



# **GHAIN SUPPORT TO PREVENTION OF MOTHER TO CHILD TRANSMISSION OF HIV SERVICES IN NIGERIA**

**END OF PROJECT MONOGRAPH**

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## FOREWORD



The Global HIV/AIDS Initiative Nigeria (GHAIN) comes to an end, it is an opportune time to reflect on its achievements and draw lessons from challenges encountered in order to inform future HIV programming in Nigeria and similar context. The GHAIN program was designed to support the Government of Nigeria's response to HIV/AIDS, particularly in scaling up proven HIV prevention, treatment and care and related interventions. The comprehensive nature of GHAIN's scope and ability to leverage different sources of funding for greater impact made it a very complex program. However, a genuine partnership made GHAIN implementation successful.

Working in close collaboration with stakeholders at the federal, state, local government and community level, GHAIN managed in a relatively short period of time to contribute to increased access to ART and related services in Nigeria. The project's support was channeled mainly through public health facilities and communities in a manner that empowered staff in these facilities and communities to deliver HIV and related services by themselves. The purpose of this monograph is to share the experience of GHAIN implementation with policy makers, program managers, public health practitioners and health care workers.

The achievements and lessons described stand in testimony of the invaluable work of staff in government ministries, GHAIN-supported public health facilities, communities and support groups of people living with HIV (PLHIV) who worked tirelessly to overcome numerous challenges to make HIV services more accessible. None of these achievements would be possible without the United States's PEPFAR funding of the project through the United States Agency for International Development (USAID).

The manuscript benefited tremendously from reviews by experts from the WHO Nigeria office, for which we are grateful.

It is hoped that GHAIN has contributed to lay a solid foundation for a future evidence-based, efficient, sustainable and government owned HIV response in Nigeria.



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Chief of Party, GHAIN

# LIST OF ACRONYMS

ANC	Antenatal care
ART	Antiretroviral therapy
ARV	Antiretroviral (drugs)
DNA PCR	Deoxyribonucleic acid polymerase chain reaction
DBS	Dried Blood Spots
EID	Early infant diagnosis
FCT	Federal Capital Territory
FHI	Family Health International
FMOH	Federal Ministry of Health
FP	Family planning
GHAIN	Global HIV Initiative in Nigeria
GLRA	German Leprosy and TB Relief Association
GoN	Government of Nigeria
HIV+	HIV positive
HU-PACE	Howard University Pharmacists and Continuing Education Center
HTC	HIV testing and counselling
LACA	LGA AIDS Control Agency
MCH	Maternal and child health
MTCT	Mother-to-child transmission
NACA	National Agency for the Control of AIDS
NASCP	National AIDS and STDs Control Programme
NPC	National Population Commission
PMTCT	Prevention of mother-to-child transmission of HIV
PITC	Provider-initiated testing and counselling
SASCP	State HIV/AIDS Control Program
SACA	State/ Agency for the Control of AIDS (/LACA
SOPs	Standard operating procedures
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNICEF	United Nations Children's Fund



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## INTRODUCTION

**M**other-to-child transmission (MTCT) of HIV represents 90% source of paediatric HIV infections. It is estimated that 370,000 children were infected with HIV globally, 90% of whom live in developing countries (UNAIDS, 2010). Nigeria is the country with the highest burden of MTCT in the world (UNAIDS, 2009); 210,000 HIV-positive women are pregnant every year. Contributing to that high MTCT burden in Nigeria are high population size, HIV prevalence in general population and among pregnant women. More than 3.6 million adults and children were estimated to be living with HIV in 2005 and the 2010 national sentinel survey report estimated the HIV prevalence among pregnant women attending antenatal care services (ANC) at 4.1%. There is relatively low antenatal attendance – only 58% of pregnant women attend at least one antenatal clinic visit and only 35% deliver in health facilities (UNICEF, 2010; NPC 2008).

