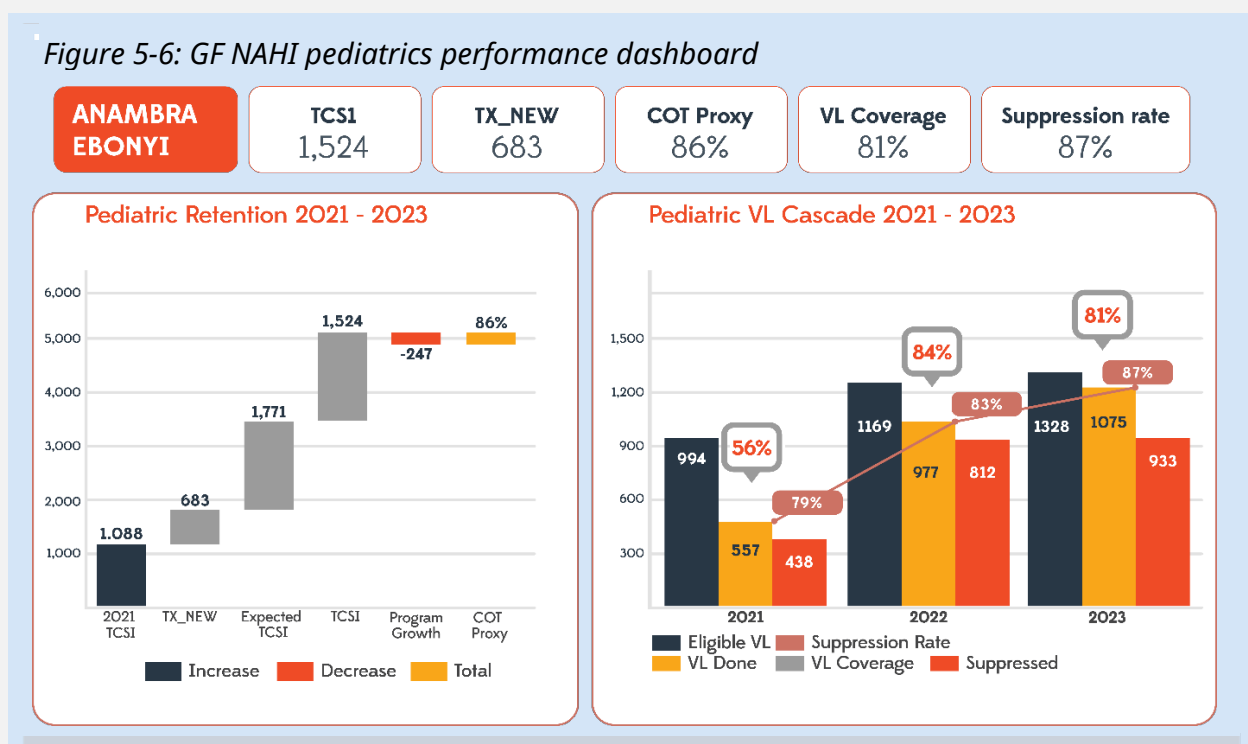
In optimizing treatment saturation, retention, and overall treatment outcomes for pediatrics clients, a multipronged approach was deployed. State pediatrics focal persons were identified among the senior technical staff who were tasked with monitoring and providing technical support at cluster and state level for the 0-14 subpopulation. Dedicated weekly technical review meetings with the Principal Recipient's HQ backstops were also instituted to monitor the technical performance for the 0-14 across the three UNAIDS three 95s and tuberculosis preventive therapy update among other essential wrap around services.

To optimize the first 95, an integrated approach was ensured through the review of the Index Testing (IT) cascade with analysis of genealogy elicitation gaps at facility level. Subsequently, line listing of index clients who have not been offered genealogy services with a follow-through on cascade completion for testing and linked to ART for positively identified children.

A significant knowledge gap was identified in the ability to provide quality service delivery to the pediatric subpopulation thus, affecting the second and third 95 components of the UNAID goals. Training of selected pediatric focal persons from health facilities across Anambra and Ebonyi states was held aimed at optimizing pediatrics ART care with sessions on care and support, adherence, and enhanced adherence counselling.

