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# ASSESSMENT OF PMTCT/MNCH INTEGRATION IN NIGERIAN HEALTH FACILITIES

**AIDSTAR-One**  
AIDS SUPPORT AND TECHNICAL ASSISTANCE RESOURCES

**MARCH 2014**

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**AIDS Support and Technical Assistance Resources Project**

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# ACRONYMS

AED	Academy for Educational Development
AIDS	acquired immune deficiency syndrome
ANC	antenatal care/clinic
ART	antiretroviral therapy
ARV	antiretroviral (drug)
AZT	zidovudine
AZT+3TC	AZT + lamivudine (3TC)
BCG	Bacillus Calmette-Guérin vaccine
CBO	community-based organizations
CCHP	Comprehensive Council Health Plans
CD4	cluster of differentiation 4
CDC	Centers for Disease Control and Prevention
CHEW	community health extension worker
CHW	community health worker
CO	clinical officers
CPD	cephalopelvic disproportion
CTC	care and treatment clinic
DBS	dried blood spots
DOD	Department of Defense
DT	Deloitte & Touche
EGPAF	Elizabeth Glaser Pediatric AIDS Foundation
FHI	Family Health International
FMOH	Federal Ministry of Health
FP	family planning
FY	fiscal year
GHI	Global Health Initiative
HAART	highly active antiretroviral therapy
HEID	HIV-exposed infant diagnosis
HIV	human immunodeficiency virus
HTC	HIV testing and counseling
ICAP	International Center for AIDS Care and Treatment Programs
IP	implementing partner
IUCD	intrauterine contraceptive devices
JLC	JL Consulting
L&D	labor and delivery
LLFP	long-lasting family planning methods
LLIN	long-lasting insecticide-treated bed net
LOI	level of integration

LW	labor ward
M&E	monitoring and evaluation
MA	medical assistant
MAPS	Malaria Action Program for States project
MDH	Management and Development for Health
MER	more efficacious regimens
MHSW	Ministry of Health and Social Welfare
MNCH	maternal, newborn, and child health
MO	medical officers
MOH	Ministry of Health
MTCT	mother-to-child-transmission
NACP	National AIDS Control Program
NGO	nongovernmental organization
NVP	nevirapine
OPD	outpatient department
OPV	oral polio vaccine
PCR	polymerase chain reaction
PEARL	PMTCT Effectiveness in Africa: Research and Linkages to Care and Treatment study
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
PLHIV	person/people living with HIV
PMTCT	prevention of mother-to-child-transmission
QI	quality improvement
RCH	reproductive and child health
RN	registered nurse
SdNVP	single-dose nevirapine
SP	sulphadoxine/pyrimethamine
TACAIDS	Tanzania Commission for AIDS TB tuberculosis
THMIS	Tanzania Health Management Information System
UN	United Nations
UNAIDS's	Joint United Nations Programme on HIV/AIDS
USAID	U.S. Agency for International Development
USG	U.S. Government
WHO	World Health Organization

# EXECUTIVE SUMMARY

In Nigeria, HIV prevalence among adults in the general population 15-49 is 3.6 percent. Sixty percent of the 3.3 million individuals living with HIV are women (UNAIDS 2010). In 2009, more than 200,000 HIV-positive pregnant women required antiretroviral therapy (ART) prophylaxis countrywide but only 13 percent received it (FMOH 2010: National PMTCT Scale-Up Plan 2010-2015), far less than the United Nations (UN) target of 80 percent by 2010. Integrating prevention of mother-to-child-transmission (PMTCT) of HIV services with maternal, newborn, and child health (MNCH) programs has been promoted as a strategy to increase access to services (WHO 2008). The goal of this assessment was to capture information on available PMTCT services in Nigeria and to determine the level of PMTCT/MNCH service integration at facilities in Nigeria.

AIDS Support and Technical Assistance Resources, Sector I, Task Order 1 (AIDSTAR-One), the United States Agency for International Development (USAID)'s global technical support and assistance HIV and AIDS project, administered a cross sectional survey capturing service-delivery factors associated with integration to health care personnel at 101 PMTCT sites sampled from eight states (Anambra, Benue, Cross River, Kaduna, Lagos, Nasarawa, and Taraba, and the Federal Capital Territory of Abuja). These sites were purposefully sampled. Therefore, results may not be generalizable but provide a reasonable snapshot of service availability and PMTCT/MNCH integration in Nigeria.

This assessment captured extensive information relating to guidelines, antiretroviral (ARV) prophylaxis, and treatment regimens currently being used in Nigeria; HIV testing and counseling; HIV-exposed infant follow-up; community-facility linkages; and HIV laboratory services.

- **The model of care for PMTCT, including the regimens currently prescribed for women and infants**

The majority of sites provide triple ARV prophylaxis to ART-ineligible women, with 86 percent offering triple ARV prophylaxis from 14 weeks, or as soon as possible, and continued through delivery, or until one week after infant exposure to breast milk ceases. Twenty-nine percent of primary health care centers and 10 percent of secondary health care centers do not have the capacity to provide triple ARV prophylaxis or to monitor patients on treatment. Sites that do not offer triple ARV prophylaxis provide some combination of zidovudine (AZT) or AZT + lamivudine (AZT+3TC) prior to labor, single-dose nevirapine (sdNVP) or sdNVP+3TC+AZT at onset of labor, and AZT+3TC during and/or after delivery for up to seven days postpartum.

All sites surveyed offer ARV prophylaxis for infants, except for one site that refers patients for this service. Half of the sites (50 percent) give infants daily nevirapine (NVP) from birth to six weeks of age only, regardless of whether or not the infant is breastfeeding, while the other half of the sites (51 percent) continue daily NVP until one week after infant cessation of breastfeeding. A minority of sites (16 percent) offer sdNVP as soon as possible after birth plus AZT for six weeks.

- **Guidelines and protocols utilized at the sites visited and challenges encountered with guideline implementation**

The majority of sites (78 percent) report using the National PMTCT Guidelines 2010, while 18 percent follow the National PMTCT Guidelines 2007, and 4 percent follow implementing partner guidelines.

Major challenges to guideline implementation include inadequate staff training and insufficient funding. Additional challenges to providing PMTCT services are largely psychosocial and include patient nondisclosure, lack of partner engagement, and patients who experience difficulty accepting their HIV status.

- **HIV testing and counseling**

In terms of integration, 66 percent of sites have integrated HIV testing into antenatal care/clinic services—in other words, they offer HIV testing and counseling (HTC) under the same roof and at the same time as a woman’s ANC visit. Eighty-five percent have integrated pre-test counseling, 62 percent have integrated post-test counseling, 58 percent have integrated rapid HIV testing, 71 percent have integrated the sharing of HIV test results, and 66 percent have integrated psychosocial support. Some sites that have not integrated HTC services offer services elsewhere at the same facility. For example, sites may offer HIV testing within ANC while results are shared with patients in the laboratory rather than the ANC.

- **HIV-exposed infant diagnosis (HEID) and follow-up**

Almost all sites offer cotrimoxazole (96 percent) to exposed infants, and many sites conduct exposed-infant evaluations on a regular schedule (85 percent), draw blood for polymerase chain reaction (PCR) testing (87 percent), and offer serologic testing (73 percent). Primary health care centers are less likely than secondary and tertiary centers to offer comprehensive exposed infant care services: 68 percent of primary health care centers conduct exposed-infant evaluations on a regular basis, 75 percent draw blood for PCR testing, and 57 percent offer serologic testing, while 100 percent of tertiary centers offer these three services.

Among facilities that offer exposed infant care services, infant feeding and counseling is the service that is most commonly integrated with ANC (78 percent), followed by adherence support to mother-infant pairs (51 percent), growth monitoring for children (40 percent), immunization for children (36 percent), and provision of Vitamin A for children (33 percent). Services that are integrated within ANC at 30 percent or less of facilities are regularly scheduled exposed-infant evaluations, blood draw for PCR testing, dispensing of cotrimoxazole, and sick-child services.

- **Types of community-based services available to pregnant women and the community-level mechanisms in place that support PMTCT and referral for clinical services**

Of the facilities that reported linkages with community-based organizations (CBOs), 88 percent refer HIV+ women and their infants to CBOs, 82 percent are linked to CBOs that refer HIV-positive women and their infants to the facility, and 59 percent have linkages with CBOs that trace women who are lost to follow-up.

Among the 49 sites with CBO linkages, the most common service for which patients are referred from the facility to CBOs is psychosocial support (73 percent), followed by socioeconomic support (55 percent), breastfeeding support (14 percent), and growth monitoring for infants (10 percent). Among the 49 sites with CBO linkages, the most common service for which patients are referred from CBOs to the facility is immunization follow-up (65 percent), followed by psychosocial support (61 percent). Additionally, between 29-37 percent of facilities have CBOs refer patients to them for breastfeeding support, growth monitoring for infants, family planning (FP), and HIV testing, care, and treatment.

- **Availability of HIV laboratory-based services such as HIV tests, CD4 testing, and early infant diagnosis**

All sites use rapid HIV tests.

Eighty-four percent of facilities draw blood for CD4 count on-site, while the remaining 16 percent refer patients for all aspects of CD4 testing services. Of the 85 sites that offer on-site CD4 blood draw, 88 percent draw blood outside of the ANC, most often at the on-site laboratory. Seventy-five percent of facilities who draw blood on-site also conduct CD4 testing on-site, while 25 percent of sites send samples to offsite laboratories for analysis. At 58 percent of sites, women receive their CD4 count results outside of the ANC, although 35 percent of sites share CD4 results as a fully integrated service within the ANC.

Primary health care centers have less capacity to offer CD4 testing services than tertiary sites. While 100 percent of tertiary sites offer CD4 blood draw on-site, 21 percent of primary sites refer for all aspects of CD4 testing services. Similarly, while 100 percent of tertiary sites analyze blood samples on-site, 82 percent of primary health care centers that draw blood for CD4 count analyze the samples at offsite laboratories.

Of sites that draw blood for PCR testing, only 19 percent of sites analyze PCR on-site, and only one primary center analyzes PCR on-site. Less than half (41 percent) of sites take dried blood spot (DBS) samples at the same time as immunization. Almost all sites (94 percent) take DBS samples between 4-6 weeks of age, 23 percent take samples earlier than 18 months of age if a baby is symptomatic, and 16 percent take DBS samples at 18 months of age (responses are not mutually exclusive).

- **Level of integration rating system**

AIDSTAR-One developed a level of integration (LOI) rating system to measure the degree of PMTCT and MNCH integration at site level. The scale ranked sites from 0-21 with higher scores indicating greater service integration. Points for the LOI are based on the provision of a particular service at each site (e.g. HTC, CD4 blood draw, HIV-exposed infant follow-up), whether that service is provided at the same time as ANC services, or whether the service is offered elsewhere on-site. The median integration score across all 101 facilities was seven [range 1.5 (low LOI) – 17 (high LOI)]. For primary health care facilities, the median LOI was 7.25 with a range of 1.5 to 17. For secondary health care facilities, the median LOI was eight with a range of 1.5 to 17. For tertiary health care facilities, the median was five with a range of 2 to 13. Overall, tertiary facilities scored lower on the LOI scale than their primary and secondary counterparts. While tertiary facilities generally offer more services than primary and secondary facilities, their services tend to be less integrated. Larger tertiary facilities are

more likely to have multiple departments where they provide services, whereas smaller facilities are more likely to offer their services in the same location due to space and resource constraints.

Integration of PMTCT and MNCH is highly variable at the selected health facilities, even within each site type. Efforts should be targeted toward improving integration so that women are offered a package of services to increase uptake of PMTCT services and improve health outcomes for HIV-positive pregnant women and exposed infants.

# INTRODUCTION

Limited access to PMTCT has had a substantial impact on HIV incidence among children. In 2009, there were an estimated 56,681 HIV-positive infants born in Nigeria (UNGASS 2010). PMTCT interventions can reduce transmission rates from 25-35 percent to less than 5 percent (WHO 2010b).

Significant strides have been made to increase access to PMTCT services. In 2008, 45 percent of HIV-infected pregnant women in sub-Saharan Africa received ART to prevent transmission to their children (UNAIDS 2009). However, this represents a huge shortfall from the UN target of 80 percent by 2010, and much work remains to ensure universal access to PMTCT services. UNAIDS's campaign to end mother-to-child-transmission (MTCT) by 2015, which calls for a reduction in HIV infections in children by 90 percent and reduction in maternal deaths related to HIV by 50 percent, will require increased resources devoted to PMTCT, increased capacity of health care workers, new technologies, and improved access to quality interventions for women, children, and families.

As programs have struggled to overcome challenges to the scale-up of PMTCT services, regimens and protocols have become increasingly complex. In July 2010, the World Health Organization (WHO) released new recommendations for the use of ARVs for treating pregnant women and preventing HIV infection in infants. Two critical WHO recommendations are earlier provision of ARVs for prophylaxis or treatment during pregnancy and provision of ARVs to reduce the risk of transmission during breastfeeding. If sites are able to implement these new guidelines, they will be able to significantly reduce MTCT of HIV, improve maternal health, and improve HIV-free survival in children (WHO 2009).

## PMTCT/MNCH INTEGRATION

Based on the WHO definition (2006), integration of HIV services for pregnant women, newborns, and under-fives aims to ensure delivery of a set of essential interventions for PMTCT and other HIV prevention, treatment, and care, as part of the continuum of care for women, children, and families. Continuum of care services are provided through one-stop facility-based efforts and referrals to and between facilities with community-based programs. In guidelines released in 2010, the WHO recommended that health facilities integrate PMTCT with MNCH services to improve access to PMTCT, patient follow up, and adherence (WHO 2010c). In addition, the Global Health Initiative (GHI) prioritizes integrated health service delivery with an emphasis on a women- and girlcentered approach. Several program descriptions have suggested that integration of services may reduce maternal and neonatal mortality (Evjen-Olsen 2009, Bhutta 2008). Reports have also suggested that integration of PMTCT, ANC, and MNCH improves health outcomes (van der Merwe 2006, Welty 2005, and Tudor Car 2011). PMTCT and MNCH services are traditionally implemented as separate programs: they are supported by vertical funding streams, may be located in different areas of a single facility, and are often staffed separately. Integration of PMTCT within MNCH offers the opportunity

to target women for HIV prevention services, decrease attrition, share resources and information, and ultimately prevent MTCT of HIV.

This assessment focuses on service integration as defined by the WHO, and provides detailed documentation on how, where, and the degree to which PMTCT services are integrated with MNCH services. Guidelines issued by the WHO on HIV prevention and care, and infant feeding emphasize incorporating PMTCT over time within MNCH services to ensure appropriate follow-up and therapeutic adherence (WHO 2009b; WHO 2010). The vision for full integration calls for inclusion of PMTCT interventions within the full continuum of existing public, private, and community-based women's, newborn, and child health services, including sexual and reproductive health programs. From a programmatic point of view, integration can also mean merging existing PMTCT and MNCH programs at the district, regional, and national levels.

PMTCT/MNCH integration has just begun in some countries and is more fully implemented in others. At this critical point when countries are trying to implement changes in PMTCT approaches, as well as integrate PMTCT and MNCH services, rigorous study of models of integration can determine the benefits of each approach and identify promising programmatic components for effectively implementing the guidelines.

## **THE PMTCT PROGRAM IN NIGERIA**

Nigeria has the second highest number of people living with HIV and AIDS (PLHIV) in the world, second only to South Africa (NACA, 2012). HIV prevalence among adults 15-49 in Nigeria is 3.6 percent. Sixty percent of the 3.3 million individuals living with HIV are women (UNAIDS 2010). Growing attention has been directed toward the reduction or total elimination of HIV infection transmitted from an HIV-infected mother to her child during pregnancy, labor, delivery, or breastfeeding in Nigeria and elsewhere around the world. In 2009, more than 200,000 HIV-positive pregnant women required ART prophylaxis countrywide in Nigeria but only 13 percent received it (FMOH 2010: National PMTCT Scale-Up Plan 2010-2015), far less than the UN target of 80 percent by 2010. The high burden of maternal HIV infection and potential for MTCT illustrates the need for intensified responses and new implementation strategies.

In 2012, Nigeria will begin the process of PMTCT scale-up in community-based settings (Draft National PMTCT Scale-Up Plan for Nigeria 2010-2015). This assessment provides an opportunity to study, evaluate, and document PMTCT/MNCH integration strategies as they scale up. It will also provide key information on which aspects of integration are most critical to increase access to PMTCT and to improve quality of care. This assessment will provide detailed documentation and recommendations on how, where, and the degree to which PMTCT services at selected health facilities are provided and the extent to which they are integrated within ANC/MNCH.

# OBJECTIVES

This assessment report has three primary objectives:

1. To document the PMTCT services provided in a select number of health facilities in Nigeria, and the extent to which these services are integrated with ANC/MNCH services
2. To define and measure levels of integrated PMTCT/MNCH services for women and infants at selected sites
3. To explore statistical associations between levels of PMTCT/MNCH integration and key quality indicators within the PMTCT cascade (such as maternal receipt of HIV counseling and testing, receipt of ART for prophylaxis, and receipt of ART for the woman's health).

Findings will be used to identify specific aspects of service integration that are critical to improving quality of care and health outcomes, and to develop evidence-based strategies to improve access to PMTCT in community-based settings in Nigeria.

This study provides information and documentation on the following areas:

- The model of care for PMTCT, including the regimens currently being used for women and infants
- Guidelines and protocols being utilized at the sites visited and barriers encountered in the implementation of those guidelines
- HIV-exposed infant diagnosis and follow-up (from 6 weeks up to 18 months)
- Types of community-based services available to pregnant women and the community-level mechanisms in place that support PMTCT and referral for clinical services
- Availability of HIV laboratory-based services such as HIV tests, CD4 testing, and early infant diagnosis.



# METHODS

The AIDS Support and Technical Assistance Resources, Sector 1, Task Order 1 (AIDSTAR-One) project is funded by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) through a contract with USAID (2008-2013). The project provides technical assistance services to the Office of HIV/AIDS and U.S. Government (USG) country teams in knowledge management, technical leadership, program sustainability, strategic planning, and program implementation support. USAID/Nigeria contracted AIDSTAR-One for the purpose of documenting and assessing the level of integration of the USG- supported PMTCT program. AIDSTAR-One administered a cross sectional survey tool capturing service delivery factors associated with PMTCT/MNCH integration to key personnel at 101 purposively selected PMTCT sites.