In 2002, the Government of Nigeria (GoN) initiated programs on prevention of mother-to-child transmission of HIV (PMTCT). The GoN response to MTCT was in line with the global PMTCT strategy that promotes the “Four-Pronged” approach (see details below). By 2004, the actual response to MTCT was still very limited: less than 1% of pregnant women were accessing HIV testing and counselling, less than 1% of HIV-positive women were receiving ARV and virtually no HIV-exposed child received ARV prophylaxis (UNICEF, 2010).

In 2004 the Global HIV Initiative in Nigeria (GHAIN), a project led by FHI and several international partners (AXIOS Foundation, the German Leprosy and TB Relief Association (GLRA) and Howard University) started supporting the GoN effort on PMTCT. The overarching principle of GHAIN's PMTCT strategy was to improve access to quality PMTCT service by activating new sites in Nigeria. By the end of the project, in 2011, GHAIN had been supporting PMTCT in all the 36 States and the Federal Capital Territory. The purpose of this monograph is to describe how GHAIN supported PMTCT, share the results achieved and discuss lessons learned.



## GHAIN'S PMTCT STRATEGY

In response to the MTCT threat and in line with the global declaration of commitment to universal access to HIV prevention, treatment, care, and support and global efforts to reduce paediatric HIV infections, the Nigerian National PMTCT program was launched in 2002 employing a comprehensive four-pronged approach: 1) primary prevention of HIV infection among women of reproductive age group and their partners, 2) prevention of unintended pregnancies among women infected with HIV, 3) prevention of HIV transmission from women infected with HIV to their infants and 4) provision of treatment, care, and support to women infected with HIV, their infants and their families

GHAIN supported all aspects of the “Four-Prong” approach using evidence-based strategies. Primary prevention was a core program area in GHAIN, featuring abstinence and being faithful messages, condom use, HIV testing and counselling (HTC). Offer of FP services to prevent unintended pregnancies among women infected with HIV as well as prevention of perinatal transmission services were integrated within the maternal and child health (MCH) services. Women infected with HIV, their infants and their families accessed treatment, care and support through integration, referral and linkages to care and treatment services.

### **GHAIN's operationalization of the four-prong strategy**

The approach for primary prevention included advocacy, community mobilization and dialogue, focused group discussion, electronic media intervention, distribution of related media material and peer education. These are described in detail in a separate monograph (the GHAIN sexual and other risk prevention monograph). Guided by the principle of integrating PMTCT into MCH services, GHAIN articulated its support around increasing access to and quality of PMTCT. Existing MCH structure and human resources constituted the platform of GHAIN support to PMTCT. To be selected as a PMTCT site, a health facility has to have a pre-existing and functional ANC, maternity, child welfare and pharmacy services pre-existing.

### **Improving Access to PMTCT**

MCH service delivery points were carefully selected, taking into account the PMTCT roll out provision in the national and state strategic plans, the patient load and the state specific HIV prevalence when available. The phased support to health facilities was agreed with state





health authorities. Facilities with high ANC and maternity patient load were prioritized. GHAIN pioneered the implementation of PMTCT in secondary level hospitals in Nigeria and later supported decentralization to primary health centers and in communities.

Upon selection of health facilities, GHAIN strengthened the capacity to deliver existing routine MCH services and to add on PMTCT interventions. This was done by first conducting an assessment of the selected facility with government and facility staff. Informed by the findings from the participatory assessments by government, facility and GHAIN staff, gaps were identified and filled as necessary. The gaps filled included but were not limited to infrastructural upgrade of health facilities, equipment supply, capacity building for available human resource, pharmaceutical supplies and provision of job aids. These ensured that antenatal clinics and labour wards in health facilities that would provide PMTCT services had the full complement of supplies and equipment.