This led to improvement in regimen optimization of over 98%, viral load coverage of 81%, and improvement in pediatrics viral load suppression from **56%** (2021) to **83%** (2022) and **87%** in 2023.

Figure 5-6: GF NAHI pediatrics performance dashboard



Support For The National PMTCT Scale-Up Plan. In 2022, the National AIDS, Hepatitis and STIs Control Programme (NASCP) developed a National PMTCT Scale-up plan to accelerate progress towards the achievement of eMTCT targets. This plan followed a six-year retrospective analysis of PMTCT service delivery at national and state levels. In line with this, NASCP with the support of the NAHI grant engaged Clinton Health Access Initiative (CHAI) to provide technical assistance (TA) to address gaps in EID which is a key pillar of the National PPMTCT scale up plan. The TA provided catalytic support to NASCP to rapidly address programmatic gaps in EID for infants exposed to HIV in Nigeria while providing systems strengthening support to sustain gains in line with the National Treatment and PMTCT Programme (NTPP) operational plan.

CHAI supported NASCP to conduct a POC-EID diagnostic network assessment to identify and address gaps impeding EID coverage and strengthen identification of infants exposed to HIV in hard-to-reach areas. The CHAI support also was to facilitate timely results return, strengthen EID data management to improve visibility for decision making. The lessons learnt from this TA were documented in manuscripts for publication.

5.6. CHAI PROVIDED TA TO NASCP ON FOUR MAJOR ISSUES RELATED TO THE PMTCT SCALE UP AND EID OPTIMISATION AS FOLLOWS:

5.6.1. NATIONAL EID DIAGNOSTIC NETWORK ASSESSMENT (DNA).

In order to identify gaps impeding EID coverage, CHAI in the TA conducted POC EID diagnostic network assessment. The results from the assessment informed the selection of 38 GeneXpert sites for EID/TB integration and selection of 76 sites for the placement of the Abbott m-Pima devices.

5.6.2. INCREASE EID AND EARLY INITIATION ON TREATMENT (EIT) FOR HIV POSITIVE INFANTS.

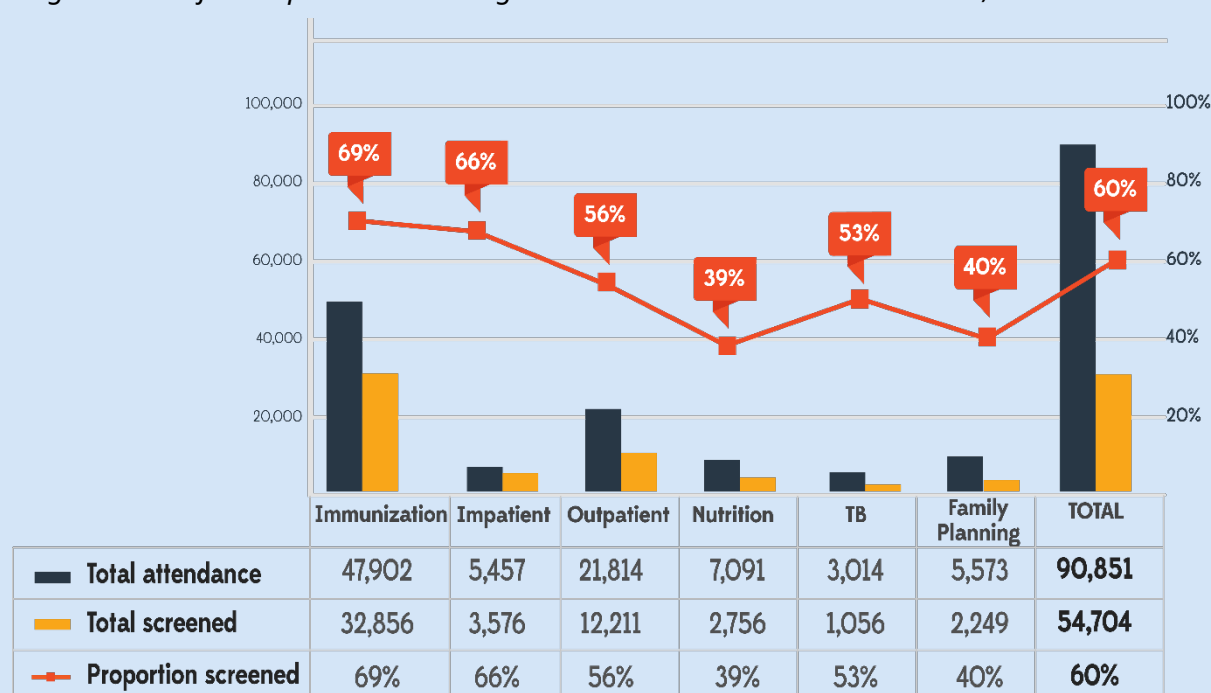
This TA focused on learning how to identify infants exposed to HIV in hard-to-reach areas and facilitate timely results return. As part of the efforts to improve case finding for infants exposed to HIV and demand generation EID, CHAI supported the deployment of Infant Exposure Screening at Alternate Entry Points in facilities to routinely screen and test infants outside of the traditional PMTCT setting, identify new or known HEIs who have missed a testing milestone, link those who are positive to care, and improve EID coverage.