## DATA COLLECTION METHODS

Teams of trained data collectors visited 101 health facilities in Nigeria to administer the following rapid assessment tools:

1. The Site Assessment Tool (see Annex A), which involved interviews with relevant staff who coordinate ANC, HIV, and PMTCT activities
2. The Indicator Collection Tool (see Annex B), which captured 30 indicators from registers related to ANC, PMTCT, labor and delivery, care and treatment, and immunization.

Data collectors entered data into a customized Access database created for this project at the end of each day.

The Site Assessment Tool was created by PMTCT experts at John Snow Inc. in collaboration with partner agencies, and some components of the tool were adapted from instruments developed by Family Health International (FHI), the Linkages Project (from the Academy for Educational Development, or AED), and the PMTCT Effectiveness in Africa: Research and Linkages to Care and Treatment (PEARL) study. This tool was first used in a similar AIDSTAR-One PMTCT/MNCH integration assessment conducted in Tanzania. The tool was then reviewed and revised in close collaboration with USAID/Nigeria, and adapted to the Nigerian context. This tool examined the extent of PMTCT and MNCH integration via specific program dimensions such as protocols and guidelines, staffing, training, service delivery, laboratory services, supply chain, and monitoring and evaluation. The Site Assessment Tool yields an aggregate integration score that was used in statistical analysis.

The assessment team collected 30 indicators from registers, 6 of which were used only as denominators for the other indicators. Patient-level data was not collected, as data collectors gathered summary data at the site level using PMTCT summary forms and other forms provided by facilities. These site-level data were related to ANC, labor and delivery, HIV testing, PMTCT, and ART, and FP services at the 101 selected facilities.

## SAMPLING STRATEGY

AIDSTAR-One visited sites purposively selected by USAID/Nigeria in collaboration with the Federal Ministry of Health (FMOH) of Nigeria. Factors that guided the selection include:

- Sites must have a minimum of services for PMTCT in order to assess the level of integration
- HIV prevalence by region (5.1 percent prevalence in Lagos to 10.6 percent in Benue; UNGASS 2010)
- Geographic location.

The assessment involved 101 sites across the Federal Capital Territory of Abuja and Anambra, Benue, Cross River, Kaduna, Lagos, Nasarawa, and Taraba. Figure 1 below illustrates the assessment's geographic scope.

Over the course of data collection, the assessment team replaced a total of 14 sites. The team replaced 5 sites because they did not currently offer a minimum of PMTCT services and 9 sites because security issues in Kaduna made these sites inaccessible during the data collection period. In collaboration with USAID/Nigeria, the team chose replacement sites that would yield valuable information for the assessment and that were located in areas that could be readily covered by data collectors within the predetermined data collection timeframe. The team chose 9 of 15 replacement sites from among sites supported by the Malaria Action Program for States (MAPS) project. Annex D provides a list of the 101 sites used in this assessment, while Annex E provides details on replacement.

**Figure 1. Geographic Scope of Assessment**



## TEAM TRAINING AND PILOT STUDY

AIDSTAR-One contracted a Nigerian-based monitoring and evaluation organization, Indepth Precision, to coordinate logistics of the assessment and provide qualified individuals for data collection. Fourteen data collectors were contracted through Indepth Precision to comprise seven teams of two individuals each. Each team had one clinically trained member and one member experienced in research methods and data collection.

Assessment training was conducted by Dr. Sulayman Umar Hajaratu, an experienced Nigerian obstetrician and gynecologist, on June 4 and 6, 2012. The training addressed (a) a review of PMTCT, (b) overview of assessment goals, objectives, and methods, (c) review and hands-on practice of the Site Assessment Tool, (d) review of the Indicator Collection Tool, (e) data collector roles and responsibilities, (f) database software, including data entry, and (i) logistics.

On June 5, 2012, the seven teams were deployed to seven health facilities in Abuja to pilot the tools. None of the seven sites were included in the sample. Three of the seven teams were accompanied by senior experts during piloting. Each team debriefed at the end of the pilot, discussed what worked and challenges, and suggested revisions to the tools. Some revisions were made to the Site Assessment and Indicator Collection Tools, and the teams reconvened on June 6, 2012 to discuss revisions and challenges, and to receive training on data entry. The teams were deployed to the sample sites on Thursday, June 7, 2012.

## **FIELD WORK PROTOCOLS**

Before visiting the sites, the AIDSTAR-One team gained the support of the FMOH, state Ministry of Health (MOH), and implementing partners. Data collection teams contacted implementing partners at the state level as well as contact persons at each facility. Upon arriving at each facility, teams introduced themselves and the project to the in-charge at each facility, who was a medical officer, clinical officer, or nurse. The teams administered the majority of the Site Assessment Tool with available PMTCT and ANC staff at each site, including clinical officers, nurses, and medical assistants. They also interviewed key informants in other departments, such as labor and delivery, laboratory, or pharmacy, as needed. Annex F provides details on respondents' cadres and designations. Teams dedicated an average of four hours at each site.



# FINDINGS

This section reports on findings obtained through administration of the Site Assessment Tool.

## GENERAL SITE CHARACTERISTICS

Data collectors completed Site Assessment Tools for 101 sites. As shown in Table 1, 28 percent of sites were primary health care centers, while 62 percent were secondary facilities, and 10 percent were tertiary facilities.

**Table 1. Sample by Site Type**

Site Type	n	%
Primary	28	28%
Secondary	63	62%
Tertiary	10	10%
TOTAL	101	100%

Almost half of sites (49 percent) were in urban areas, while 30 percent were in rural areas and 22% were in peri-urban or suburban areas. Teams collected data from sites across the Federal Capital Territory of Abuja and the following seven states: Anambra, Benue, Cross River, Kaduna, Lagos, Nasarawa, and Taraba. The sample included facilities supported by six different implementing partners – FHI360, IHVN, CIHP, CHARIS, MSH, and APIN (see abbreviations below). Sample size is too small to make any conclusions on implementing partners, however. The implementing partners with the greatest representation in the sample are FHI360 (42 percent) and IHVN (12 percent).

The majority of sites were facilities funded primarily by the Government of Nigeria (77 percent). Facilities funded by faith-based organizations represented 18 percent of facilities, while 4 percent of facilities were privately funded, and one facility was funded by a nongovernmental organization (NGO). Only four percent of sites had less than 12 months experience providing PMTCT services.

Table 2 below provides details on general site characteristics.

**Table 2. General Site Characteristics, by Site Type**

General Site Characteristics	Primary		Secondary		Tertiary		Overall	
	n	%	n	%	n	%	n	%
<b>Setting</b>								
Urban	10	36%	30	48%	9	90%	49	49%
Rural	14	50%	16	25%	0	0%	30	30%
Peri-urban or suburban	4	14%	17	27%	1	10%	22	22%

<b>Region</b>								
Abuja (FCT)	2	7%	10	16%	2	20%	14	14%
Anambra	6	21%	7	11%	3	30%	16	16%
Benue	4	14%	12	19%	0	0%	16	16%
Cross River	6	21%	9	14%	1	10%	16	16%
Kaduna	2	7%	2	3%	0	0%	4	4%
Lagos	2	7%	6	10%	1	10%	9	9%
Nasarawa	4	14%	12	19%	1	10%	17	17%
Taraba	2	7%	5	8%	2	20%	9	9%
<b>Implementing Partner</b>								
FHI 360 - Family Health International 360	6	21%	33	53%	3	30%	42	42%
IHVN - Institute of Human Virology, Nigeria	9	32%	14	22%	5	50%	28	28%
CIHP - Centre for Integrated Health Programs	8	29%	4	6%	0	0%	12	12%
CHARIS - Comprehensive HIV/AIDS Response; the Interfaith Solution	2	7%	7	11%	0	0%	9	9%
MSH - Management Sciences for Health	2	7%	4	6%	1	10%	7	7%
APIN - AIDS Prevention Initiative in Nigeria	1	4%	1	2%	1	10%	3	3%
<b>Main Source of Funding</b>								
Public	23	79%	46	73%	9	90%	78	77%
Private	3	11%	1	2%	0	0%	4	4%
Faith-Based Organization	3	11%	14	22%	1	10%	18	18%
NGO	0	0%	1	2%	0	0%	1	1%
<b>Year that PMTCT Was First Initiated at Site</b>								
2012	3	11%	1	2%	0	0%	4	4%
2011	0	0%	0	0%	0	0%	0	0%
2010	1	4%	4	6%	0	0%	5	5%
2009	5	18%	6	10%	0	0%	11	11%
2008	4	14%	9	14%	1	10%	14	14%
2007	12	43%	21	33%	2	20%	35	35%
2006	1	4%	10	16%	1	10%	12	12%
2005	1	4%	7	11%	4	40%	12	12%
2004	0	0%	5	8%	0	0%	5	5%
2003	0	0%	0	0%	1	10%	1	1%
2002	1	4%	0	0%	1	10%	2	2%

## HIV TESTING AND COUNSELING

HIV testing and counseling (HTC) is integrated within ANC and labor and delivery in most facilities assessed. The Site Assessment Tool includes questions about the protocol used for testing in ANC, including when, how, and to whom HTC is provided. All sites reported testing all women who come for ANC during their first prenatal visit using an opt-out testing approach, providing pre- and post-test counseling, and using rapid HIV tests. Most facilities (93 percent) offer pre-test counseling through group sessions, with about half of sites (51 percent) offering individual pre-test counseling sessions as well. All sites offer individual post-test counseling sessions, with some facilities (12 percent) providing group post-test counseling sessions as well for those who test negative.

All sites used rapid HIV tests and almost all sites (97 percent) share results with women the same day as the test. Almost all sites (95 percent) administer a second confirmatory test when the first test

indicates positive, and most sites (91 percent) administer a third tiebreaker test. Eighteen percent of facilities refer to another facility for the third tiebreaker test.

Eighty-two percent of sites retest women who have tested negative early in pregnancy. Among sites that retest women, 71 percent retest women every three months after the first test. Of the 18 sites that do not routinely retest women, 9 of those sites do not retest because there are inadequate supplies of test kits; this report discusses commodities and supplies in more detail in **Section IV**. The remaining 9 sites reported that they do not retest women because either it is not their policy or because most of their clients present too late in pregnancy to justify retesting.

Facility staff were asked whether the sites provided psychosocial support, disclosure support, and couples counseling, and who provided those services. Most sites (93 percent) offer disclosure support; and 88 percent of sites routinely offer couples counseling and testing as part of their PMTCT program. Almost all sites (99 percent) offer psychosocial support. Psychosocial support may be provided by several facility staff, although at almost all sites (99 percent), PMTCT staff provide psychosocial support. Other staff who provide psychosocial support include trained peer counselors (49 percent of sites) and support group members (7 percent of sites).

Table 3 provides details on HTC services.

**Table 3. HTC Services, by Site Type**

HTC Services	Primary		Secondary		Tertiary		Overall	
	n	%	n	%	n	%	n	%
<b>HTC Services Offered (Numbers and percentages not mutually exclusive.)</b>								
Test all women who come for ANC during first prenatal visit	28	100%	63	100%	10	100%	101	100%
Use opt-out approach*	28	100%	63	100%	10	100%	101	100%
Provide pre-test counseling	28	100%	63	100%	10	100%	101	100%
Provide post-test counseling	28	100%	63	100%	10	100%	101	100%
Use rapid HIV tests	28	100%	63	100%	10	100%	101	100%
Administer second confirmatory test when first test indicates positive	27	96%	59	94%	10	100%	96	95%
Administer third tiebreaker test when first test indicates positive and second test indicates negative	27	96%	55	87%	10	100%	92	91%
Refer to another facility for third tiebreaker test	8	29%	9	14%	1	10%	18	18%
Share results with women the same day as the test	28	100%	61	97%	9	90%	98	97%
Offer psychosocial support	27	96%	63	100%	10	100%	100	99%
Offer disclosure support	24	89%	59	94%	10	100%	93	93%
Routinely offers couples counseling and testing as part of its PMTCT program	23	82%	58	92%	8	80%	89	88%
Retest women who have tested negative early in pregnancy	23	82%	51	81%	9	90%	83	82%
<b>Frequency of Retesting Women among sites that retest women</b>								
Retest women every three months after the first test	19	83%	36	71%	4	44%	59	71%
Retest women every three months after the first test AND at labor and delivery	2	9%	9	18%	3	33%	14	17%
Retest women six months from the first test	1	4%	1	2%	0	0%	2	2%
Retest women six months from the first test AND at labor and delivery	0	0%	2	4%	1	11%	3	4%
Retest at labor and delivery only	0	0%	2	4%	1	11%	3	4%
Other**	1	4%	1	2%	0	0%	2	2%
<b>Modes of Pre-Test Counseling (Numbers and percentages are not mutually exclusive.)</b>								
Individual session	18	64%	31	49%	2	20%	51	51%
Group Session	25	89%	60	95%	9	90%	94	93%
<b>Modes of Post-Test Counseling (Numbers and percentages are not mutually exclusive.)</b>								
Individual Session	28	100%	63	100%	10	100%	101	100%
Group Session	5	18%	7	11%	0	0%	12	12%
<b>Psychosocial Support Provider (Numbers and percentages are not mutually exclusive.)</b>								
PMTCT Staff	26	96%	63	100%	10	100%	99	99%
Other Facility Staff	2	7%	15	24%	4	40%	21	21%
Trained Peer Counselors	11	41%	33	52%	5	50%	49	49%
Support Group Members	2	7%	4	6%	1	10%	7	7%

In terms of integration, 66 percent of sites have integrated HIV testing into ANC – in other words, they offer components of HTC under the same roof and at the same time as a woman’s ANC visit.

Eighty-five percent have integrated pre-test counseling, 62 percent have integrated post-test counseling, 58 percent have integrated rapid HIV testing, 71 percent have integrated the sharing of HIV test results, and 66 percent have integrated psychosocial support. Some sites that have not integrated HTC services offer services elsewhere at the same facility. For example, sites may offer HIV testing and share HIV test results at the laboratory rather than the ANC (Table 4).

**Table 4. Integrating HTC within ANC Services**

Integrating HTC within ANC Services	Primary		Secondary		Tertiary		Overall	
	n	%	n	%	n	%	n	%
<b>HIV Testing</b>								
Integrated with ANC	18	64%	44	70%	5	50%	67	66%
Offered at ANC at different day/time	1	4%	5	8%	1	10%	7	7%
Offered elsewhere at the same facility	9	32%	14	22%	4	40%	27	27%
<b>Pre-Test Counseling</b>								
Integrated with ANC	24	86%	54	86%	7	70%	85	84%
Offered at ANC at different day/time	1	4%	3	5%	0	0%	4	4%
Offered elsewhere at the same facility	3	11%	6	10%	3	30%	12	12%
<b>Post-Test Counseling</b>								
Integrated with ANC	15	54%	40	64%	7	70%	62	61%
Offered at ANC at different day/time	2	7%	4	6%	0	0%	6	6%
Offered elsewhere at the same facility	11	39%	19	30%	3	30%	33	33%
<b>Rapid HIV testing</b>								
Integrated with ANC	13	46%	39	62%	6	50%	58	57%
Offered at ANC at different day/time	0	0%	3	5%	1	10%	4	4%
Offered elsewhere at the same facility	15	54%	21	33%	3	30%	39	39%
<b>Sharing HIV Test Results</b>								
Integrated with ANC	18	64%	46	73%	8	80%	72	71%
Offered at ANC at different day/time	1	4%	2	3%	0	0%	3	3%
Offered elsewhere at the same facility	9	32%	15	24%	2	20%	26	26%
<b>Psychosocial Support</b>								
<i>Service offered</i>	27		63		10		101	99%
Integrated with ANC	19	70%	40	63%	7	70%	66	66%
Offered at ANC at different day/time	2	7%	6	10%	0	0%	8	8%
Offered elsewhere at the same facility	6	22%	17	27%	3	30%	26	26%
<i>Service not offered</i>	1	4%	0	0%	0	0%	1	1%

Table 5 below lists HTC challenges. The Site Assessment Tool includes open-ended questions about the challenges sites face in offering psychosocial support, couples counseling, and HTC in general. The most frequently cited challenge in offering psychosocial support is that patients have trouble accepting their status (reported by 44 percent of facilities). Disclosure (42 percent), financial constraints (24 percent), stigma (15 percent), and loss to follow-up (15 percent) are also common challenges sites face when offering psychosocial support. Additionally, the majority (63 percent) of facilities share that low

partner involvement is a significant challenge in providing couples testing, as well as testing challenges related to disclosure, conflict resulting from disclosure, and patients' acceptance of their status. Over all sites, 51 percent of sites report they have seen an increase in partners getting tested.

Close to one third of facilities report that stockouts and supply challenges (33 percent) and shortage of manpower (32 percent) are obstacles in adopting the testing and counseling practices in place at facilities. Other obstacles to providing HTC include inadequate equipment or infrastructure (23 percent), stigma (10 percent), and patient loss to follow-up (8 percent).

**Table 5. HTC Challenges**

No.	HTC Challenges	n	%
<b>Top 5 Challenges with Providing Psychosocial Support</b>			
1	Patients have trouble accepting their status	44	44%
2	Patients have trouble disclosing status	42	42%
3	Financial constraints (both patients and facility)	24	24%
4	Stigma	15	15%
5	Patients lost to follow-up	15	15%
<b>Top 5 Challenges with Providing Couples Counseling and Testing</b>			
1	Low partner involvement	56	63%
2	Patients have trouble disclosing status	26	29%
3	Disclosure leads to conflict/divorce	19	21%
4	Patients have trouble accepting their status	8	9%
5	Shortage of manpower	5	6%
<b>Top 5 Challenges with Adopting the Testing and Counseling Practices That Are in Place</b>			
1	Stockouts and supply challenges	33	33%
2	Shortage of manpower	32	32%
3	Inadequate equipment or infrastructure	23	23%
4	Stigma	10	10%
5	Patients lost to follow-up	8	8%

## PMTCT GUIDELINES AND PROTOCOLS

Data collectors asked PMTCT staff to identify which PMTCT guideline was used to guide the management of patients and to provide a paper copy of their guidelines for verification. Table 6 below illustrates that the majority of sites (78 percent) report using the National PMTCT Guidelines 2010, while 18 percent of sites follow the National PMTCT Guidelines 2007, and 4 percent of sites follow implementing partner guidelines.