In parallel with upgrading health facilities infrastructure, GHAIN trained health care providers to offer PMTCT. GHAIN supported the development of the national PMTCT training curriculum and also delivered the training itself. The training was followed by mentoring. Standard Operating Procedures (SOPs) were adapted and disseminated. Mentoring was also an opportunity to promote the importance of routine service data, its analysis and use by program managers to guide and fine-tune the implementation of PMTCT. Shortage of pharmacists were filled by the use of volunteer pharmacists coordinated by HU-PACE. These volunteers were later paid stipend by some state governments (e.g. Cross River State government)

GHAIN supported setting up referral systems to ensure that complex interventions that could not be offered in MCH settings such as long term psychosocial support or in some facilities, initiation of life long anti-retroviral treatment – are offered to women testing HIV-positive, their children and their families. GHAIN put in place a documentation system ensuring that completion of referrals could be tracked and patients followed up. GHAIN also pioneered the use of maternal diaries to keep track of individual women's visits, clinic and pharmacy appointments; this helped promptly identify missed appointments, trigger tracking of defaulters and reduce loss to follow-up.

In order to address the challenge of poor ANC attendance that prevent women to access PMTCT services, GHAIN engaged in demand creation for PMTCT and expanded access beyond ANC clinics. The GHAIN developed a communications strategy for PMTCT in conjunction with the community services team; it supported community gate keepers and



health motivators to address cultural sensitivities that discouraged women from taking advantage of PMTCT services. PMTCT outreach services augmented these community efforts. Traditional birth attendants were engaged as partners who pooled their clients and encouraged them to access GHAIN-supported outreach HTC with subsequent referral to health facilities for pregnant women who tested positive.

At a more central level and in close collaboration with State HIV/AIDS Control Programs (SASCP) and State/LGA Agencies for Control of AIDS (SACA/LACA), GHAIN trained state and LGA level staff on program management and M&E. Technical assistance was provided on the development of state specific work plans in line with program objectives. Sustainability plans were jointly developed while state monthly meetings were coordinated with technical support. FHI technical staff, state and LGA staff jointly conducted integrated supportive supervision to health facilities. In addition to state and LGA institutions, community leaders were also engaged as part of the efforts to ensure community ownership and improve sustainability.

### **Ensuring Quality PMTCT**

GHAIN made sure that every single step of the PMTCT cascade has the highest uptake possible. HIV testing, eligibility for life long antiretroviral treatment, dispensation of ARVs to HIV-positive (pregnant) women and to their infants according to national guidelines, co-trimoxazole preventive therapy (CPT), early infant diagnosis (EID) of HIV, and offer of family planning methods were specifically supported to ensure that PMTCT bear the best possible outcomes. When the national PMTCT guidelines were reviewed in 2010, all providers were re-trained to ensure that the latest evidence of PMTCT is practiced in all GHAIN supported sites.

For optimal uptake of HTC, GHAIN supported institutionalization of the “Provider Initiated Testing and Counselling (PITC)” in antenatal clinics as well as in labour and delivery wards. Eligibility for lifelong ART was ensured essentially through clinical assessment and CD4 count; GHAIN supported laboratories capable of performing CD4 counts; sample and patient referral networks were built to give access to sites that were geographically remote. ARV prophylaxis was always provided on the spot at the PMTCT sites. To optimize dispensation of ARVs, GHAIN trained MCH providers to initiate ARV prophylaxis.

CPT, long term counselling as well as EID were part of the family centered approach. In addition, GHAIN supported establishment of a laboratory capable of performing DNA PCR for EID in Jalingo, Taraba State. The Jalingo laboratory was networked with several health facilities beyond those supported by GHAIN. The network was backed by a Government-



supported system for transporting of filter papers – Dried Blood Spots (DBS) – from health facilities to the Jalingo laboratory and PCR results back from the laboratory to the health facilities. Family planning (FP) services were mostly offered at the PMTCT sites but where it was not possible the solid referral network ensured that FP methods were made available. Across the steps of the PMTCT cascade, male involvement was one of the focuses of GHAIN support. Male involvement in PMTCT services was supported through two variants: firstly, male partners were encouraged to attend couple counselling sessions and secondly, male partners were actively encouraged to participate in ANC visits. When pregnant women tested HIV-positive, they were counselled on safe disclosure to partners. Attending couple counselling sessions helped bypass the challenges associated with partner disclosure amongst other benefits and ultimately adherence to PMTCT prescriptions.