The graph (Figure 5-7) below shows the screening data from the alternate entry points with the immunization and inpatient entry points screening over 60% of the total clients that visited the clinics.

Through the implementation of the Infant exposure screening strategy, a total of 1,825 infants exposed to HIV were identified across the 114 supported sites and their samples collected for EID. The outpatient and immunization clinics identified the most significant number of infants exposed to HIV.

A total of 131 infants were identified positive (8% positivity rate) with the nutrition clinic having the highest positivity rate of 39%. Of the 1,825 EID samples collected, 1,063 (58%) were tested on the GeneXpert platform and 762 (42%) were sent to the conventional PCR Laboratories due to the unavailability of m-Pima cartridges in the facilities with the m-Pima POC devices.

Figure 5-7: Infant Exposure Screening at AEPs: November 2023 –March 22, 2024



5.6.3. EID DATA MANAGEMENT TO IMPROVE VISIBILITY FOR DECISION MAKING

Knowledge management: WhatsApp Bot. The CHAI team collaborated with NASCP to develop and deploy NASCP WhatsApp Bot. The WhatsApp bot was leveraged to improve health workers' knowledge with respect to guidelines for EID services at health facilities and any other required capacity. Over 682 healthcare workers have been trained on the use of the WhatsApp bot, and a total of 920 user-initiated conversations occurred between October 2023 and March 2024, with about 486 completed conversations with the bot.

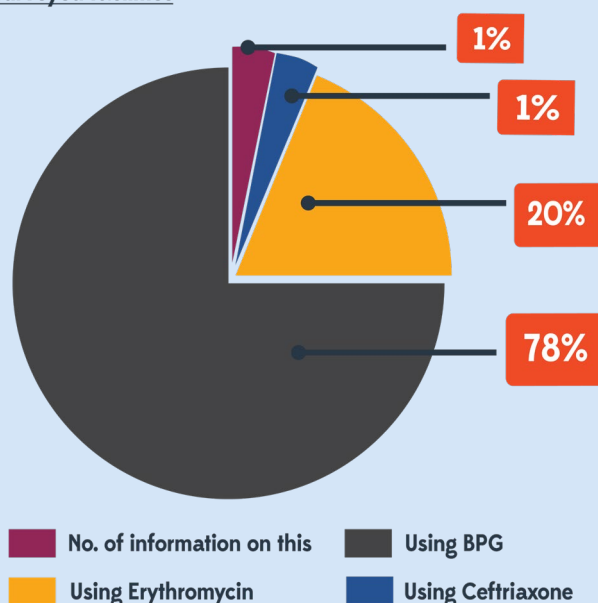
LIMS Optimization for EID Reporting. To improve data visualization on LIMs, CHAI harmonized the data reporting/visualization needs for the National LIMS dashboard as regards EID testing (POC and conventional), enhanced the National LIMS dashboard and trained a total of 121 participants (staff of networked facilities) in the use of the National LIMS dashboard.