**Table 6. PMTCT Guideline Used, by Site Type**

PMTCT Guideline Used	Primary		Secondary		Tertiary		Overall	
	n	%	n	%	n	%	n	%
<b>National PMTCT Guidelines 2010</b>	<b>19</b>	<b>68%</b>	<b>51</b>	<b>81%</b>	<b>9</b>	<b>90%</b>	<b>79</b>	<b>78%</b>
<b>National PMTCT Guidelines 2007</b>	<b>7</b>	<b>25%</b>	<b>10</b>	<b>16%</b>	<b>1</b>	<b>10%</b>	<b>18</b>	<b>18%</b>
<b>Implementing Partner Guidelines*</b>	<b>2</b>	<b>7%</b>	<b>2</b>	<b>3%</b>	<b>0</b>	<b>0%</b>	<b>4</b>	<b>4%</b>

The Site Assessment Tool includes several questions about the prophylaxis and treatment regimens offered to HIV-positive pregnant women and HIV-exposed infants. The questions include which drugs are offered to HIV-positive women as prophylaxis, which drugs are offered as treatment for women's own health, and which drugs are available for HIV-exposed infants. Questions also assessed when and where drugs can be obtained at each site.

The majority of sites provide triple ARV prophylaxis to ART-ineligible women, with 86 percent offering triple ARV prophylaxis from 14 weeks, or as soon as possible, and continued to delivery, or until one week after infant exposure to breast milk. Twenty-nine percent of primary health care centers and 10 percent of secondary health care centers do not have the capacity to provide and monitor triple ARV medication. Sites that do not offer triple ARV prophylaxis provide some combination of AZT or AZT+3TC prior to labor, sdNVP or sdNVP+3TC+AZT at onset of labor, and AZT+3TC during and/or after delivery for up to 7 days postpartum.

Thirty-five percent and 34 percent of facilities offer sdNVP at onset of labor and sdNVP+AZT+3TC at onset of labor, respectively; many respondents at facilities that offer triple ARV prophylaxis as well as sdNVP or sdNVP+AZT+3TC at onset of labor explain that they offer triple ARV prophylaxis for registered patients that had visited the ANC before going to into labor, and offer sdNVP or sdNVP+AZT+3TC to previously unregistered patients that present for the first time in labor.

The most commonly used triple ARV combination offered to ART-ineligible women is AZT+3TC+NVP, which is used by 86 percent of surveyed sites. At one third (33 percent) of sites that offer triple ARVs, AZT+3TC+NVP is the only triple combination offered.<sup>2</sup> After AZT+3TC+NVP, the next most commonly used triple ARV combinations are AZT+3TC+EFV (63 percent of facilities), TDF+3TC (or FTC)+EFV (32 percent), AZT+3TC+LPV/r (29 percent), and AZT+FTC+EFV (20 percent). Other combinations are used by less than 10 percent of facilities.

Table 7 below describes ARV prophylaxis regimens offered to ART-ineligible positive pregnant women, while Table 8 provides details on triple ARV regimens used by facilities.

**Table 7. Regimens of ARV Prophylaxis Offered to ART-Ineligible HIV-Positive Pregnant Women, by Site Type**

ARV Prophylaxis Regimens	Primary		Secondary		Tertiary		Overall	
	n	%	n	%	n	%	n	%
<b>Regimens based on National PMTCT Guidelines 2010 for facilities with the capacity to provide and monitor triple ARV medication</b>								
Triple ARV prophylaxis from 14 weeks or as soon as possible when the woman presents late in pregnancy, labor, or delivery	20	71%	57	90%	10	100%	87	86%
Maternal triple ARV prophylaxis continued until one week after cessation of infant's exposure to breast milk	19	68%	54	86%	10	100%	83	82%
<b>Regimens based on National PMTCT Guidelines 2010 for facilities with limited capacity to provide and monitor triple ARV medication</b>								
AZT from 14 weeks gestation	7	25%	5	8%	0	0%	12	12%
sdNVP at onset of labor	12	43%	22	35%	1	10%	35	35%
AZT+3TC 12 hourly during labor and delivery	6	21%	7	11%	0	0%	13	13%
AZT+3TC 12 hourly for seven days postpartum	5	18%	9	14%	0	0%	14	14%

<b>Regimens based on National PMTCT Guidelines 2007</b>								
AZT from week 28 or AZT+ 3TC from week 34-36	3	11%	3	5%	0	0%	6	6%
Single-dose NVP (sdNVP) + AZT + 3TC at onset of labor	7	25%	22	35%	5	50%	34	34%
AZT + 3TC for seven days after delivery	7	25%	10	16%	1	10%	18	18%

**Note: Numbers and percentages are not mutually exclusive**

**Table 8. Triple ARV Regimens Offered to ART-Ineligible HIV-Positive Pregnant Women, by Site Type**

Triple ARV Regimens	Primary		Secondary		Tertiary		Overall	
	n	%	n	%	n	%	n	%
AZT + 3TC + NVP	18	90%	50	89%	7	70%	75	86%
AZT + 3TC + EFV	10	50%	52	91%	10	100%	72	83%
AZT + 3TC + LPV/r	4	20%	17	30%	4	40%	25	29%
AZT + 3TC + ABC	0	0%	7	12%	1	100%	8	9%
TDF + 3TC (or FTC) + EFV	3	15%	22	39%	3	30%	28	32%
3TC + TDF + NVP	1	4%	1	2%	0	0%	2	2%
TDF + FTC + NVP	0	0%	2	4%	0	0%	2	2%
TDF + FTC + LPV/r	0	0%	1	2%	0	0%	1	1%

All surveyed sites offer ARV prophylaxis for infants, except for one site that refers patients for this service. Half of sites (50 percent) give infants daily NVP from birth to six weeks of age only regardless of whether or not the infant is breastfeeding, while half of sites (51 percent) continue daily NVP until one week after exposure to breast milk. A minority of sites (16 percent) offer sdNVP as soon as possible after birth plus AZT for six weeks. Table 9 below details ARV prophylaxis regimens offered to HIV-exposed infants.

**Table 9. Regimens of ARV Prophylaxis Offered to HIV-Exposed Infants, by Site Type**

ARV Prophylaxis Regimens	Primary		Secondary		Tertiary		Overall	
	n	%	n	%	n	%	n	%
<b>Regimen based on National PMTCT Guidelines 2010 for facilities with the capacity to provide and monitor triple ARV medication</b>								
Daily NVP from birth to six weeks of age ONLY for both breastfeeding and non-breastfeeding infants	16	57%	30	48%	4	40%	50	50%
<b>Regimen based on National PMTCT Guidelines 2010 for facilities with limited capacity to provide and monitor triple ARV medication</b>								
For breastfeeding infants, start daily NVP; continue until one week after cessation of all exposure to breast milk	11	39%	34	54%	6	60%	51	51%
For non-breastfeeding infants, give daily NVP until six weeks of age	20	71%	56	89%	10	100%	86	85%
<b>Regimens based on National PMTCT Guidelines 2007</b>								
Single-dose NVP as soon as possible after birth preferably within 72 hours, plus AZT for six weeks	5	18%	10	16%	1	10%	16	16%

Forty-seven percent of facilities do not offer sdNVP to women, as many facilities administer more efficacious regimens (MERs). Among facilities that offer sdNVP, 54 percent integrate sdNVP provision into ANC, while 55 percent offer sdNVP elsewhere at the same facility. Respondent comments suggest that many sites that offer sdNVP elsewhere on-site may offer it in the labor ward rather than the ANC, since they only offer sdNVP to patients who present for the first time in labor. The majority (95 percent) of sites offer ARV prophylaxis to women with MERs. Almost half (54 percent) of sites provide MERs as part of integrated ANC services, while 42 percent offer MERs

elsewhere on-site. Thirty-four percent of facilities integrate ARV prophylaxis for infants into ANC services, while a greater number of sites (59 percent) offer infants ARV prophylaxis elsewhere on-site. Table 10 below provides information on the integration of ARV prophylaxis into ANC services.

**Table 10. Integrating ARV Prophylaxis within ANC**

Integrating ARV Prophylaxis within ANC	Primary		Secondary		Tertiary		Overall	
	n	%	n	%	n	%	n	%
<b>sdNVP prophylaxis for women</b>								
<i>Service offered</i>	15	54%	35	57%	4	40%	54	54%
Integrated with ANC	9	69%	12	38%	0	0%	21	43%
Offered at ANC at different day/time	1	8%	0	0%	0	0%	1	2%
Offered elsewhere at the same facility	3	23%	20	63%	4	100%	27	55%
<i>Not offered</i>	13	46%	28	44%	6	60%	47	47%
<i>Among those that responded "not offered," referral provided</i>	0	0%	1	4%	0	0%	1	2%
<b>ARV prophylaxis for women with MERs</b>								
<i>Service offered</i>	26	93%	60	95%	10	100%	96	95%
Integrated with ANC	18	69%	27	45%	7	70%	52	54%
Offered at ANC at different day/time	3	12%	1	2%	0	0%	4	4%
Offered elsewhere at the same facility	5	19%	32	53%	3	30%	40	42%
<i>Not offered</i>	2	7%	3	5%	0	0%	5	5%
<i>Among those that responded "not offered," referral provided</i>	1	50%	1	33%	0	0%	2	40%
<b>ARV prophylaxis for infants</b>								
<i>Service offered</i>	27	96%	63	100%	10	100%	100	99%
Integrated with ANC	12	44%	21	33%	1	10%	34	34%
Offered at ANC at different day/time	5	19%	2	3%	0	0%	7	7%
Offered elsewhere at the same facility	10	37%	4	63%	9	90%	59	59%
<i>Not offered</i>	1	4%	0	0%	0	0%	1	1%
<i>Among those that responded "not offered," referral provided</i>	1	100%	0	0%	0	0%	1	100%

Facility staff were asked how sites follow-up on patient adherence to drug regimens. Almost all sites (96 percent) ask patients about adherence at ANC visits or postpartum visits. Other common strategies to determine patient compliance are checking patient prescription/pharmacy records (78 percent), checking ANC cards (72 percent), and asking patients about compliance as part of outreach visits (57 percent). Less common methods include tracking patients through phone calls (13 percent) and asking patients about compliance in support groups (5 percent). Table 11 below describes methods to determine patient compliance.

**Table 11. Methods to Determine Patient Compliance, by Site Type**

Method	Primary		Secondary		Tertiary		Overall	
	n	%	n	%	n	%	n	%
The patient is asked about adherence at ANC visits/postpartum visits	28	100%	59	94%	10	100%	97	96%
Patient prescription/pharmacy records (filled)	18	64%	53	84%	8	80%	79	78%
The ANC clinic worker checks ANC card	21	75%	45	71%	7	70%	73	72%
Outreach worker asks patient and reports on compliance outside of the visit	19	68%	33	52%	6	60%	58	57%
Tracking and phone calls to patients	2	7%	9	14%	1	10%	13	13%
Support groups ask about adherence	1	4%	3	5%	1	10%	5	5%

The Site Assessment Tool includes open-ended questions about the challenges facilities face providing PMTCT and/or MNCH services. Patient noncompliance, poor attendance, and patient drop-out present a major challenge for providers, negatively impacting PMTCT services at 53 percent of facilities and MNCH services at 32 percent of facilities. Shortage of manpower is another significant challenge, affecting PMTCT services at 27 percent of facilities, MNCH services at 42 percent of facilities, and the integration of PMTCT and MNCH services at 70 percent of facilities. Another prevalent challenge is inadequate equipment or infrastructure, which reduces the effectiveness of PMTCT services at 13 percent of facilities, MNCH services at 27 percent of facilities, and integration at 37 percent of facilities. Stockouts and supply challenges affect the delivery of MNCH services at 23 percent of facilities and integration at 27 percent of facilities.

Challenges specific to providing PMTCT services include disclosure or partner involvement (24 percent of facilities) and patients accepting their HIV status (19 percent). Eleven percent of facilities report that patients having difficulty paying for services is a challenge to providing MNCH services. Additionally, inadequate staff training and lack of funds negatively affects PMTCT/MNCH integration at 26 percent and 12 percent of facilities, respectively. A minority of sites (15 percent) reported that they had no challenges with MNCH services. Table 12 below lists the most commonly reported challenges to providing PMTCT, MNCH, and integrated PMTCT/MNCH services.

**Table 12. PMTCT and MNCH Challenges**

No.	PMTCT and MNCH Challenges	n	%
<b>Top 5 Challenges with Providing PMTCT Services</b>			
1	Patient noncompliance, poor attendance, or patient drop-out	54	53%
2	Shortage of manpower	27	27%
3	Challenges with disclosure or partner involvement	24	24%
4	Patients have difficulty accepting their HIV status	19	19%
5	Inadequate equipment or infrastructure	13	13%
<b>Top 5 Challenges with Providing MNCH Services</b>			
1	Shortage of manpower	42	42%
2	Patient noncompliance, poor attendance, or patient drop out	32	32%
3	Inadequate equipment or infrastructure	27	27%
4	Stockouts and supply challenges	23	23%
5	Patients have difficulty paying for services	11	11%
	No challenges	15	15%
<b>Top 5 Challenges with Integrating PMTCT and MNCH Services</b>			

1	Shortage of manpower	71	70%
2	Inadequate equipment or infrastructure	37	37%
3	Stockouts and supply challenges	27	27%
4	Inadequate staff training	26	26%
5	Lack of funds	12	12%

## FAMILY PLANNING

By integrating FP services within ANC, facilities increase client access to and use of FP services. Each facility responded to questions about whether, when, and to whom FP counseling is offered, what FP products are available, and which are most popular. Eighty-six percent of facilities offer FP counseling to every woman who comes for ANC. Fourteen percent of facilities do not offer FP counseling; most of these facilities receive funding from the Catholic Church, and therefore do not provide modern FP services. Two percent of facilities do not automatically offer FP counseling to every woman who comes for ANC, but do offer services to women who request for services. The majority of sites (85 percent) integrate FP counseling into ANC services, while 12 percent offer the service elsewhere at the facility, and four percent offer the service at different time from regular clinic hours.

Among facilities that offer FP services, 92 percent offer condoms, 87 percent offer injectables, 89 percent offer oral contraceptive pills, and 76 percent offer intrauterine contraceptive devices (IUCDs). Less commonly offered methods are implants (53 percent) and sterilization/bilateral tubal ligation (37 percent). Almost half of sites (49 percent) report that injectables are the most-used FP method among women at their facility, while other facilities report that condoms (25 percent), IUCDs (14 percent), oral contraceptive pills (10 percent), or implants (one percent) are the most commonly used methods.

Table 13 provides further details on FP services.

**Table 13. Family Planning Services, by Site Type**

Family Planning Services	Primary		Secondary		Tertiary		Overall	
	n	%	n	%	n	%	n	%
<b>Modern family planning counseling</b>								
Offer modern family planning counseling to every woman who comes for ANC	24	86%	52	83%	9	90%	85	84%
Offer modern family planning counseling to women on request	1	4%	1	2%	0	0%	2	2%
<i>Do not offer modern family planning services</i>	3	11%	10	16%	1	10%	14	14%
<i>Among those that responded "not offered," referral provided</i>	2	66%	6	60%	1	100%	9	64%
<b>Integration of family planning counseling within ANC, among facilities that offer modern family planning services to every woman who comes for ANC</b>								
Integrated with ANC	21	88%	44	85%	7	78%	72	85%
Offered at ANC at different day/time	0	0%	2	4%	1	11%	3	4%
Offered elsewhere at the same facility	3	13%	6	12%	1	11%	10	12%
<b>Methods offered among facilities that offer modern family planning services (numbers and percentages not mutually exclusive)</b>								
Offer condoms	21	84%	52	98%	7	78%	80	92%
Offer injectables	19	76%	48	91%	9	100%	76	87%
Offer oral contraceptive pills	19	76%	50	94%	8	89%	77	89%

Offer IUCDs	12	48%	45	85%	9	100%	66	76%
Offer implants	7	28%	31	58%	8	89%	46	53%
Offer sterilization/ bilateral tubal ligation	1	4%	25	47%	6	67%	32	37%
<b>Most common method used among facilities that offer modern family planning services</b>								
Condoms	9	36%	11	21%	2	22%	22	25%
Injectables	12	48%	26	49%	5	56%	43	49%
Oral contraceptive pills	3	12%	5	9%	1	11%	9	10%
IUCDs	1	4%	10	19%	1	11%	12	14%
Implants	0	0%	1	2%	0	0%	1	1%

## CD4 TESTING

Integration of CD4 testing with ANC allows providers and patients to make more informed decisions on ARV regimens and other important issues to optimize health outcomes for the mother and child. Facility staff were asked numerous questions about CD4 testing, including: whether the site offers blood draw or testing on-site, where these services are offered at the site, and what is done with the results of the test. Eighty-four percent of facilities draw blood for CD4 count on-site, while the remaining 16 percent refer patients for all aspects of CD4 testing services.

Of the 85 sites that offer on-site CD4 blood draw, 88 percent draw blood outside of the ANC, most often at the on-site laboratory. After blood is drawn, 75 percent of facilities offering CD4 blood draw offer CD4 testing on-site, while 25 percent of sites send samples to offsite laboratories for analysis. The majority (87 percent) of sites offering blood draw for CD4 testing return results to women within one week, although 12 percent of sites return results between eight days to two weeks, and one site returns results between 15 days and one month. At most sites (58 percent), women receive their CD4 count results outside of the ANC, although 35 percent of sites share CD4 results as a fully integrated service within the ANC.

Primary health care centers have less capacity to offer CD4 testing services than tertiary sites. While 100 percent of tertiary sites offer CD4 blood draw on-site, 21 percent of primary sites refer for all aspects of CD4 testing services. Similarly, while 100 percent of tertiary sites analyze blood samples on-site, 82 percent of primary health care centers that draw blood for CD4 count analyze the samples at offsite laboratories.

Table 14 further describes CD4 testing at surveyed facilities.