GHAIN supported quality improvement initiatives in many facilities but in all of them, GHAIN ensured that data for monitoring and evaluation are collected and consistently reported, analysed to generate strategic information to guide PMTCT implementation.

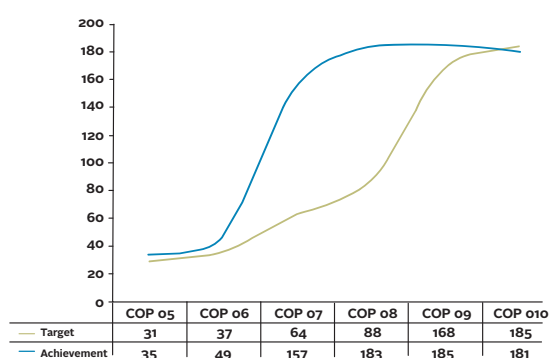
At national level, GHAIN's support to the FMOH in the production of guideline and SOPs was notable. At facility level, GHAIN's national network of experienced mentors regularly paid supportive visits to health facilities all year round providing coaching, supervision and technical assistance. GHAIN also produced job aids to support health workers.



## PROGRAM ACHIEVEMENTS

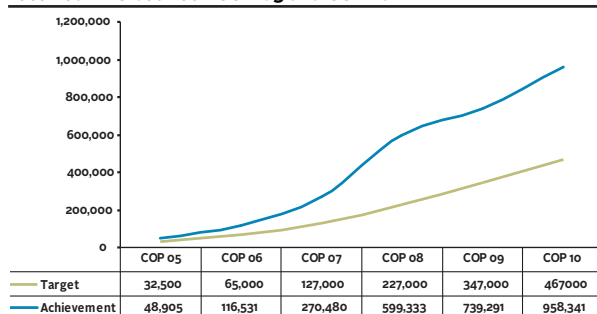
**G**HAIN has made major contributions towards national achievement in PMTCT by supporting the national scale up. The number of GHAIN supported sites increased from 6 health facilities at inception (2005), to 181 in all 36 states and the FCT in June 2011. Of these, 10 were tertiary, 164 secondary and 7 primary level facilities translating to over 25% of the nation's 670 PMTCT sites (NACA, 2010). A total of 3,795 health care workers received PMTCT training using a cascade approach that involved centralised training of trainers and subsequent regionalised step-down trainings. Further step-down trainings were also done at facility level.

Figure 1 – Increase in number of service outlets providing PMTCT between COP 05 and COP 10



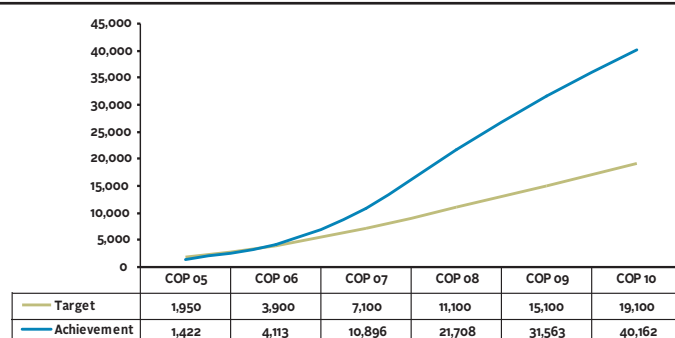
The PITC approach and community level PMTCT activities increased GHAIN's ability to reach more women. As of June 2011, 958,341 pregnant women were tested for HIV. This accounts for about 33% of the total national achievement (NASCP, 2010). The number of pregnant women accessing PMTCT services increased relatively slowly for the first three years then there was a steep increase in the number of pregnant women receiving PMTCT services between 2007 and 2009, when community components were added to the strategic approach. Of pregnant women tested, 49,351 were found HIV positive. Partners testing had a moderate success: 33032 male partners received HTC and 8788 were found HIV-positive.