5.6.4. DOCUMENT AND DISSEMINATE EVIDENCE ON HIGH-IMPACT PMTCT SERVICE DELIVERY MODELS INCLUDING THE DUAL HIV/SYPHILIS EMTCT

Country-wide Benzathine Penicillin G survey. CHAI conducted with NASCP a country wide BPG survey. This survey revealed that NCPC and Penaxin were the most predominant brand of drugs available for the treatment of syphilis in pregnant women. The prices of the BPG ranged between N 700 and N900 with drugs possessing an average shelf-life of three years. The findings of this survey were disseminated at the Dual HIV/Syphilis RDTs meeting held with PMTCT focal persons and M&E officers from the 36+1 states in the country.

Figure 5-8: Treatment of Congenital Syphilis among Pregnant Women in Healthcare Facilities in Nigeria

How pregnant women who test positive for syphilis are treated in surveyed facilities



Seventy seven percent of pregnant women who tested positive for syphilis were treated using BPG. Other drugs used in treatment of congenital syphilis as reported by the respondents includes Erythromycin, Doxycycline and Ceftriaxone.

Country-wide Dual HIV/Syphilis RDTs Scale-up data collection/Study. To determine the impact of the dual HIV/Syphilis RDTs scale-up on PMTCT service delivery across the country, CHAI in collaboration with NASCP and SASCPs conducted a country-wide dual HIV/Syphilis RDTs scale-up data collection exercise in 241 healthcare facilities across 12 states namely, Nasarawa, Kogi, Adamawa, Bauchi, Kano, Sokoto, Anambra, Enugu, Cross River, Rivers, Lagos, and Oyo.

Findings from the MSV revealed that in Rivers, the dual RDTs were available in 45% of the facilities visited and all the health facilities visited had capacity to test pregnant women using the Dual HIV/Syphilis RDTs. Moreso, in the state across the facilities visited, 36% were using single Treponemal RDTs, 36% were using the VDRL kits while 27% were using the Dual HIV/Syphilis RDTs. In Akwa Ibom, 100% testing of pregnant women for HIV/Syphilis were done using DTKs (where available). However, there was stockout of BPG for syphilis treatment in all visited facilities. In Anambra State, 63% of the facilities sourced test kits from the Global Fund IP, while 37% were sourced from facility procurement. It was also reported that all health facilities test pregnant women for Syphilis during ANC. Notably, 75% of the facilities use VDRL while 25% use VDRL and Single Treponema Test across the facilities visited in Anambra State.

CHAI recommended upon completion of the MSV, the need to strengthen monitoring, supervision and inter-partner collaboration and information sharing for sustained programme implementation in the states while stressing the relevance of synergy between the SASCP and health facilities to ensure quick identification and immediate mitigation of identified challenges.

6. CHALLENGES IMPLEMENTING PMTCT IN GC6

Insecurity resulting in reduced workdays: The two states where PMTCT was implemented are in the southeast of Nigeria prone to insecurity challenges with a series of weekly shootings from unknown gunmen. This also impacts health facility visits by individuals with limited movements for safety concerns on several occasions. For example, as can be seen in the calendar below, the total number of days available for work from January to June 2023 was 96 (out of 130 days), representing 74% of the expected workdays. Thus, the team has been unable to provide services for 26% of the expected workdays. This was mainly caused by the sit-at-home order by the Indigenous People of Biafra (IPOB). The team had to resort to working on Saturdays to balance for the days not worked.

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Figure 5-1: Calendar showing the workdays and associated interruptions in Anambra following compulsory sit-at-home order.

The grant recorded the following challenges initially: lack of capacity to collect DBS for EID especially for staff in the labour and delivery units, regular downtime in the PCR lab for maternal viral load and infant DBS. These challenges were mitigated by providing onsite mentorship for facility staff to ensure no missed opportunities, faulty parts on the equipment were replaced, and solar inverters were provided to mitigate fluctuations in power. Also, with collaboration of the SMOH, two near point of care m-PIMA machines contributed 35% of the total number of samples collected (2,359) on PMTCT optimization efforts

7. LESSONS LEARNT

PLHIV Mentor Mothers Remarkable Success in PMTCT Services. PMTCT of HIV is a critical component in the fight against the HIV/AIDS pandemic. Implementing PMTCT services is complex, requiring a multifaceted approach. NEPWHAN's innovative and successful strategy involves the integration of MM living with HIV (PLHIV) into PMTCT programmes. This best practice highlights the exceptional success observed in Anambra and Ebonyi states, where PLHIV MM have played a pivotal role in achieving outstanding results.