**Table 14. CD4 Testing Services, by Site Type**

CD4 Testing	Primary		Secondary		Tertiary		Overall	
	n	%	n	%	n	%	n	%
<b>Drawing blood for CD4 count on-site</b>								
Blood drawn for CD4 count on-site	22	79%	53	84%	10	100%	85	84%
Do not draw CD4 sample on-site	6	21%	10	16%	0	0%	16	16%
Among those that responded "not offered," referral provided	4	67%	9	90%	0	0%	13	81%
<b>Integration of drawing blood for CD4 count within ANC, among sites offering CD4 services</b>								
Integrated with ANC	4	18%	5	9%	0	0%	9	11%
Offered at ANC at different day/time	0	0%	1	2%	0	0%	1	1%
Offered elsewhere at the same facility	18	82%	47	89%	10	100%	75	88%

<b>Location of blood sample analysis, among sites offering CD4 services</b>								
On-site	4	18%	50	94%	10	100%	64	75%
Offsite	18	82%	3	6%	0	0%	21	25%

  

<b>Timeframe for patients to receive CD4 test results, among sites offering CD4 services</b>								
Within one week	16	73%	50	94%	8	80%	74	87%
Between 8 days to 2 weeks	6	27%	3	6%	1	10%	10	12%
Between 15 days to 1 month	0	0%	0	0%	1	10%	1	1%

  

<b>Integration of sharing CD4 results with patients within ANC, among sites offering CD4 services</b>								
Integrated with ANC	10	45%	18	34%	2	20%	30	35%
Offered at ANC at different day/time	3	14%	2	4%	1	10%	6	7%
Offered elsewhere at the same facility	9	41%	33	62%	7	70%	49	58%

## ART FOR WOMEN'S HEALTH

Providing ART for women's health as part of ANC services may increase ART uptake and adherence among patients. The Site Assessment Tool includes questions about where and when treatment options are discussed, regimens offered to women who are eligible for ART for their own health, where and when these regimens are available at the facility, and the initiation criteria used to determine eligibility.

Ninety-five percent of surveyed facilities discuss treatment and support options with patients, with five percent of sites referring patients for these discussions. Roughly half of sites (53 percent) integrate treatment and support discussions within ANC, while 38 percent have these discussions elsewhere at the same facility, and nine percent have these discussions at the ANC at a special designated time. Table 15 details integration of treatment and support discussions within the ANC.

**Table 15. Integration of Treatment and Support Discussions Within the ANC, by Site Type**

<b>Treatment and Support Discussions</b>	<b>Primary</b>		<b>Secondary</b>		<b>Tertiary</b>		<b>Overall</b>	
	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>
<b>Integration of treatment and support discussions within the ANC</b>								
<i>Service offered</i>	24	86%	62	98%	10	100%	96	95%
Integrated with ANC	11	46%	34	55%	6	60%	51	53%
Offered at ANC at different day/time	3	13%	6	10%	0	0%	9	9%
Offered elsewhere at the same facility	10	42%	22	35%	4	40%	36	38%
<i>Discussion of treatment and support not offered</i>	4	14%	1	2%	0	0%	5	5%
<i>Among those that responded "not offered," referral provided</i>	3	75%	1	100%	0	0%	4	80%

Seventy-five percent of facilities offer ART for women's health. The 25 percent of facilities that do not offer ART are primary health care centers and secondary centers that provide ARV prophylaxis, but do not have the capacity to provide ARVs for women's own health. Among the facilities that offer ART for women's health, most offer the service outside of the ANC, while 26 percent integrate it within ANC, and seven percent offer it within ANC at a different designated time.

Once an HIV-positive pregnant woman meets the criteria to receive ART for her own health, 75 percent of facilities will initiate her on ART within one week, 16 percent of sites will initiate her from

eight days to one month, and one site will initiate her after more than a month. Eight percent of sites report that the timeframe for initiation depends on factors such as client's readiness to adhere and receipt of CD4 results.

Almost all sites that offer ART for women's health use WHO clinical staging (97 percent) and CD4 count (97 percent) as initiation criteria. Most sites initiate ART at CD4 counts of 350 or less (92 percent), while a few sites (eight percent) initiate ART at CD4 counts of 250 or less. Eighty-three percent of sites that offer ART for women's health initiate ART irrespective of gestational age, in accordance with the National PMTCT Guidelines 2010, while 18 percent delay initiation of ART until after the first trimester, if possible.

Table 16 provides information on ART for women's health services.

**Table 16. ART for Women's Health Services, by Site Type**

ART for Women's Health Services	Primary		Secondary		Tertiary		Overall	
	n	%	n	%	n	%	n	%
<b>Provision of ART for women's health</b>								
Offer ART for women's health	12	43%	54	86%	10	100%	76	75%
Do not offer ART for women's health	16	57%	9	14%	0	0%	25	25%
Among those that responded "not offered," referral provided	13	81%	9	100%	0	0%	22	88%
<b>Integration of ART for women's health within ANC, among facilities that offer ART for women's health*</b>								
Integrated with ANC	2	17%	16	30%	2	20%	20	26%
Offered at ANC at different day/time	3	25%	2	4%	0	0%	5	7%
Offered elsewhere at the same facility	7	58%	36	67%	8	80%	51	67%
<b>Timeframe for HIV+ pregnant women who meet the established criteria for ART initiation to receive ART, among facilities that offer ART for women's health*</b>								
One week or less	11	92%	37	69%	9	90%	57	75%
From 8 days to 1 month	1	8%	10	19%	1	10%	12	16%
More than a month	0	0%	1	2%	0	0%	1	1%
Depends*	0	0%	6	11%	0	0%	6	8%
<b>ART initiation criteria, among facilities that offer ART for women's health</b>								
WHO clinical staging	11	92%	53	98%	10	100%	74	97%
CD4 count	11	92%	53	98%	10	100%	74	97%
CD4 count of 350 or less	10	91%	49	92%	9	91%	68	92%
CD4 count of 250 or less	1	9%	4	8%	1	10%	6	8%
<b>Gestational age and ART initiation, among facilities that offer ART for women's health</b>								
Initiate ART irrespective of gestational age	10	83%	45	83%	8	80%	63	83%
Delay initiation of ART until after the first trimester, if possible	3	25%	9	17%	2	20%	14	18%
<b>ARV regimens offered to HIV+ pregnant women who meet the established criteria for ART for their own health, among facilities that initiate ART irrespective of gestational age</b>								
AZT + 3TC + NVP	10	100%	44	98%	8	100%	62	98%
AZT + 3TC + EFV	5	50%	40	89%	8	100%	53	84%
AZT + 3TC + LPV/r	2	20%	16	36%	6	75%	24	38%
AZT + FTC + EFV	1	10%	9	20%	3	38%	13	21%
AZT + 3TC + ABC	0	0%	8	18%	1	14%	9	15%
TDF + 3TC (or FTC) + EFV	1	10%	24	53%	6	75%	31	49%

\*Numbers and percentages not mutually exclusive.

## LABOR AND DELIVERY

Integrating PMTCT services within labor and delivery has the potential to increase the uptake of PMTCT prophylaxis. Facility staff were asked about the labor and delivery services available at each site, including special services offered to HIV-positive women. All sites offer delivery services, and almost all sites offer basic obstetric care services (99 percent) and have a labor ward (99 percent). The labor and delivery staff at almost all sites know whether or not women are HIV positive (99 percent) and test women of unknown status at labor and delivery (98 percent). Staff primarily learn women's HIV status through their ANC records.

All tertiary centers and most (92 percent) secondary centers offer Caesarean sections (C-sections), while only 18 percent of primary health care centers do. All facilities that do not offer C-sections provide written referrals for the service. Among facilities that perform C-sections, all facilities perform C-sections if the mother's life is endangered and almost all (99 percent) facilities perform C-sections if the fetus' life is endangered. Fifteen percent of facilities offering C-sections automatically perform C-sections for HIV-positive women, while 81 percent of facilities report that they offer elective C-sections to HIV-positive women where possible. Additionally, 19 percent of facilities report that they perform C-sections for "other" reasons such as cephalopelvic disproportion (CPD) or elective C-section on request. Almost all sites (99 percent) perform C-sections at the theatre or some other place outside of the ANC.

Eighty-nine percent of sites adopt specific procedures when they know women are HIV-positive. Among sites that adopt specific procedures, the most commonly observed procedures are limiting episiotomy (92 percent) and limiting artificial rupture of membranes (91 percent). Other common responses are limiting fetal scalp monitoring (57 percent), elective C-section where possible (39 percent), and universal basic precautions (19 percent). Table 17 below describes labor and delivery services in detail.

**Table 17. Labor and Delivery Services, by Site Type**

Labor and Delivery Services	Primary		Secondary		Tertiary		Overall	
	n	%	n	%	n	%	n	%
<b>Labor and Delivery Services***</b>								
Offer delivery services	28	100%	63	100%	10	100%	101	100%
Offer basic obstetric care services for all women in labor and delivery	27	96%	63	100%	10	100%	100	99%
Have a labor ward	27	96%	63	100%	10	100%	100	99%
Offer C-sections	5	18%	58	92%	10	100%	73	72%
Test all women of unknown HIV status at labor and delivery	27	96%	62	98%	10	100%	99	98%
Labor and delivery staff know whether or not women are HIV+	27	96%	63	100%	10	100%	100	99%
Adopt specific procedures when they know women are HIV+	25	89%	56	89%	9	90%	90	89%
<b>Reasons for performing C-sections, among facilities offering C-sections***</b>								
Mother's life endangered (maternal indications)	5	100%	58	100%	10	100%	73	100%
Fetus is endangered (fetal indications)	5	100%	57	98%	10	100%	72	99%
Mother is HIV+	1	20%	7	12%	3	30%	11	15%
Other reasons**	0	0%	11	19%	3	30%	14	19% n
<b>Specific labor and delivery procedures adopted for HIV-positive women, among facilities that offer specific procedures</b>								
Limit episiotomy	19	76%	55	98%	9	100%	83	92%
Limit artificial rupture of membranes	19	76%	54	96%	9	100%	82	91%

Limit fetal scalp monitoring	12	48%	34	61%	5	56%	51	57%
Elective C-section where possible	3	12%	27	48%	5	56%	35	39%
Universal basic precautions	7	28%	10	18%	0	0%	17	19%
Limit frequent vaginal examinations	1	4%	4	7%	0	0%	5	6%
Other procedures*	1	4%	0	0%	1	11%	2	2%

\* Other procedures include “avoid invasive procedures such as external cephalic version” (one site) and “use Mama Pack kits” (one site).

\*\* Other reasons for C-sections include CPD (six sites), elective C-section on request (three sites), “high risk mothers” (one site), other obstetric indications (one site), “pragmatic” (one site), standard indications (one site), and placenta previa depending on CD4 count (one site).

\*\*\*Numbers and percentages not mutually exclusive

## EXPOSED INFANT FOLLOW-UP

Integrating exposed infant care within ANC and postnatal care provides an opportunity to enhance and prolong the follow-up of HIV-exposed or infected mother-infant pairs. Facilities were asked how they follow-up mother-infant pairs, how they identify exposed infants, what testing protocol they use for exposed infants, what other services are available for newborns, and where and when services are provided.

The most common method of first identifying exposed infants is recording infants’ exposure status on their immunization cards and following them monthly at MNCH clinics (76 percent). Additional methods include identifying infants at first post-natal visit to MNCH (59 percent) and having community health extension workers (CHEWs) identify children who are symptomatic (17 percent). Use of CHEWs was only reported at primary and secondary facilities. Twenty-one percent of sites reported identifying infants through “other” methods such as through the labor ward, their mothers, the outpatient department, and infant HIV testing.

Almost all sites offer cotrimoxazole (96 percent), and many sites conduct exposed-infant evaluations on a regular schedule (85 percent), draw blood for PCR testing (87 percent), and offer serologic testing (73 percent). Primary health care centers are less likely than secondary and tertiary centers to offer comprehensive exposed infant care services: 68 percent of primary health care centers conduct exposed-infant evaluations on a regular basis, 75 percent draw blood for PCR testing, and 57 percent offer serologic testing, while 100 percent of tertiary centers offer these three services.

Among sites that draw blood for PCR testing, only 19 percent of sites analyze PCR on-site, and only 1 primary center analyzes PCR on-site. Less than half (41 percent) of sites take DBS samples at the same time as immunization. Almost all sites (94 percent) take DBS samples between 4-6 weeks of age, 23 percent take samples earlier than 18 months of age if a baby is symptomatic, and 16 percent take DBS samples at 18 months of age (responses not mutually exclusive).

Among sites that offer serologic testing, most (66 percent) offer testing at 18 months only. Twenty-three percent offer testing at both 18 months and less than 18 months if the mother’s status is unknown, and 11 percent offer testing only at less than 18 months if the mother’s status is unknown.

Ninety-four percent of facilities offer early antiretroviral therapy, treatment adherence support for children, and infant and young child feeding support. Post-natal services related to tuberculosis (TB) are less common, as 56 percent of facilities provide TB screening and diagnosis, 40 percent provide TB

prevention, and 49 percent provide TB management and treatment for children. Tertiary centers are more likely than primary centers to offer TB-related post-natal services for children.

Most facilities (97 percent) provide the basic newborn care services of immediate thorough drying, cord clamping and cutting, skin-to-skin contact between the newborn and the mother, and early initiation of exclusive breastfeeding. Between 84-92 percent of facilities provide positive pressure ventilation for newborns who do not start breathing on their own, eye care, birth dose of oral polio vaccine, hepatitis B vaccine, and Bacillus Calmette-Guérin (BCG) vaccine. Sixty-six percent of facilities provide vitamin K. Twelve percent of facilities mentioned “other” basic newborn care services such as immunization, infant-feeding counseling, and vitamins.

The most common place where facilities follow-up on HIV-positive mother-infant pairs is the post-partum clinic (86 percent), followed by nutrition/infant-feeding counseling sessions (65 percent), pediatric clinic (56 percent), and ART clinic (54 percent). Facilities also follow-up at pediatric HIV clinic (20 percent) and growth monitoring sites in communities (29 percent). Ten percent of facilities mentioned that they follow-up through “other” points such as immunization, outreach/tracking, and peer support groups.

Almost half of sites (46 percent) examine exposed infants two weeks after birth, then monthly; while 28 percent of sites examine infants every two weeks after birth for six weeks, then monthly; 20 percent of sites examine infants monthly from birth; and seven percent of sites follow other schedules.

Table 18 below provides additional information on exposed infant care services.

**Table 18. Exposed Infant Care Services, by Site Type**

Exposed Infant Care Services	Primary		Secondary		Tertiary		Overall	
	n	%	n	%	n	%	n	%
<b>Methods of first identifying exposed infants (Numbers and percentages not mutually exclusive.)</b>								
First post-natal visit to the MNCH	17	61%	38	60%	5	50%	60	59%
Infants of infected mothers have exposure status recorded on their immunization cards and are followed monthly at MNCH clinics	22	79%	50	79%	5	50%	77	76%
CHEW identify children who are symptomatic	6	21%	12	19%	0	0%	18	17%
Other methods*	4	14%	14	22%	3	30%	21	21%
<b>Exposed infant care services offered (Numbers and percentages not mutually exclusive.)</b>								
Conduct exposed- infant evaluations on a regular schedule	19	68%	58	90%	10	100%	86	85%
Draw blood for PCR testing	21	75%	57	90%	10	100%	88	87%
Offer serologic testing	16	57%	48	76%	10	100%	74	73%
Offer co-trimoxazole	24	86%	63	100%	10	100%	97	96%
<b>PCR testing practices, among sites that draw blood for PCR testing (Numbers and percentages not mutually exclusive.)</b>								
PCR analyzed on-site	1	5%	11	19%	5	60%	17	19%
DBS sample taken at the same time as immunization	6	29%	26	46%	4	40%	36	41%
DBS sample taken between 4-6 weeks of age	21	100%	53	93%	9	90%	83	94%
DBS sample taken earlier than 18 months if baby is symptomatic	5	24%	13	23%	2	20%	20	23%
DBS sample taken at 18 months of age	5	24%	7	12%	2	20%	14	16%
<b>Serologic testing practices, among sites that offer serologic testing</b>								
Serologic testing at 18 months only	12	80%	27	60%	7	70%	46	66%
Serologic testing at <18 months if mother’s status is	0	0%	7	16%	1	10%	8	11%

Exposed infant care services	Primary		Secondary		Tertiary		Overall	
	n	%	n	%	n	%	n	%
Unknown only								
Serologic testing at both 18 months and <18 months if mother's status is unknown	3	20%	11	24%	2	20%	16	23%
<b>Postnatal services offered (Numbers and percentages not mutually exclusive.)</b>								
Early antiretroviral therapy	23	82%	61	97%	10	100%	94	93%
Treatment adherence support	25	89%	60	95%	10	100%	95	94%
Counseling and support for optimizing nutrition and infant and young- child feeding	28	100%	59	94%	10	100%	97	96%
TB screening and diagnosis for children	10	36%	38	60%	9	90%	57	56%
TB prevention, including isoniazid prophylaxis, for children	8	29%	27	43%	5	50%	40	40%
TB management and treatment for children	8	29%	32	51%	9	90%	49	49%
Other post-natal services**	4	14%	2	5%	4	40%	10	10%
<b>Basic newborn care services provided (Numbers and percentages not mutually exclusive.)</b>								
Immediate thorough drying	27	96%	63	100%	10	100%	100	99%
Cord clamping and cutting after the first minutes after birth	28	100%	62	98%	10	100%	100	99%
Skin-to-skin contact of the newborn with the mother	27	96%	61	97%	10	100%	98	97%
Early initiation of breastfeeding, and exclusive breastfeeding	27	96%	62	98%	10	100%	99	98%
Positive pressure ventilation for newborns who do not start breathing on their own by one minute after birth	20	71%	57	90%	10	100%	87	86%
Eye care	25	89%	58	92%	10	100%	93	92%
Vitamin K	16	57%	43	68%	8	80%	67	66%
Birth dose of oral polio vaccine (OPV)	26	93%	54	86%	9	90%	89	88%
Hepatitis B	22	79%	54	86%	9	90%	85	84%
BCG vaccine	23	82%	55	87%	9	90%	87	86%
Other basic newborn care services***	3	11%	7	11%	3			
<b>Places where facilities follow-up on HIV+ mother-infant pairs, among facilities that follow-up (Numbers and percentages not mutually exclusive.)</b>								
Post-partum clinic	22	85%	55	89%	7	70%	84	86%
Nutrition/infant-feeding counseling sessions	20	77%	39	63%	5	50%	64	65%
Pediatric clinic	13	50%	34	55%	8	80%	55	56%
ART clinic	6	23%	41	66%	6	60%	53	54%
Pediatric HIV clinic	8	31%	14	23%	6	60%	28	29%
Growth monitoring sites in communities	16	62%	9	15%	3	30%	28	29%
Other places****	2	8%	8	13%	0	0%	10	10%
<b>Follow-up schedule for examining exposed infants postpartum (Numbers and percentages not mutually exclusive.)</b>								
Monthly from birth	9	32%	11	17%	0	0%	20	20%
Two weeks after birth, then monthly	12	43%	31	49%	3	30%	46	46%
Every two weeks after birth for six weeks, then monthly	7	25%	16	25%	5	50%	28	28%
Other schedules*****	0	0%	5	8%	2	20%	7	7%

\* Other methods of identifying exposed infants include from the labor ward (seven sites), through mothers (three sites), through the outpatient department (three sites), infant HIV testing (two sites), previous contact (one site), in collaboration with traditional birth attendants (one site), through ANC card (one site), matron identifies children who are symptomatic (one site), and ART clinic (one site).