Figure 2 – Cumulative increase in number of pregnant women who received HTC between COP 05 and COP 10



GHAIN since inception has provided prophylaxis to over 40,162 HIV+ pregnant women (as at end of June 2011), which represents about 40% of the total national achievement (NASCP, 2010). Provision of same-day results of HIV testing was a key approach that helped to reduce leakages in the PMTCT program by helping the program to reduce the risk of losing a woman to follow-up in the waiting period for a test result. GHAIN's support to PMTCT services has been backed by a network of 125 ART labs with CD4 testing capability.

Figure 3 –Increase in number of pregnant women who received ARV prophylaxis between COP 05 and COP 10



A total of 20,626 babies were delivered by HIV infected pregnant women in GHAIN-supported PMTCT sites while 27,046 exposed infants received ARV prophylaxis as per the GoN national guidelines. This includes not only infants whose mothers cascaded the PMTCT but also from HIV-exposed infants identified in under-5 clinics or in paediatric wards. A total of 12,526 -exposed infants were tested for HIV through DNA PCR. Identification of HIV exposed infants had been hampered by a number of issues: low delivery in health facilities, limited communication between labour and delivery ward and under-5 clinics and in other settings, a long turn-around time from sample collection to collection of results. The GHAIN program engaged a government-supported transportation network that significantly reduced turn-around time in supported facilities on the Jalingo network.

GHAIN provided technical assistance to the FMoH in the development and review of the National PMTCT curriculum and guideline and is supporting the PMTCT National Evaluation Team to develop a monitoring and evaluation system. Further, GHAIN developed standard operating procedures (SOPs) and a monitoring tool for PMTCT for use at GHAIN-supported facilities.

Figure 3 –Increase in number of pregnant women who received ARV prophylaxis between COP 05 and COP 10

	COP 04	COP 05	COP 06	COP 07	COP 08	COP 09	COP 10
Antenatal first visit	17,857	89,978	176,282	424,247	829,985	997,796	1,293,724
Preg. women CTRR	16,278	69,109	125,769	279,718	608,571	748,529	958,341
Preg. women tested HIV +	800	3,194	6,390	15,035	27,885	40,826	47,771
HIV+ preg received prophylaxis	0	1,602	4,113	10,896	21,708	31,563	40,162

## DISCUSSION

Since inception of GHAIN in 2004 to date, Nigeria has made substantial progress in implementing PMTCT. The proportion of pregnant women that have been tested for HIV between has increased from 0% in 2004 to 13% in 2009. Similarly, proportion of HIV-positive women that accessed ARV increased from 1% in 2004 to 22% in 2009. GHAIN has been recognized as major supporter as it contributed up to a third of this progress nationwide. The major lesson learnt is that PMTCT can be successfully implemented in secondary, primary and even community level health services. Scaling up PMTCT at these lower levels of the health system is critical if Nigeria's PMTCT gap is to be closed in the foreseeable future.



GHAIN's PMTCT program integrated PMTCT into MCH services in all supported facilities. This integrated approach was a strategic investment to ensure that PMTCT services will continue to be provided as part of routine MCH services. Integration of PMTCT into ANC, labour ward and FP services were key features of the GHAIN PMTCT program. Chabikuli et al (2009) showed how integration of services led to improved uptake of family planning services among HIV positive women.

Commencement of PMTCT services in a facility was also seen as an opportunity to strengthen MCH services in that facility. Thus, facility upgrades, renovations and supplies that were done prior to commencement of PMTCT services contributed to strengthening services in that facility.

Implementing PMTCT at levels lower than tertiary is critical to increasing access. What is required is dedicated capacity building which focuses on the building blocks of the health system. Outcomes of PMTCT intervention at secondary level health facilities have been demonstrated to be comparable to globally accepted outcomes (Odafe et al, 2011).

National and sub-national leadership has been critical to the success of the GHAIN project. The FMOH and NACA were supported to play their leadership role with the development of national frameworks, strategic plans, PMTCT scale-up plan, PMTCT guideline, SOPs and training manuals as evidence. These documents guide national implementation. In accelerating the reach of PMTCT services in the country; the local leadership helped GHAIN train health

workers, ensured adequate supplies and equipment for provision of integrated services, supported service delivery, and contributed to the national health information system.