Key Success Indicators. Programmes without PLHIV MM have demonstrated variable retention rates. The use of PLHIV MM in Anambra and Ebonyi states resulted in a 100% of HIV-positive pregnant women at every point of care placed on treatment in 2023. This unparalleled commitment contributed significantly to the overall success of PMTCT services. Traditional programmes face challenges in ensuring timely care for HEI. PLHIV MM facilitated a 124% increase in the number of HEI born outside health facilities, brought back for PCR testing within 0-2 months of birth. This achievement is a testament to the effectiveness of MM in ensuring the crucial early care necessary for HEIs.

Programmes lacking PLHIV MM may experience delays in ARV prophylaxis initiation for newborns. Hundred percent of HEI born outside the facility, under the guidance of MM, received ARV prophylaxis within 72 hours of birth. This swift intervention resulted in an outstanding 99% negative outcome for children born to HIV-positive mothers, highlighting the importance of timely ARV prophylaxis.

Factors Contributing to Success

- **Peer-to-Peer Support:** PLHIV MM provide relatable and empathetic support, fostering a strong connection with pregnant women living with HIV. This peer-to-peer approach significantly contributes to increased adherence to PMTCT protocols.
- **Community Engagement:** MM engage with communities, addressing stigmas and dispelling myths surrounding HIV. Community trust and awareness are pivotal in encouraging pregnant women to access and adhere to PMTCT services.
- **Holistic Care:** MM offer holistic support, addressing not only medical needs but also providing emotional and social assistance. This comprehensive care approach enhances the overall well-being of HIV-positive pregnant women and contributes to positive outcomes.

Recommendations for Replication

- **Training and Capacity Building:** Conduct thorough training programmes to equip MM with the necessary knowledge and skills. Focus on building MM capacity in counselling, adherence monitoring and community engagement.
- **Integration into Health Systems:** Integrate PLHIV MM seamlessly into existing health systems. Collaborate with healthcare providers to ensure MM work in tandem with medical professionals for comprehensive care.

- **Monitoring and Evaluation:** Establish robust monitoring and evaluation mechanisms to track the impact of mentor mothers. Regularly assess programme outcomes, adapt strategies based on feedback, and share success stories to motivate MM and communities.
- **Use of point of care (PoC) machines such as m-PIMA should be prioritized for increasing EID uptake**

MM to improve retention amongst PPW and optimize EID for HIV Exposed Infant:

Introduction: Using PLHIVs has helped a lot in the retention of PLHIVs. They serve as expert patients.

Implementation approach: Mentor Mothers acted as case managers to identify positive mothers in the PMTCT programme in NAHI grant. They provided HIV positive women and their children with basic understanding of the social and cultural challenges of living with HIV. MM liaised with TBA settings and other maternity homes to test PW and provide care for PPW who did not utilize health facilities (either through referral or direct support).

Result (Outcome & Output): The use of MM to track positive pregnant women has helped with retaining positive pregnant women and nursing mothers in care. This has also assisted with EID sample collection. They supported counselling and psychosocial support (including disclosure, drug adherence and infant feeding). This was achieved through tracking and visiting HIV positive mothers in the community to improve retention and inform facility clinical staff of ill clients needing additional care. They also supported with linkage of HIV positive pregnant women to care (100%), especially those who were identified in the community and ensured all HIV exposed infant received ARV prophylaxis. In addition, they promoted and supported EID. Furthermore, MM through openness were able to reduce stigma and discrimination and improve client disclosure.

8. RECOMMENDATION AND CONCLUSION

There is a need to review the target for the states especially as more PLHIV are being identified and placed on treatment as evidenced by the treatment-adjusted prevalence. More capacity building and strengthening should also be done as service provision is being rapidly expanded to the communities to ensure high quality of care, especially as there is very high rate of attrition of health care providers in the country. Efforts should also be put in place concerning optimal maintenance of the PCR labs. Finally, with the activation of GeneXpert machines to run EID samples, there will be obvious improvement in turnaround time for the EID samples and EID services in general.

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