\*\* Other post-natal services include immunization (six sites), growth monitoring (one site), child health services (one site), cotrim prophylaxis (one site), and spiritual support (one site).

\*\*\* Other basic newborn services include immunization (six sites), infant-feeding counseling (two sites), and vitamins (two sites). Responses mentioned by one site each include bathing the baby and keeping the baby warm, counseling on care of minor illnesses, deworming, phototherapy, circumcision, routine drugs for exposed infants, mucus extraction, and mouth-mouth respiration. Some sites gave more than one "other" response.

\*\*\*\* Other places where facilities follow-up on mother-infant pairs include immunization (three sites), outreach/tracking (three sites), peer support groups (two sites), and infant welfare clinic (one site).

\*\*\*\*\* Other schedules include at six weeks after birth only (three sites); three weeks, six weeks, then monthly (one site); six weeks after birth, then three months, six months, nine months, one year, and 18 months (one site); six weeks after birth, then monthly (one site); and three weeks after birth only (one site).

Infant-feeding counseling service provision was assessed using several questions about what, when, and where infant feeding education and services are provided, and which health care workers are involved. Eighty-nine percent of facilities promote exclusive breastfeeding for HIV-positive women, while the remaining facilities present HIV-positive women with information about both exclusive breastfeeding and exclusive formula feeding, and encourage women to choose the method that is best for them. For women of unknown status, 95 percent of facilities promote exclusive breastfeeding. Since so many facilities promote exclusive breastfeeding for HIV-positive mothers, only five percent of facilities supply or subsidize infant formula for HIV-positive mothers. Ninety-seven percent of facilities report that the majority of their HIV-positive clients practice exclusive breastfeeding.

All facilities provide infant feeding and counseling services during antenatal visits, and most (89 percent) provide counseling again during postnatal visits. Almost all facilities (95 percent) provide postpartum follow-up support and lactation management for HIV-positive women at postnatal care. Sixty-eight percent of primary health care centers provide lactation support at home through home visitors, while a smaller percentage of secondary centers (32 percent) and tertiary centers (30 percent) provide lactation support at home. Fifteen percent of sites listed “other” points where they provided lactation support, such as pediatric clinic immunization, labor room, and the ART clinic.

PMTCT-trained counselors have primary responsibility for delivering infant-feeding counseling, as they provide counseling at 97 percent of facilities. Other infant-feeding counseling providers include nutritional counselors (active in 45 percent of facilities), peer counselors (26 percent), and other facility staff (10 percent). Table 19 below provides details on infant and young child feeding services.

**Table 19. Infant and Young Child Feeding Services, by Site Type**

Infant and Young Child Feeding Services	Primary		Secondary		Tertiary		Overall	
	n	%	n	%	n	%	n	%
<b>Infant and young child feeding policy for HIV+ women</b>								
Promote exclusive breastfeeding	24	86%	58	92%	8	80%	90	89%
No policy, or provide women with the options of exclusive breastfeeding and formula feeding, but do not promote one method over the other	4	14%	5	8%	2	20%	11	11%
<b>Infant and young child feeding policy for women of unknown status</b>								
Promote exclusive breastfeeding	27	96%	60	97%	8	89%	94	95%
No policy, or provide women with the options of exclusive breastfeeding and formula feeding, but do not promote one method over the other	1	4%	3	5%	2	10%	5	5%
<b>Most common infant feeding method chosen by HIV+ women***</b>								
Exclusive breastfeeding	27	96%	62	98%	9	90%	98	97%
Formula feeding	1	4%	1	2%	1	10%	3	3%
<b>Point when infant feeding and counseling provided</b>								
During antenatal visit	28	100%	63	100%	10	100%	101	100%
During postnatal visit	25	89%	57	90%	8	80%	90	89%
Other*	4	4%	15	24%	4	40%	23	23%
<b>Point where follow-up support and lactation management for HIV+ women provided postpartum***</b>								
Home through home visitors	19	68%	20	32%	3	30%	42	42%
Postnatal care	26	93%	61	97%	9	90%	96	95%
Other**	2	7%	13	21%	0	0%	15	15%
<b>Persons who provide infant-feeding counseling</b>								
PMTCT-trained counselors	28	100%	61	97%	9	90%	98	97%

Nutritional counselors	12	43%	28	44%	5	50%	45	45%
Peer counselors (mentor mothers and other volunteers)	4	14%	16	25%	6	60%	26	26%
Other facility staff	3	11%	6	10%	1	10%	10	10%

**Infant formula**

Infant formula is supplied or subsidized to HIV+ women	1	4%	3	5%	1	10%	5	5%
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\* Other points where infant feeding and counseling are provided include immunization (five sites), ART and/or CT clinic (three sites), community outreach (four sites), pediatric clinic (four sites), mentor mother visits (three sites), outpatient department (one site), pediatric HIV visits (one site), and “during checkup” (one site).

\*\*Other points where follow-up support and lactation management provided include pediatric clinic (four sites), immunization (three sites), labor room (three sites), ART clinic (three sites), support group visits (one site), and CT unit (one site), and growth monitoring (one site). One site gave two “other” responses.

\*\*\* Numbers and percentages not mutually exclusive.

Facility staff were asked when and where services are provided to mother-infant pairs in order to assess whether these services are integrated into the general ANC clinic. Among facilities that offer exposed infant care services, infant feeding and counseling is the service that is most commonly integrated with ANC (78 percent), followed by adherence support to mother-infant pairs (51 percent), growth monitoring for children (40 percent), immunization for children (36 percent), and provision of Vitamin A for children (33 percent). Services that are integrated within ANC at 30 percent or less of facilities are regularly scheduled exposed-infant evaluations, blood draw for PCR testing, dispensing of cotrimoxazole, and sick child services. Table 20 below details the integration of exposed infant care within ANC services.

**Table 20. Integrating Exposed Infant Care within ANC Services**

Integrating Exposed Infant Care within ANC Services	Primary		Secondary		Tertiary		Overall	
	n	%	n	%	n	%	n	%
<b>Regularly scheduled exposed-infant evaluations</b>								
Service offered	19	68%	57	90%	10	100%	86	85%
Integrated with ANC	8	42%	16	28%	2	20%	26	30%
Offered at ANC at different day/time	2	11%	2	4%	0	0%	4	5%
Offered elsewhere at the same facility	9	47%	39	68%	8	80%	56	65%
Not offered	9	32%	6	10%	0	0%	15	15%
Among those that responded "not offered," referral provided	8	100%	6	100%	n/a	n/a	14	100%
<b>Blood draw for PCR testing</b>								
Service offered	21	75%	57	90%	10	100%	88	87%
Integrated with ANC	2	11%	8	15%	0	0%	10	12%
Offered at ANC at different day/time	2	11%	4	7%	0	0%	6	7%
Offered elsewhere at the same facility	14	78%	43	78%	10	100%	67	81%
Not offered	7	25%	6	10%	0	0%	13	13%
Among those that responded "not offered," referral provided	5	83%	4	100%	n/a	n/a	9	90%
<b>Dispensing of cotrimoxazole</b>								
Service offered	24	86%	63	100%	10	100%	97	96%
Integrated with ANC	11	46%	11	17%	1	10%	23	24%
Offered at ANC at different day/time	1	4%	1	2%	0	0%	2	2%
Offered elsewhere at the same facility	12	50%	51	81%	9	90%	72	74%
Not offered	4	14%	0	0%	0	0%	4	14%
Among those that responded "not offered," referral provided	4	100%	n/a	n/a	n/a	n/a	4	100%
<b>Adherence support to mother-infant pairs</b>								
Service offered	28	100%	62	98%	10	100%	100	99%
Integrated with ANC	19	68%	30	48%	2	20%	51	51%
Offered at ANC at different day/time	1	4%	2	3%	0	0%	3	3%
Offered elsewhere at the same facility	8	29%	30	48%	8	80%	46	46%
Not offered	0	0%	1	2%	0	0%	1	1%
Among those that responded "not offered," referral provided	n/a	n/a	1	100%	n/a	n/a	1	100%
<b>Immunization for children</b>								
Service offered	27	96%	54	86%	10	100%	91	90%
Integrated with ANC	14	52%	17	31%	2	20%	33	36%
Offered at ANC at different day/time	3	11%	10	19%	0	0%	13	14%
Offered elsewhere at the same facility	10	37%	27	50%	8	80%	45	50%
Not offered	1	4%	9	14%	0	0%	10	10%
Among those that responded "not offered," referral provided	1	100%	6	67%	n/a	n/a	7	70%
<b>Sick child services</b>								
Service offered	28	100%	63	100%	10	100%	101	100%
Integrated with ANC	12	43%	4	6%	0	0%	16	16%
Offered at ANC at different day/time	3	11%	4	6%	0	0%	7	7%
Offered elsewhere at the same facility	13	46%	55	87%	10	100%	78	77%
Not offered	0	0%	0	0%	0	0%	0	0%
<b>Infant-feeding counseling for HIV+ women</b>								
Service offered	28	100%	63	100%	10	100%	101	100%
Integrated with ANC	23	82%	48	76%	8	80%	79	78%
Offered at ANC at different day/time	2	7%	4	6%	0	0%	6	6%
Offered elsewhere at the same facility	3	11%	11	17%	2	20%	16	16%
Not offered	0	0%	0	0%	0	0%	0	0%
<b>Provision of vitamin A for children</b>								

Service offered	26	93%	53	84%	10	100%	89	88%
Integrated with ANC	12	46%	15	28%	2	20%	29	33%
Offered at ANC at different day/time	3	12%	5	9%	0	0%	8	9%
Offered elsewhere at the same facility	11	42%	33	62%	8	80%	52	58%
Not offered	2	7%	10	16%	0	0%	12	12%
Among those that responded "not offered," referral provided	1	50%	7	70%	n/a	n/a	8	67%
<b>Growth monitoring for children</b>								
Service offered	28	100%	60	95%	10	100%	98	97%
Integrated with ANC	14	50%	22	37%	3	30%	39	40%
Offered at ANC at different day/time	3	11%	3	5%	0	0%	6	6%
Offered elsewhere at the same facility	11	39%	35	58%	7	70%	53	54%
Not offered	0	0%	3	5%	0	0%	3	3%
Among those that responded "not offered," referral provided	n/a	n/a	1	33%	n/a	n/a	1	33%

## NUTRITION COUNSELING FOR WOMEN

Offering nutrition counseling to pregnant and HIV-positive women may improve health behaviors, and ultimately health outcomes. All facilities offer nutrition counseling to all pregnant women, 89 percent of facilities provide nutrition counseling to all HIV-positive women (including those who are not pregnant), and 10 percent of facilities reported offering counseling to other groups of patients (malnourished patients, nursing mothers, children, etc.). Table 21 below describes nutrition counseling for women.

**Table 21. Nutrition Counseling for Women, by Site Type**

Nutrition Counseling, by Site Type	Primary		Secondary		Tertiary		Overall	
	n	%	n	%	n	%	n	%
Provide nutrition counseling to all pregnant women	28	100%	63	100%	10	100%	101	100%
Provide nutrition counseling to other patients*	1	4%	9	14%	0	0%	10	10%

\* Other patients included malnourished patients, nursing mothers, children, immunization patients, and other patients at the facility.

## COMMUNITY LINKAGES

Successful linkages between health facilities and communities may support engagement and retention in care. Forty-nine percent of facilities have linkages with CBOs. Each facility was asked to describe its linkages with the community. Facility staff were asked to detail the CBOs that refer to the facility, and for which services, and to name those CBOs to which the facility refers, and for what services. Of the facilities that have linkages with CBOs, 88 percent refer HIV-positive women and their infants to CBOs, 82 percent have CBOs refer HIV-positive women and their infants to the facility, and 59 percent have linkages with CBOs that follow-up on women who are lost to follow-up.

Among the 49 sites with CBO linkages, the most common service for which patients are referred from the facility to CBOs is psychosocial support (73 percent), followed by socioeconomic support (55 percent), breastfeeding support (14 percent), and growth monitoring for infants (10 percent). Among the 49 sites with CBO linkages, the most common service for which patients are referred from CBOs to the facility is immunization follow-up (65 percent), followed by psychosocial support (61 percent). Additionally, between 29-37 percent of facilities have CBOs refer patients to them for breastfeeding support, growth monitoring for infants, FP, and HIV testing, care, and treatment. Furthermore, 22

percent of facilities receive referrals from CBOs for growth monitoring for infants, and 20 percent receive referrals for home-based care.

Twenty-nine sites (29 percent) have linkages to CBOs that track women lost to follow-up. While almost all sites (97 percent) share HIV test results with women the same day as the test, 23 facilities reported maintaining linkages with CBOs to track women who might leave the facility before receiving her result. Although sdNVP is one of the less common drug regimens used by facilities, 17 facilities reported linkages to CBO partners that track women who do not return for sdNVP. Eleven facilities have CBO partners that track women who miss appointments or do not return for medicines.

Table 22 below describes linkages with CBOs.

**Table 22. Nutrition Counseling for Women, by Site Type**

Linkages with Community-Based Organizations by Site Type	Primary		Secondary		Tertiary		Overall	
	n	%	n	%	n	%	n	%
<b>Linkages with CBOs</b>								
Have linkages with CBOs	13	46%	30	48%	6	60%	49	49%
<b>Types of linkages with CBOs, among sites that have linkages with CBOs (Numbers and percentages not mutually exclusive.)</b>								
The facility refers HIV+ women and their infants to CBOs	12	92%	25	83%	6	100%	43	88%
CBOs refer HIV+ women and infants to the facility	10	77%	25	83%	5	83%	40	82%
Have linkages with CBOs that follow-up on women who are lost to follow-up	6	46%	17	57%	6	100%	29	59%
<b>Services for which health facilities refer HIV+ women and their infants to CBOs, among sites that refer to CBOs (Numbers and percentages not mutually exclusive.)</b>								
Psychosocial support	8	62%	22	73%	6	100%	36	73%
Breastfeeding support	3	23%	4	13%	0	0%	7	14%
Socioeconomic support	6	46%	17	57%	4	67%	27	55%
Growth monitoring for infants	1	8%	3	10%	1	17%	5	10%
Immunization follow-up	1	8%	1	3%	0	0%	2	4%
Family planning referrals	0	0%	1	3%	0	0%	1	2%
Home-based care	1	8%	1	3%	1	10%	3	3%
Other*	5	38%	5	17%	0	0%	10	20%
<b>Services for which CBOs refer HIV+ women and their infants to facilities, among sites that have CBOs that refer to them (Numbers and percentages not mutually exclusive.)</b>								
Psychosocial support	8	62%	18	60%	4	67%	30	61%
Breastfeeding support	7	54%	7	23%	1	17%	15	31%
Socioeconomic support	1	8%	7	23%	3	50%	11	22%
Growth monitoring for infants	8	62%	7	23%	3	50%	18	37%
Immunization follow-up	7	54%	8	27%	2	33%	17	37%
Family planning referrals	6	46%	6	20%	2	33%	14	65%
Home-based care	4	31%	5	17%	1	17%	10	29%
HIV testing, care, and treatment	3	23%	10	33%	1	17%	14	20%
Other**	0	0%	3	10%	0	0%	3	29%
<b>Types of women who receive follow-up from CBOs, among sites that linkages to CBOs that follow-up (Numbers and percentages not mutually exclusive.)</b>								
Women who do not return for HIV test results	5	83%	16	94%	2	33%	23	79%
Women who do not return for sdNVP	3	50%	13	76%	1	17%	17	59%
Women who miss appointments or do not return for medicines	2	33%	4	24%	5	83%	11	38%
Other***	1	17%	2	12%	0	0%	3	10%

\* Other services for which health facilities refer HIV+ women and their infants to CBOs include orphans and vulnerable children services (four sites), nutritional support (four sites), community education (two sites), drug adherence support (one site), and TB counseling (one site). One site gave three “other” responses.

\*\* Other services for which CBOs refer HIV+ women and their infants to facilities include delivery (one site), family medicine (one site), and orphan services (one site).

\*\*\* Other types of women who receive follow-up from CBOs include women with husbands who stigmatize them (one site), children (one site), and women who do not return for voluntary testing and counseling (one site)

## PATIENT COSTS

Patient costs can act as a barrier to care, while the provision of free services may increase service uptake. Each facility was asked about the patient costs associated with receiving PMTCT and/or FP services. Eleven percent of facilities listed that patient costs are a challenge to providing MNCH services.

As shown in Table 23 below, patients receive all PMTCT services for free at 80 percent of surveyed facilities. At 20 percent of facilities, patients bear costs for some PMTCT and/or MNCH services. For example, patients may be asked to pay fees for delivery, general drugs, lab tests, ANC registration card, consumables such as hand gloves and cotton wool, ultrasounds, C-sections, or other services and items. If patients are unable to afford these fees, 15 out of 20 facilities will exempt the patient from paying.