GHAIN sought to involve male partners in every aspect of its PMTCT program. This stemmed from the recognition of male partners as key agents in the uptake of services. GHAIN acknowledged men's role in improving uptake especially at the critical points such as returning for test results, taking ARV drugs, delivering in facilities and safer infant feeding. Couple counselling helped to address challenges associated with male partner notification and testing. Male participation in ANC sessions was however challenging in many culturally-rooted societies.

As facility-based services had their limitations in terms of reach, GHAIN's community approach to expanding access was shown to effectively complement facility-based services (Abdul-Hadi et al, 2011). While creating demand for facility-based services, some services were also provided in community settings. The engagement of key community stakeholders and gatekeepers was critical to the success of the community approach.

A focus on quality of services ensured that while striving to reach more women, services delivered met defined standards and international best practices.

The project was faced with human resource challenges in health facilities which included inadequate numbers of staff in facilities; frequent government-mandated transfers of trained staff out of facilities; and strike action by health workers leading to service disruptions. GHAIN continued to engage facility managers and government ministries in addressing staff shortages and attrition. Stop gap arrangements were made to ensure that clients already on ARVs continued to receive services during strike actions. This was at increased programmatic costs.



Another challenge was the non-availability of CD4 testing in some sites. GHAIN worked around this challenge by clustering health facilities with linkages and referrals amongst clusters. In each cluster, facilities that do not have CD4 testing capacity are linked to a comprehensive site that has CD4 testing facilities. An ideal situation would be to have CD4 testing capability in all facilities providing PMTCT services. This will further plug possible leakages in the PMTCT cascade. Regarding EID, the main lesson learnt is that active identification of HIV-exposed infants is critical to increasing access to early infant diagnostic and ultimately access to early paediatric treatment.

## CONCLUSION

**P**reventing vertical transmission of HIV in a resource limited setting is feasible. It requires implementing context appropriate strategies that address challenges and bring services to a wide section of the population in an equitable manner. The approaches adopted by GHAIN have shown that strengthening facility-based services through an integrated approach and decentralisation of services coupled with expanding access through community-based approaches have the promise of accelerating progress towards national and global elimination of new paediatric infections.



## SUCCESS STORY

### PMTCT services client gives birth twice to HIV-negative babies

**N**gozi Enakerakpor, a 31-year old mother of two, runs a hair dressing salon in Benin-City Edo State. Eight months into her first pregnancy in 2005, she tested positive to HIV during a routine antenatal visit to St. Philomena's Catholic Hospital, Benin, which is supported for HIV/AIDS services by the GHAIN project with United States Government funding.



**Ngozi Enakerakpor in front of her salon**

“But for two separate factors, the news of my status would have devastated me,” says Mrs. Enakerakpor. First, the hospital provided excellent counselling. Second, her husband has continued to show full understanding towards her.

“My husband was not worried by my HIV status,” Mrs. Enakerakpor says. With continuing good counselling from the hospital and support from her husband, she says they have not experienced any of the marital problems usually afflicting discordant couples.

Ngozi was enrolled into prevention of mother-to-child transmission (PMTCT) services and HIV treatment without antiretroviral drugs. During labor, she received the standard single-dose Nevirapine to ensure that she did not infect the baby. Thereafter, she continued treatment at home for one week. The baby was given Nevirapine syrup 72 hours after birth, and further preventive treatment for six weeks. At the age of 18 months he was confirmed to be HIV negative.

Mrs. Enakerakpor became pregnant again in 2006 and received prevention of mother-to-child transmission (PMTCT) services, again at St. Philomena's. In late 2006, she gave birth to a baby girl, who was also confirmed HIV negative after 18 months. Mrs. Enakerakpor attributes these “feats”, including her stable marriage, to the support she received from the GHAIN-supported hospital. Because her CD4 count has remained sufficiently high, Mrs. Enakerakpor does not need ART. She says she feels healthy and able to work completely normally.

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