At half of the surveyed facilities, patients receive all FP services for free. At 37 percent of facilities, some FP methods are free while other methods require that patients pay for commodities. Often, commodities are subsidized so that patients only pay a token. At 11 percent of sites, patients bear costs for all FP services. If a patient was unable to afford FP services, 11 out of the 48 sites with FP costs (23 percent) report that they would exempt the patient from payment. Many respondents indicated that they rarely come across women who are unable to pay, as clients are generally aware of costs and come to the facility prepared to pay. Additionally, since a number of facilities offer free FP methods (such as condoms) in addition to cost-associated methods, clients at these sites do not opt for cost-associated methods unless they are able to afford them.

Table 23 provides information on patient costs associated with PMTCT and FP services.

**Table 23. Patient Costs, by Site Type**

Patient Costs	Primary		Secondary		Tertiary		Overall	
	n	%	n	%	n	%	n	%
<b>Patient costs associated with PMTCT services</b>								
All PMTCT services are provided without cost	25	89%	47	75%	9	90%	81	80%
Patient bears the costs of some PMTCT services	3	11%	16	25%	1	10%	20	20%
<b>Patient costs associated with family planning services</b>								
All family planning services are provided without cost	17	61%	29	48%	4	40%	50	50%
Patients bear costs for some services	9	32%	23	38%	5	50%	37	37%
Patients bear costs for all services	2	7%	8	13%	1	10%	11	11%

## PATIENT-PROVIDER RATIO

High patient-provider ratios may negatively affect quality of care. Shortage of manpower is a prevalent challenge, reported to negatively affect HTC services at 32 percent of facilities, PMTCT services at 27 percent of facilities, MNCH services at 42 percent of facilities, and the integration of PMTCT and MNCH services at 70 percent of facilities.

A patient-to-provider ratio was generated using the number of ANC patients seen on the last clinic day prior to data collection and the number of providers (medical officers, nurse/midwife, and nurses) working with ANC patients on the last clinic day prior to data collection. As shown in Table 24, the

median patient-provider ratio was 5.65. In terms of integration, all sites shared staff between ANC and PMTCT programs.

**Table 24. Patient-Provider Ratio, by Site Type**

Patient-Provider Ratio	Primary		Secondary		Tertiary		Overall	
	n	Median	n	Median	n	Median	n	Median
Ratio of patients seen in ANC on last clinic day to providers working in ANC on last clinic day	25	6.13	63	5.25	10	6.29	98	5.65

## TRAINING

Staff training was assessed for each cadre at each facility. The Site Assessment Tool includes a table detailing several different types of relevant training and 11 cadres of health care workers, and the interviewee was asked to respond to whether a member of each cadre had received each type of training in the last year. Training was also a frequent response in open-ended questions about challenges to providing PMTCT and MNCH services. Fifty-seven percent of sites reported that their staff needed training in order improve PMTCT/MNCH integration. Training and retraining on targeted topics may increase providers’ capacity to deliver quality care based on up-to-date evidence.

Our survey indicates that nurse midwives are the most likely cadre to have received training in any area in the past year—38 percent of facilities had nurses who were trained on PMTCT in the past year, 26 percent on HTC, 21 percent on ART, 22 percent on ART in pregnancy, 26 percent on newborn care of HIV-exposed infants, 26 percent on breastfeeding for HIV-positive women, 18 percent on nutrition counseling for positive mothers and children, 18 percent on FP, 23 percent on early infant diagnosis, and 13 percent on other training topics. Medical officers were more likely to have been trained in PMTCT in the past year than other training topics (25 percent of facilities), while pharmacists were most likely to be trained in ART (18 percent), and lab scientists were most likely to be trained in early infant diagnosis (17 percent). Table 25 below provides details on training by cadre and training topic.

**Table 25. Training in the Last Year by Cadre and Training Topic, by Site Type**

Training	Primary		Secondary		Tertiary		Overall	
	n	%	n	%	n	%	n	%
<b>PMTCT</b>								
Any staff	19	68%	37	59%	3	30%	59	58%
Medical officer	3	11%	19	30%	3	30%	25	25%
Nurse/midwife	9	32%	27	43%	2	20%	38	38%
Nurse	4	14%	8	13%	1	10%	13	13%
Community health officer	3	11%	2	3%	0	0%	5	5%
Community health extension worker	8	29%	1	2%	0	0%	9	9%
Pharmacist	2	7%	9	14%	2	20%	13	13%
Pharmacy technician	3	11%	6	10%	0	0%	9	9%
Lab scientist	2	7%	6	10%	0	0%	8	8%
Lab technician	7	25%	1	2%	1	10%	9	9%

Medical record officer/clerk	2	7%	4	6%	0	0%	6	6%
Consultant Ob/Gyn	0	0%	2	3%	0	0%	2	2%

### HIV Testing and Counseling

Any Staff	14	50%	29	46%	4	40%	47	47%
Medical officer	1	4%	5	8%	0	0%	6	6%
Nurse/midwife	5	18%	19	30%	2	20%	26	26%
Nurse	3	11%	6	10%	1	10%	10	10%
Community health officer	4	14%	2	3%	0	0%	6	6%
Community health extension worker	4	14%	3	5%	0	0%	7	7%
Pharmacist	1	4%	4	6%	1	10%	6	6%
Pharmacy technician	2	7%	3	5%	1	10%	6	6%
Lab scientist	2	7%	8	13%	3	30%	13	13%
Lab technician	7	25%	6	10%	0	0%	13	13%
Medical record officer/clerk	0	0%	1	2%	1	10%	2	2%
Consultant Ob/Gyn	1	4%	0	0%	0	0%	1	1%

### ART

Any staff	12	43%	28	44%	5	50%	45	45%
Medical officer	2	7%	12	19%	3	30%	17	17%
Nurse/midwife	7	25%	13	21%	1	10%	21	21%
Nurse	2	7%	6	10%	0	0%	8	8%
Community health officer	3	11%	1	2%	0	0%	4	4%
Community health extension worker	4	14%	1	2%	0	0%	5	5%
Pharmacist	2	7%	13	21%	3	30%	18	18%
Pharmacy technician	0	0%	8	13%	1	10%	9	9%
Lab scientist	2	7%	1	2%	1	10%	4	4%
Lab technician	1	4%	1	2%	0	0%	2	2%
Medical record officer/clerk	1	4%	1	2%	2	2%	4	4%
Consultant Ob/Gyn	0	0%	0	0%	0	0%	0	0%

### ART in Pregnancy

Any staff	12	43%	26	41%	3	30%	41	41%
Medical officer	2	7%	13	21%	1	10%	16	16%
Nurse/midwife	6	21%	16	25%	0	0%	22	22%
Nurse	3	11%	2	3%	0	0%	5	5%
Community health officer	3	11%	0	0%	0	0%	3	3%
Community health extension worker	5	18%	0	0%	0	0%	5	5%
Pharmacist	2	7%	12	19%	1	10%	15	15%
Pharmacy technician	1	4%	4	6%	1	10%	6	6%
Lab scientist	2	7%	0	0%	0	0%	2	2%
Lab technician	1	4%	0	0%	0	0%	1	1%
Medical record officer/clerk	0	0%	0	0%	0	0%	0	0%

Consultant Ob/Gyn	0	0%	0	0%	0	0%	0	0%
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### **Newborn care of HIV-exposed infants**

Any staff	8	29%	24	38%	5	50%	37	37%
Medical officer	0	0%	10	16%	3	30%	13	13%
Nurse/midwife	4	14%	19	30%	3	30%	26	26%
Nurse	2	7%	3	5%	2	20%	7	7%
Community health officer	2	7%	1	3%	0	0%	3	3%
Community health extension worker	4	14%	1	2%	0	0%	5	5%
Pharmacist	0	0%	2	3%	1	10%	3	3%
Pharmacy technician	0	0%	2	3%	1	10%	3	3%
Lab scientist	0	0%	1	2%	1	10%	2	2%
Lab technician	0	0%	1	2%	1	10%	2	2%
Medical record officer/clerk	0	0%	0	0%	2	20%	2	2%
Consultant Ob/Gyn	0	0%	1	2%	2	20%	3	3%

### **Breastfeeding for HIV+ women**

Any staff	10	36%	26	41%	2	20%	38	38%
Medical officer	0	0%	5	8%	2	20%	7	7%
Nurse/midwife	6	21%	19	30%	1	10%	26	26%
Nurse	2	7%	6	10%	0	0%	8	8%
Community health officer	2	7%	0	0%	0	0%	2	2%
Community health extension worker	4	14%	1	2%	0	0%	5	5%
Pharmacist	0	0%	3	5%	1	10%	4	4%
Pharmacy technician	0	0%	4	6%	1	10%	5	5%
Lab scientist	0	0%	1	2%	1	10%	2	2%
Lab technician	0	0%	1	2%	1	10%	2	2%
Medical record officer/clerk	0	0%	0	0%	1	10%	1	1%
Consultant Ob/Gyn	0	0%	0	0%	1	10%	1	1%

### **Nutrition counseling for positive mothers and children**

Any staff	7	25%	16	25%	1	10%	24	24%
Medical officer	0	0%	3	5%	0	0%	3	3%
Nurse/midwife	5	18%	12	19%	1	10%	18	18%
Nurse	1	4%	4	6%	1	10%	6	6%
Community health officer	3	11%	0	0%	0	0%	3	3%
Community health extension worker	2	7%	1	2%	0	0%	3	3%
Pharmacist	0	0%	3	5%	0	0%	3	3%
Pharmacy technician	0	0%	1	2%	0	0%	1	1%
Lab scientist	0	0%	1	2%	0	0%	1	1%
Lab technician	0	0%	1	2%	0	0%	1	1%
Medical record officer/clerk	0	0%	0	0%	0	0%	0	0%
Consultant Ob/Gyn	0	0%	0	0%	0	0%	0	0%

<b>Family planning</b>								
Any staff	11	39%	16	25%	0	0%	27	27%
Medical officer	1	4%	4	6%	0	0%	5	5%
Nurse/midwife	5	18%	13	21%	0	0%	18	18%
Nurse	2	7%	3	5%	0	0%	5	5%
Community health officer	4	14%	2	3%	0	0%	6	6%
Community health extension worker	4	14%	0	0%	0	0%	4	4%
Pharmacist	0	0%	0	0%	0	0%	0	0%
Pharmacy technician	0	0%	0	0%	0	0%	0	0%
Lab scientist	0	0%	1	2%	0	0%	1	1%
Lab technician	0	0%	0	0%	0	0%	0	0%
Medical record officer/clerk	0	0%	0	0%	0	0%	0	0%
Consultant Ob/Gyn	0	0%	0	0%	0	0%	0	0%

<b>Early infant diagnosis</b>								
Any staff	13	46%	32	51%	3	30%	48	48%
Medical officer	2	7%	10	16%	1	10%	13	13%
Nurse/midwife	3	11%	20	32%	0	0%	23	23%
Nurse	1	4%	3	5%	0	0%	4	4%
Community health officer	3	11%	0	0%	0	0%	3	3%
Community health extension worker	3	11%	3	5%	0	0%	6	6%
Pharmacist	0	0%	1	2%	0	0%	1	1%
Pharmacy technician	1	4%	2	3%	0	0%	3	3%
Lab scientist	1	4%	13	21%	3	30%	17	17%
Lab technician	9	32%	13	21%	0	0%	22	22%
Medical record officer/clerk	1	4%	5	8%	0	0%	6	6%
Consultant Ob/Gyn	0	0%	0	0%	0	0%	0	0%

<b>Other training*</b>								
Any staff	8	29%	19	30%	4	40%	31	31%
Medical officer	1	4%	5	8%	1	10%	7	7%
Nurse/midwife	2	7%	9	14%	2	20%	13	13%
Nurse	2	7%	2	3%	0	0%	4	4%
Community health officer	5	18%	1	2%	0	0%	6	6%
Community health extension worker	5	18%	2	3%	0	0%	7	7%
Pharmacist	1	4%	5	8%	1	10%	7	7%
Pharmacy technician	1	4%	1	2%	0	0%	2	2%
Lab scientist	1	4%	3	5%	0	0%	4	4%
Lab technician	1	4%	5	8%	0	0%	6	6%
Medical record officer/clerk	1	4%	3	5%	1	10%	5	5%
Consultant Ob/Gyn	1	4%	1	2%	0	0%	2	2%

\* Examples of other trainings topics include malaria, TB, care support and counseling, injection safety, data quality, referrals,

## SUPERVISION

Supportive supervision promotes quality improvement and may improve the effectiveness of health care services. Facilities were asked to report on the frequency of supervision provided, who provides it, and what a supportive supervision session includes. Almost all sites (97 percent) receive supervision on a regular basis, and the majority (91 percent) has received supervision in the past three months. Among facilities that implement regular supervision, the most common type of supervision is checking records and reports (93 percent), followed by discussing problems that staff have encountered (86 percent), providing feedback on staff performance (66 percent), and observing staff at work (59 percent). Table 26 describes supervision at surveyed sites.

**Table 26. Supervision, by Site Type**

Supervision provided to the clinical nursing staff that provides PMTCT services	Primary		Secondary		Tertiary		Overall	
	n	%	n	%	n	%	n	%
Supervision provided on a regular basis	28	100%	60	95%	10	100%	98	97%
Within past three months	26	93%	54	90%	9	90%	89	91%
Longer than three months ago, but less than six months	2	7%	3	5%	0	0%	5	5%
Longer than six months ago, but less than one year	0	0%	3	5%	1	10%	4	4%
Supervision not provided on a regular basis	0	0%	3	5%	0	0%	3	3% n
<b>Type of supervision provided at the last round of supervision among facilities that provide supervision (Numbers and percentages not mutually exclusive.)</b>								
Observed staff at their work	18	64%	33	55%	7	70%	58	59%
Provided feedback on staff performance	19	68%	39	65%	7	70%	65	66%
Discussed problems that staff have encountered	22	79%	52	87%	10	100%	84	86%
Checked records and reports	25	89%	57	95%	9	90%	91	93%
Other*	3	11%	4	7%	1	10%	8	8%

\* Other types of supervision included brought more registers/record folders (two sites), attended continuing education and coordination meeting (one site), provided critical assessment of patients (one site), suggested possible improvements (one site), provided stipends (one site), administered written test (one site), and on-site training (one site).

## COMMODITIES

As supplies determine the services that facilities are able to render, stockouts of commodities can limit facilities' capacities to deliver effective services. The Site Assessment Tool captures numerous data points on more than 20 drugs and commodities, including whether the facility carries the item, whether it is currently available, and whether the facility stocked out of an item in the past three months. Among the commodities for which we collected data, phlebotomy supplies (lancets) had the fewest facilities experiencing stockouts in the past three months at seven percent, while long-lasting insecticide-treated bed nets (LLINs) had the most stockouts at 39 percent of facilities.

In terms of ARVs, almost all sites carry NVP (99 percent), single combination AZT (95 percent), and AZT+3TC (98 percent). Most sites also carry single combination 3TC (78 percent) and EFV (70 percent). Only a minority of sites carry d4T (26 percent), as this drug is being phased out across the country. For each of the commonly used ARV drugs (NVP, AZT, AZT+3TC, 3TC, and EFV),

between 9-16 percent of facilities experienced stockouts of the drug within the last three months. The current availabilities of the commonly used ARV drugs range from 88 percent for single combination 3TC to 100 percent for EFV.

Close to one-third (33 percent) of facilities report that stockouts and supply challenges are an obstacle in adopting the testing and counseling practices in place at facilities. Nine sites reported that if a woman tests HIV-negative early in pregnancy, they will not retest her later in pregnancy because testing supplies are limited. Data on commodities confirm that stockouts of HIV testing supplies are common. In the past three months, 27 percent of facilities experienced stockouts of Determine, 30 percent experienced stockouts of Unigold, and 30 percent experienced stockouts of Stat Pak. A number of respondents commented that such stockouts lasted over a month.

The most commonly carried FP commodities were condoms (92 percent of sites), oral contraceptive pills (89 percent), and injectables (87 percent). Less commonly carried FP commodities were IUCDs (76 percent) and implants (53 percent). Percentages of facilities carrying particular FP commodities that experienced stockouts in the past three months ranged from 12 percent (oral contraceptive pills and IUCD) to 36 percent (implants).

Regarding exposed-infant supplies, almost one quarter (23 percent) of sites carrying cotrimoxazole experienced a stockout in the last three months, and at the time of the survey, 11 percent of sites did not have cotrimoxazole currently available. The figures for DBS supplies are similar—23 percent experienced stockouts and 11 percent did not have DBS supplies available at the time of the interview. Sixteen percent of facilities had stockouts of NVP syrup for infants in the past three months.

Malaria commodities also faced supply challenges. Among sites that carried the particular items, rapid diagnostic tests for malaria were currently out-of-stock at 17 percent of facilities at the time of the interview, LLINs were currently out-of-stock at 39 percent of facilities, artemisinin combination therapy was currently out-of-stock at 21 percent of facilities, and sulphadoxine-pyrimethamine (SP)/fansidar was currently out-of-stock at 19 percent of facilities. Rapid diagnostic tests for malaria were a less commonly used commodity, carried by about half (51 percent) of sites.

In comparison with other commodities, phlebotomy supplies (lancets) and needles/syringes had few stockouts in the past 3 months, at 7 percent and 9 percent of facilities, respectively.

Table 27 describes commodity supply and availability at surveyed sites.

**Table 27. Commodity Supply and Availability, by Site Type**

Commodity Supply and Availability	Primary		Secondary		Tertiary		Overall	
	n	%	n	%	n	%	n	%
<b>ARVs</b>								
<b>Nevirapine</b>								
Carry the item	27	97%	63	100%	10	100%	100	99%
Currently available, among sites that carry item	27	100%	60	95%	10	100%	97	97%
Stockout in last three months, among sites that carry item	2	7%	10	16%	2	20%	14	14%
Site does not carry item, among all sites	1	4%	0	0%	0	0%	1	1%
<b>AZT</b>								
Carry the item	28	100%	58	92%	10	100%	96	95%
Currently available, among sites that carry item	24	86%	52	90%	10	100%	86	90%
Stockout in last three months, among sites that carry item	5	18%	8	14%	1	10%	14	15%
Site does not carry item, among all sites	0	0%	5	8%	0	0%	5	5%
<b>AZT+3TC</b>								
Carry the item	27	96%	62	98%	10	100%	99	98%
Currently available, among sites that carry item	26	96%	61	98%	10	100%	97	97%
Stockout in last three months, among sites that carry item	0	0%	10	16%	1	10%	11	11%
Site does not carry item, among all sites	1	4%	1	2%	0	0%	2	2%
<b>3TC</b>								
Carry the item	20	71%	49	78%	9	90%	78	77%
Currently available, among sites that carry item	17	85%	43	88%	8	100%	68	88%
Stockout in last three months, among sites that carry item	4	20%	8	16%	0	0%	12	16%
Site does not carry item, among all sites	8	29%	14	22%	1	10%	23	22%
<b>EFV</b>								
Carry the item	11	39%	50	79%	10	100%	71	70%
Currently available, among sites that carry item	11	100%	50	100%	10	100%	71	100%
Stockout in last three months, among sites that carry item	0	0%	3	6%	3	30%	6	9%
Site does not carry item, among all sites	17	61%	13	21%	0	0%	30	3000%
<b>d4T</b>								
Carry the item	3	11%	18	29%	4	40%	25	25%
Currently available, among sites that carry item	2	67%	8	44%	2	50%	12	48%

Stockout in last three months, among sites that carry item	1	33%	11	61%	2	50%	14	56%
Site does not carry item, among all sites	25	89%	44	71%	6	60%	75	75%

### HIV Testing Commodities

#### Determine

Carry the item	28	100%	63	100%	10	100%	101	100%
Currently available, among sites that carry item	25	89%	60	95%	10	100%	95	94%
Stockout in last three months, among sites that carry item	8	29%	15	24%	4	40%	27	27%
Site does not carry item, among all sites	0	0%	0	0%	0	0%	0	0%

#### Unigold

Carry the item	28	100%	62	98%	10	100%	100	99%
Currently available, among sites that carry item	26	93%	51	82%	10	100%	87	87%
Stockout in last three months, among sites that carry item	4	14%	23	37%	3	30%	30	30%
Site does not carry item, among all sites	0	0%	1	2%	0	0%	1	1%

#### Stat pak

Carry the item	27	96%	58	92%	10	100%	95	94%
Currently available, among sites that carry item	23	85%	51	88%	9	90%	83	87%
Stockout in last three months, among sites that carry item	5	19%	19	33%	4	40%	28	30%
Site does not carry item, among all sites	1	4%	5	8%	0	0%	6	6%

#### Viral reagents for other HIV assays

Carry the item	0	0%	10	16%	3	30%	13	13%
Currently available, among sites that carry item	n/a	n/a	8	80%	3	100%	11	85%
Stockout in last three months, among sites that carry item	n/a	n/a	3	30%	1	33%	4	31%
Site does not carry item, among all sites	28	100%	53	84%	7	70%	88	87%

### Family Planning Commodities

#### Condoms

Carry the item	21	84%	52	98%	7	78%	80	92%
Currently available, among sites that carry item	18	86%	48	92%	7	100%	73	91%
Stockout in last three months, among sites that carry item	2	10%	12	24%	0	0%	14	18%
Site does not carry item, among all sites	4	16%	1	2%	2	22%	7	8%

#### Injectables

Carry the item	19	76%	48	91%	9	100%	76	87%
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Currently available, among sites that carry item	16	84%	44	92%	8	89%	68	89%
Stockout in last three months, among sites that carry item	5	26%	8	17%	1	11%	14	19%
Site does not carry item, among all sites	6	24%	5	9%	0	0%	11	13%

#### Oral contraceptive pills

Carry the item	19	76%	50	94%	8	89%	77	89%
Currently available, among sites that carry item	18	95%	46	92%	8	100%	72	94%
Stockout in last three months, among sites that carry item	1	5%	8	16%	0	0%	9	12%
Site does not carry item, among all sites	6	24%	3	6%	1	11%	10	11%

#### IUCD

Carry the item	12	48%	45	95%	9	100%	66	76%
Currently available, among sites that carry item	12	100%	41	91%	9	100%	62	94%
Stockout in last three months, among sites that carry item	0	0%	7	16%	1	11%	8	12%
Site does not carry item, among all sites	13	52%	8	15%	0	0%	21	24%

#### Implants

Carry the item	7	28%	31	58%	8	89%	46	53%
Currently available, among sites that carry item	4	57%	28	93%	6	75%	38	84%
Stockout in last three months, among sites that carry item	4	57%	9	30%	3	38%	16	36%
Site does not carry item, among all sites	18	72%	22	42%	1	11%	41	47%

#### Exposed Infant Commodities

##### Cotrimoxazole/Septin

Carry the item	25	89%	63	100%	10	100%	98	97%
Currently available, among sites that carry item	21	84%	56	89%	10	100%	87	89%
Stockout in last three months, among sites that carry item	6	24%	14	22%	3	30%	23	23%
Site does not carry item, among all sites	3	11%	0	0%	0	0%	3	3%

##### DBS supplies

Carry the item	23	82%	57	90%	9	90%	89	88%
Currently available, among sites that carry item	18	78%	52	91%	9	100%	79	89%
Stockout in last three months, among sites that carry item	0	0%	12	21%	8	36%	20	23%
Site does not carry item, among all sites	5	18%	6	10%	1	10%	12	12%

##### Nevirapine syrup for infants

Carry the item	27	96%	63	100%	9	90%	99	98%
Currently available, among sites that carry item	25	93%	60	95%	9	100%	94	95%
Stockout in last three months, among sites that carry item	5	19%	11	17%	0	0%	16	16%
Site does not carry item, among all sites	1	4%	0	0%	1	10%	2	2%

### Malaria Commodities

#### Rapid diagnostic test for malaria

Carry the item	13	46%	35	56%	4	40%	52	51%
Currently available, among sites that carry item	10	77%	29	83%	4	100%	43	83%
Stockout in last three months, among sites that carry item	5	38%	8	24%	2	50%	15	29%
Site does not carry item, among all sites	15	54%	28	44%	6	60%	49	49%

#### Long-lasting insecticide-treated bed nets

Carry the item	25	89%	59	94%	8	80%	92	91%
Currently available, among sites that carry item	16	64%	35	59%	5	63%	56	61%
Stockout in last three months, among sites that carry item	11	46%	30	51%	4	50%	45	49%
Site does not carry item, among all sites	3	11%	4	6%	2	20%	9	9%

#### Artemisinin combination therapy

Carry the item	27	96%	61	97%	9	90%	97	96%
Currently available, among sites that carry item	20	74%	53	87%	4	44%	77	79%
Stockout in last three months, among sites that carry item	8	30%	12	20%	6	67%	26	27%
Site does not carry item, among all sites	1	4%	2	3%	1	10%	4	4%

#### SP/fansidar

Carry the item	25	89%	59	94%	10	100%	94	93%
Currently available, among sites that carry item	19	76%	50	85%	7	70%	76	81%
Stockout in last three months, among sites that carry item	6	24%	11	19%	4	40%	21	23%
Site does not carry item, among all sites	3	11%	4	6%	0	0%	7	7%

### General Commodities

#### Phlebotomy supplies (lancets)

Carry the item	27	96%	62	98%	10	100%	99	98%
Currently available, among sites that carry item	25	93%	59	95%	9	100%	93	95%
Stockout in last three months, among sites that carry item	3	11%	4	7%	0	0%	7	7%

Site does not carry item, among all sites	1	4%	1	2%	0	0%	2	2%
<b>Needles/syringes</b>								
<b>Carry the item</b>	<b>28</b>	<b>100%</b>	<b>62</b>	<b>98%</b>	<b>9</b>	<b>90%</b>	<b>99</b>	<b>98%</b>
Currently available, among sites that carry item	28	100%	59	95%	9	100%	96	97%
Stockout in last three months, among sites that carry item	4	14%	5	8%	0	0%	9	9%
Site does not carry item, among all sites	0	0%	1	2%	1	10%	2	2%



# INTEGRATION ANALYSIS

## LEVEL OF INTEGRATION SCORE METHODOLOGY

A LOI rating system was developed to quantify the degree to which PMTCT services are integrated into MNCH at the site level. A total integration score (0-21 points) was assigned for each facility based on the availability of selected PMTCT services within the context of antenatal care (ANC/labor ward (LW)) facilities. Sites with higher scores were determined to have a higher LOI. The availability of the service was determined through interpreting responses on the Site Assessment Tool. The question numbers from the site assessment tool, as well as the point allocation, are provided.

- **HIV testing and counseling is offered (Q20a)**
  - 1 point was awarded if HIV testing and counseling was offered during routine hours *within the ANC anytime during regular clinic hours*; 0.5 points awarded if offered *within the ANC limited to certain designated hours*; and 0 points awarded for the service being offered *elsewhere on-site or not offered on-site*.
- **Psychosocial counseling is offered (partner disclosure, stigmatization) (Q30a)**
  - 1 point was awarded if offered during routine hours *within the ANC anytime during regular clinic hours*; 0.5 points awarded if offered *within the ANC limited to certain designated hours*; and 0 points awarded for the service being offered *elsewhere on-site or not offered on-site*.
- **Family planning counseling (Q36a)**
  - 1 point was awarded if offered during routine hours *within the ANC anytime during regular clinic hours*; 0.5 points awarded if offered *within the ANC limited to certain designated hours*; and 0 points awarded for the service being offered *elsewhere on-site or not offered on-site*.
- **ARV prophylaxis for PMTCT with single dose NVP for mothers (SDN) (Q14a)**
  - 1 point was awarded if offered during routine hours *within the ANC anytime during regular clinic hours*; 0.5 points awarded if offered *within the ANC limited to certain designated hours*; and 0 points awarded for the service being offered *elsewhere on-site or not offered on-site*.
- **ARV prophylaxis for PMTCT with more efficacious combinations including dual and triple ART (Q15a) *regular clinic hours*;**
  - 0.5 points awarded if offered *within the ANC limited to certain designated hours*; and 0 points awarded for the service being offered *elsewhere on-site or not offered on-site*.

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- **ARV prophylaxis for infants (sdNVP or AZT) (Q17a)**
  - 1 point was awarded if offered during routine hours *within the ANC anytime during regular clinic hours*; 0.5 points awarded if offered *within the ANC limited to certain designated hours*; and 0 points awarded for the service being offered *elsewhere on-site or not offered on-site*.
- **Infant-feeding counseling for positives (Q82a)**
  - 1 point was awarded if offered during routine hours *within the ANC anytime during regular clinic hours*; 0.5 points awarded if offered *within the ANC limited to certain designated hours*; and 0 points awarded for the service being offered *elsewhere on-site or not offered on-site*.
- **Infant formula supplied or subsidized to HIV-positive women (Q85a)**
  - 1 point was awarded if offered during routine hours *within the ANC anytime during regular clinic hours*; 0.5 points awarded if offered *within the ANC limited to certain designated hours*; and 0 points awarded for the service being offered *elsewhere on-site or not offered on-site*.
- **Blood for CD4 count drawn for positives (Q39a)**
  - 2 points were awarded if offered during routine hours *within the ANC anytime during regular clinic hours*; 1 point awarded if offered *within the ANC limited to certain designated hours*; and 0 points awarded for the service being offered *elsewhere on-site or not offered on-site*.
- **Results of CD4 returned to patients on-site (Q42)**
  - 2 points were awarded if offered during routine hours *within the ANC anytime during regular clinic hours*; 1 point awarded if offered *within the ANC limited to certain designated hours*; and 0 points awarded for the service being offered *elsewhere on-site or not offered on-site*.
- **Treatment and support options discussed with women eligible for treatment on-site (Q43a)**
  - 1 point was awarded if offered during routine hours *within the ANC anytime during regular clinic hours*; 0.5 points awarded if offered *within the ANC limited to certain designated hours*; and 0 points awarded for the service being offered *elsewhere on-site or not offered on-site*.
- **ART offered to eligible women for their own health (not PMTCT) (Q44a)**
  - 2 points were awarded if offered during routine hours *within the ANC anytime during regular clinic hours*; 1 point awarded if offered *within the ANC limited to certain designated hours*; and 0 points awarded for the service being offered *elsewhere on-site or not offered on-site*.
- **Exposed infant evaluation conducted in ANC/MNCH on a regular schedule (Q63a)**
  - 2 points were awarded if offered during routine hours *within the ANC anytime during regular clinic hours*; 1 point awarded if offered *within the ANC limited to certain designated hours*; and 0 points awarded for the service being offered *elsewhere on-site or not offered on-site*.

- **DBS for HIV detection in infants done between 4-6 weeks of age (Q64a)**
  - 2 points were awarded if offered during routine hours *within the ANC anytime during regular clinic hours*; 1 point awarded if offered *within the ANC limited to certain designated hours*; and 0 points awarded for the service being offered *elsewhere on-site or not offered on-site*.
- **Adherence support is available to mother/infant pairs (Q74a)**
  - 1 point was awarded if offered during routine hours *within the ANC anytime during regular clinic hours*; 0.5 points awarded if offered *within the ANC limited to certain designated hours*; and 0 points awarded for the service being offered *elsewhere on-site or not offered on-site*.
- **Cotrimoxazole offered to exposed infants (Q70a)**
  - 1 point was awarded if offered during routine hours *within the ANC anytime during regular clinic hours*; 0.5 points awarded if offered *within the ANC limited to certain designated hours*; and 0 points awarded for the service being offered *elsewhere on-site or not offered on-site*.

## RELATIONSHIP BETWEEN FACILITY TYPE AND LEVEL OF INTEGRATION

The median integration score was seven [range 1.5 (low LOI) – 17 (high LOI)]. For primary health care facilities, the median LOI was 7.25 with a range of 1.5 to 17. For secondary health care facilities, the median LOI was eight with a range of 1.5 to 17. For tertiary health care facilities, the median was five with a range of 2 to 13. Differences between primary, secondary, and tertiary facilities were not statistically significant ( $p < 0.05$ ).

Overall, tertiary facilities scored lower on the LOI scale than their primary and secondary counterparts. While tertiary facilities generally offer more services than primary and secondary facilities, their services tend to be less integrated. Larger tertiary facilities are more likely to have multiple departments where they provide services, whereas smaller facilities are more likely to offer their services in the same location due to space and resource constraints. For example, 43 percent of all primary facilities earned one point for providing ARV prophylaxis for infants within ANC, while 90 percent of tertiary facilities earned zero points for providing this service within the pharmacy or elsewhere on-site. Also, 36 percent of all primary facilities earned two points for sharing CD4 results with patients within ANC, while only 20 percent of tertiary facilities earned two points for this service. Finally, 39 percent of all primary facilities earned one point for dispensing cotrimoxazole within ANC, while 90 percent of tertiary facilities earned zero points for providing the service within the pharmacy or elsewhere on-site.

## QUALITY INDICATORS

Process and outcome indicators were collected from facility registers at 100 sites. The purpose of collecting these indicators was to explore statistical associations between the LOI score (the level of integration of PMTCT and MNCH service delivery) and key indicators within the PMTCT cascade. For example, the analysis may show an association between LOI and maternal receipt of HTC, receipt of ART for prophylaxis, or receipt of ART for the woman's health. These findings would then be used

to identify specific aspects of PMTCT/MNCH service integration that could improve uptake of PMTCT services and, ultimately, health outcomes for HIV-positive pregnant women and HIV-exposed infants. Program planners, implementers, and health care workers could use this information to develop evidence-based strategies to improve access to PMTCT services in all levels of health facilities and the community in Nigeria.

The assessment team collected 30 indicators from registers, six of which were used only as denominators for the other indicators. Patient-level data was not collected, as data collectors gathered summary data at the site level using PMTCT summary forms and other forms provided by facilities. These site-level data were related to ANC, labor and delivery, HIV testing, PMTCT and ART, and FP services at the 101 selected facilities. Data quality reviews revealed that most of the indicators had issues such as missing data and proportions greater than one. Of the 24 indicators to be used in the analysis, all were missing data from at least one facility and twelve were missing data from more than 50 facilities. Nineteen indicators contained numerators that were larger than the denominators, therefore yielding proportions greater than one. The assessment team requested data from implementing partners, with clarifications on each indicator and requests for explanations where no data exists; however, the same issues were encountered. Due to our inability to use the vast majority of this data, we were not able to complete the LOI/quality analysis.

## **SPECIFIC DATA QUALITY CONCERNS**

- *Outreach clients were included in the numerator but not in the denominator.* For example, when calculating the percentage of women who received pre-test counseling at ANC, the numerators included all pregnant women receiving pre-test counseling including women served during community outreaches who were not registered with ANC, while the denominator may have only included those pregnant women who were registered with ANC.
- *Infants who were not born in the facility were included in the numerator but not in the denominator.* For example, when calculating the percentage of HIV-exposed infants who received any ARV prophylaxis, facilities provided a numerator that includes all infants served regardless of whether or not they were born at the facility, while providing a denominator that only includes infants born at the facility.
- *Double-counting in the numerator.* For example, some women tested more than once and were therefore counted more than once in the numerator for percentage of women who have an HIV test result at ANC.
- *Numerators and denominators with incompatible timeframes.* For example, when calculating the percentage of HIV-positive pregnant women who were fully immunized for tetanus, the numerator included women who were fully immunized for tetanus during the August 2011 to July 2012 timeframe, while the denominator included all new HIV-positive pregnant clients during the August 2011 to July 2012 timeframe. Therefore, it is possible that the numerator included HIV-positive pregnant women who were fully immunized during the timeframe but first became clients prior to August 2011, and were therefore not included in the denominator.

# ASSESSMENT LIMITATIONS

There are several limitations to this analysis. Due to funding limitations, we analyzed data from a small, purposively selected sample of sites. Therefore, findings may not be generalized to all sites in Nigeria. Additionally, questionnaire data may suffer from response bias, as respondents may have over-reported facilities' successes and under-reported perceived failures. For example, respondents may have been reluctant to report practices that deviate from official guidelines. In order to minimize response bias, the assessment team trained data collectors to present non-judgmental attitudes and to assure respondents that their confidential answers would not affect their jobs or their facilities' funding.

An additional limitation of this assessment is the high rate of staff turnover among health care workers in Nigeria. Responses were not stratified based upon length of employment at the particular site. Lastly, as noted above, we were not able to complete the level of integration correlation analysis because of data quality concerns.

Even with these inherent limitations, the results of this assessment can be used to draw some general conclusions about PMTCT services and PMTCT/MNCH integration in Nigeria.



# RECOMMENDATIONS

Based on the data provided in this report, we would like to propose the following recommendations in support of ongoing efforts to improve the effectiveness of Nigeria's PMTCT program and PMTCT/MNCH integration:

## TRAINING

- Provide training and refresher courses to enhance providers' capacity to follow the National PMTCT Guidelines 2010
- Provide training to enhance providers' capacity to integrate services at the site level
- Offer procurement training and enhanced supply chain management for reliable commodities.

## BUILD CAPACITY TO OFFER MORE COMPREHENSIVE SERVICES

- Build capacity to analyze CD4 samples on-site in order to improve the timing of ART as well as women's long-term retention in care
- Build the capacity of primary health care centers to become "comprehensive sites" capable of providing ART, in order to make ART services more accessible
- Build capacity to draw blood for PCR on-site and analyze PCR samples on-site to enhance early infant diagnosis
- Build capacity to provide pediatric TB prevention, screening, care, and treatment services to improve exposed infant health outcomes.

## INVEST ADDITIONAL RESOURCES

- Improve and upgrade facility infrastructure and equipment to enhance service delivery
- Reduce patient loss to follow-up by devoting more human and financial resources toward patient tracking
- Train and retain additional staff to address shortages of manpower. Task-shifting select duties to lower-level staff and/or community health workers may be another strategy for improving human resource constraints.

## **DEVELOP AND IMPLEMENT EFFECTIVE STRATEGIES**

- Provide patient education and community education initiatives to counter religious and cultural barriers to care and healthy practices by using culturally-sensitive methods to encourage service uptake and compliance
- Consider transportation subsidies and community outreach programs to address patients' difficulties in traveling to facilities
- Explore innovative ways to increase partner involvement and disclosure to partners. For example, program planners could consider providing incentives for men to attend ANC with their partners, offering couples counseling and testing in more male-friendly settings, community-level and individual-level communications initiatives to encourage couples testing and counseling, and other targeted strategies.

## **ENHANCE COMMUNITY LINKAGES**

- Facilitate increased and improved linkages between facilities and community-based organizations. These improved linkages may enhance psychosocial support, adherence, compliance, and ultimately, health outcomes.

## **IMPROVE DATA COLLECTION**

- Train and provide refresher courses to health care providers on the proper use of data collection tools
- Emphasize the importance of accurate data collection at regular staff meetings
- If possible, use confidential patient identifiers when documenting receipt of services (such as HIV testing)
- If possible, establish a team of dedicated individuals who conduct routine data checks to ensure the accuracy of monitoring and evaluation data that is collected.

# CONCLUSIONS

Significant strides have been made to increase access to PMTCT services in Nigeria. Efforts to integrate PMTCT and MNCH are well underway and have coincided with increased PMTCT scale-up in community settings. This assessment captured useful information detailing access to PMTCT and MNCH services in Nigeria. Overall, these data reveal that critical services are being offered to pregnant women and their children at most health care facilities. The majority of sites are utilizing the most recent National PMTCT Guidelines (2010) and are providing triple ARV prophylaxis to women early in pregnancy (14 weeks or sooner). The vast majority of sites are also conducting comprehensive assessments and providing appropriate services to exposed infants. However, several areas should be improved to increase access to key services. For example, the integration of HTC and the availability of laboratory-based services should increase to improve access to timely HIV diagnosis and linkage to care.

Integration of PMTCT and MNCH is a strategy that has been found to increase access to and quality of HIV care. This study found that PMTCT and MNCH integration is highly variable at the selected health facilities, even within each site type. Efforts should be targeted toward improving integration so that women are offered a package of services to increase uptake of PMTCT services and improve health outcomes for HIV-positive pregnant women and exposed infants.



# REFERENCES

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# ANNEX A. SITE ASSESSMENT TOOL

## SITE ASSESSMENT FORM

### GENERAL INSTRUCTIONS

To maximize the information gained from this tool please interview the most experienced health worker involved in managing pregnant women and child health services (e.g., nurses, clinical and medical officers). For some of the questions, you may also need to request information from the operations director, lab technicians, pharmacists, and possibly peer or lay counselors.

Please probe the interviewee until s/he has answered the question or directed you to a more appropriate person who can answer the question. If multiple choice answers are given, please read all of them to the respondent.

### **CONSENT: PLEASE READ THE PARAGRAPHS BELOW TO ALL RESPONDENT(S) AND OBTAIN VERBAL CONSENT TO BE INTERVIEWED**

The purpose of this interview is to obtain an in-depth look at the PMTCT program that this facility provides and the challenges faced by sites attempting to integrate PMTCT with an array of maternal, newborn and child health services. This will help identify trends across sites in the region and areas for technical assistance and support. We are also interested in successes and practices that we can share with other sites.

Your responses will not be connected to your name. If you are unable to answer a question or feel that a colleague has more expertise in a certain area, please let me know and I will direct the question to that person. If at any point you do not understand the question, please tell me and I will try to clarify. Also, you may choose not to answer any question or stop the interview at any time. If you choose not to be interviewed, your job will not be affected. The interview will take about two hours to complete. Do you have any questions?

Are you willing to be interviewed?

- Yes
- No

Please read the consent option to all respondents listed.

## I. FACE SHEET

1. Date of Visit (DD/MM/YY) \_\_\_\_/\_\_\_\_/\_\_\_\_

2. Interviewer Name:
3. Team Number: \_\_\_\_
4. State:

Respondent Name (optional)	Cadre (choose one from the list) Medical Officer Nurse/ Midwife Nurse Community Health Officer- PHCs Community Health Extension Worker-PHCs Pharmacist Pharmacy Technician Lab Scientist Lab Technician Medical Record Officer/ Clerk Consultant OB/GYN	Title	Phone Number (optional)

5. Local Government Area:
6. Assessment Result Code:
  - Completed all forms
  - Partially completed forms: following form(s) missing: \_\_\_\_\_
  - Other (describe)

## 2. GENERAL SITE CHARACTERISTICS

7. Site type: *(Tick one)*
  - Tertiary health care facility
  - Secondary health care facility
  - Primary health care facility
  - Dispensary
8. What is this site's main source of funding? *(Tick one)*
  - Public (Government)
  - Private
  - Faith-based
  - Nongovernmental

- Foreign government donor (indicate source):
- Do not know
- Other (describe):

9. Setting: (Tick one)

- Urban (cities, large towns)
- Rural (farming villages)
- Peri-urban or suburban (areas surrounding a large city)

Sections 3-7 and 11-13 Suggested Respondent: PMTCT Focal Person

### 3. PMTCT GUIDELINES/PROTOCOLS

10. What guidelines for PMTCT does this site use? (Tick only **one**. Verify by asking for a copy of the guidelines. If they cannot produce a copy, please indicate in question 9a.)

- National PMTCT Guidelines 2007
- National PMTCT Guidelines 2010
- Donor Guidelines (donor?)
- Guidelines developed by this site (obtain a copy)
- Other (describe):

Comments:

11. Could the site produce guidelines for verification?

- Yes
- No

12. When (*in what month and year*) was PMTCT first initiated at this site?

\_\_\_\_/\_\_\_\_

Month/Year

13. Please tell me what the availability of each of the following ARV supplies is now and what it has been in the last three months (*circle the appropriate responses and comment as needed*).

Drug/item	Does the site carry this item? (Circle one)	If yes, the site carries this item...		Comments
		Is the item currently available? (Circle one)	Has there been a stockout in last 3 months? (Circle one)	

a. Nevirapine	Yes / No	Yes / No	Yes / No	
b. AZT (zidovudine)	Yes / No	Yes / No	Yes / No	
c. AZT + 3TC (combivir)	Yes / No	Yes / No	Yes / No	
d. 3TC (lamivudine)	Yes / No	Yes / No	Yes / No	
e. EFV (stocrin efavirenz)	Yes / No	Yes / No	Yes / No	
f. d4T (stavudine)	Yes / No	Yes / No	Yes / No	

14.

15. How long does it take to receive an order for ARVs after being placed? (*Tick one*)

- Within 1 week
- From 8 days to 2 weeks
- From 15 days to 1 month
- More than a month
- More than 3 months
- Other (describe): \_\_\_\_\_

16. The table below includes ARV prophylaxis regimens (*show the table to the respondent*). Are the following regimens offered to HIV-positive pregnant women who **do not** meet the criteria for ART for their own health?

	Please circle one (either "yes" or "no")	
	Yes	No (skip to 13d)
a. Triple ARV prophylaxis from 14 weeks or as soon as possible when the woman presents late in pregnancy, labor, or delivery. <b>If "no", skip to 13d.</b>		
i. AZT + 3TC + NVP	Yes	No
ii. AZT + 3TC + EFV	Yes	No
iii. AZT + 3TC + LPV/r	Yes	No
iv. AZT + 3TC + ABC	Yes	No
v. TDF + 3TC (or FTC) + EFV	Yes	No
vi. Other (specify):	Yes	No
b. Maternal triple ARV prophylaxis continued until 1 week after cessation of infant's exposure to breast milk	Yes	No
c. Mothers who decide not to breastfeed stop ARV prophylaxis 1 week after delivery	Yes	No
d. AZT from 14 weeks gestation	Yes	No
e. sdNVP at onset of labor	Yes	No
f. AZT+3TC 12 hourly during labor and delivery	Yes	No
g. AZT+3TC 12 hourly for 7 days postpartum	Yes	No
h. AZT from week 28 or AZT+ 3TC from week 34-36	Yes	No
i. Single-dose NVP (sdNVP) + AZT + 3TC at onset of labor	Yes	No
j. AZT + 3TC for 7 days after delivery	Yes	No
k. Other, specify:	Yes	No

17. Why do you use the regimen(s) indicated in the table above? In other words, why do you use one regimen over another?

18. Does the availability of supplies influence which regimen you use?

Yes, explain:

No

Comments:

19. Does this facility offer ARV prophylaxis for PMTCT with sdNVP to mothers? (*Tick yes or no*)

Yes

If yes, when and where is this service offered? (*Tick one*)

Within ANC, anytime during regular clinic hours

Within ANC, limited to certain designated hours

Elsewhere on-site

***(Probe: Can you show me where it is offered?)***

No

Comments:

Yes, data collector verified location by sight

No, data collector did not verify location by sight

If no, is the patient given a written referral for this service? (*Tick yes or no*)

Yes

No

20. Does this facility offer ARV prophylaxis for PMTCT with more efficacious combinations including dual and triple ART? (*Tick yes or no*)

Yes

No

Comments:

If yes, when and where is this service offered? (*Tick one*)

Within ANC, anytime during regular clinic hours

Within ANC, limited to certain designated hours

Elsewhere on-site

***(Probe: Can you show me where it is offered?)***

- Yes, data collector verified location by sight
- No, data collector did not verify location by sight

If no, is the patient given a written referral for this service? (*Tick yes or no*)

- Yes
- No

21. The table below includes ARV prophylaxis regimens. Are the following regimens offered to infants of HIV-positive women who **do not** meet the criteria for ART for their own health?

	<i>Please circle one (either "yes" or "no")</i>	
a. Daily NVP from birth to 6 weeks of age <b>ONLY</b> for both breastfeeding and non-breastfeeding infants	Yes	No
b. For breastfeeding infants, start daily NVP; continue until 1 week after cessation of all exposure to breast milk	Yes	No
c. For non-breastfeeding infants, give daily NVP until 6 weeks of age	Yes	No
d. Single-dose NVP as soon as possible after birth preferably within 72 hours, plus AZT for 6 weeks	Yes	No
e. Other, specify:	Yes	No

22. Why do you use the regimen(s) indicated above? In other words, why do you use one regimen over another?

Does the availability of supplies influence which regimen you use?

- Yes, explain:
- No

Comments:

23. Does the facility offer ARV prophylaxis for infants (sdNVP)? (*Tick yes or no*)

- Yes

If yes, when and where is this service offered? (*Tick one*)

- Within ANC, anytime during regular clinic hours
- Within ANC, limited to certain designated hours
- Elsewhere on-site
- No

*(Probe: Can you show me where it is offered?)*

- Yes, data collector verified location by sight

- No, data collector did not verify location by sight

If no, is the patient given a written referral for this service? (*Tick yes or no*)

- Yes
- No

24. Does this facility determine patient compliance with the use of antiretroviral therapy prophylaxis for the woman and her infant? (*Tick yes or no*)

- Yes
- No

Comments:

If yes, how is patient compliance with the use of antiretroviral therapy prophylaxis for herself and her infant determined? (*Tick all that apply*)

- The patient is asked about adherence at ANC visits/postpartum visits
- Patient prescription/pharmacy records (filled)
- The ANC clinic worker checks ANC card
- Outreach worker asks patient and reports on compliance outside of the visit
- Other (describe):\_\_\_\_\_

## 4. HIV TESTING AND COUNSELING

25. Is HIV testing offered to all women who come for ANC? (*Tick yes or no*)

- Yes
- No (Skip to Section 5 “Family Planning”.)

Comments:

26. Is HIV testing offered to all women who come for ANC during their first prenatal visit? (*Tick yes or no*)

- Yes

If yes, when and where is this service offered? (*Tick one*)

- Within ANC, anytime during regular clinic hours
- Within ANC, limited to certain designated hours
- Elsewhere on-site
- No

Comments:

*(Probe: Can you show me where it is offered?)*

- Yes, data collector verified location by sight
- No, data collector did not verify location by sight

If no, is the patient given a written referral for this service? *(Tick yes or no)*

- Yes
- No

27. Are those women who are tested early in pregnancy and have a negative test result retested? *(Tick yes or no)*

- Yes
- No

Comments:

- If yes, when are they retested? *(Tick one)*
- 3 months and 6 months from the first test (every 12 weeks)
- 3 months and 6 months from the first test (every 12 weeks) AND at labor and delivery
- 6 months from the first test
- 6 months from the first test AND at labor and delivery
- At labor and delivery only
- Other:

22. What testing approach does this facility use for HIV testing and counseling? *(Tick one)*

- Opt-out (HIV testing is offered as part of routine tests in antenatal clinics, the woman has the right to refuse taking the test.)
- Opt-in (women are not automatically tested, but they can request to take the test) If clients opt-in, how is consent obtained? *(Tick one)*
- Written
- Verbal
- Both written and verbal
- Other (describe):\_\_\_\_\_

28. Is pre-test counseling provided? *(Tick yes or no)*

- Yes

If yes, how is pre-test counseling provided? (*Tick all that apply*)

- Individual session
- Group session
- Written information
- Other (describe): \_\_\_\_\_
- If yes, where and when is this service offered? (*Tick one*)
- Within ANC, anytime during regular clinic hours
- Within ANC, limited to certain designated hours
- Elsewhere on-site
- No

Comments:

***(Probe: Can you show me where it is offered?)***

- Yes, data collector verified location by sight
- No, data collector did not verify location by sight

If no, is the patient given a written referral for this service? (*Tick yes or no*)

- Yes
- No

**24. Is post-test counseling provided? (*Tick yes or no*)**

- Yes
- If yes, how is post-test counseling provided? (*Tick all that apply*)
- Individual session
- Group sessions
- Written information
- Other (describe): -

If yes, where and when is this service offered? (*Tick one*)

- Within ANC, anytime during regular clinic hours
- Within ANC, limited to certain designated hours
- Elsewhere on-site
- No

Comments:

*(Probe: Can you show me where it is offered?)*

- Yes, data collector verified location by sight
- No, data collector did not verify location by sight

If no, is the patient given a written referral for this service? *(Tick yes or no)*

- Yes
- No

**25. Is rapid HIV testing used at this site? *(Tick yes or no)***

- Yes

If yes, where and when is this service offered? *(Tick one)*

- Within ANC, anytime during regular clinic hours
- Within ANC, limited to certain designated hours
- Elsewhere on-site

*(Probe: Can you show me where it is offered?)*

- Yes, data collector verified location by sight
- No, data collector did not verify location by sight
- No

If yes and a rapid test is positive, which of these is the confirmatory procedure?

*(Tick all that apply)*

- A second rapid test is conducted
- If second test is negative, a third rapid test is used
- If second test is negative, patient is referred elsewhere for third rapid test
- Where?

If no, what is the reason it is not? \_\_\_\_\_

If no, is the patient given a written referral for this service? *(Tick yes or no)*

- Yes
- No

**26. Where and when do women receive their HIV test results? *(Tick one)***

- Within ANC, anytime during regular clinic hours
- Within ANC, limited to certain designated hours
- Elsewhere on-site

**(Probe: Can you show me where it is offered?)**

- Yes, data collector verified location by sight
- No, data collector did not verify location by sight

29. **27.** Please tell me what the availability of each of the following HIV testing supplies is now and what it has been in the last three months (*circle the appropriate responses and comment as needed*).

Drug/item	Does the site carry this item? (Circle one)	If yes, the site carries this item...		Comments
		Is the item currently available? (Circle one)	Has there been a stockout in last 3 months? (Circle one)	
a. Determine	Yes / No	Yes / No	Yes / No	
b. Unigold	Yes / No	Yes / No	Yes / No	
c. Stat pak	Yes / No	Yes / No	Yes / No	
d. Viral reagents for other HIV assays	Yes / No	Yes / No	Yes / No	

**28.** In what timeframe do women (in ANC or labor and delivery) usually receive their HIV test results? (*Tick one*)

- Same day (if “Same day,” skip question 29).
- Within a week
- Between eight days and one month
- More than a month

Comments:

**29.** If results are not usually received the same day, how do you keep track of and follow-up with women in ANC or labor and delivery who do not return for their results? (*Tick one*)

- No system— we do not follow up
- We keep records on those who do not return for their results but we do not have a system in place for contacting/finding them (*ask to see the records*)

If records kept, tick one:

- Observed
- Not available
- We have a system for tracking and following up (describe):

**30.** Does this site offer psychosocial support to women? (*Tick yes or no*)

- Yes

If yes, where and when is this service offered? (*Tick one*)

- Within ANC, anytime during regular clinic hours
- Within ANC, limited to certain designated hours
- Elsewhere on-site
- No

*(Probe: Can you show me where it is offered?)*

- Yes, data collector verified location by sight
- No, data collector did not verify location by sight

If no, is the patient given a written referral for this service? *(Tick yes or no)*

- Yes
- No

(If “No,” skip to Question 34.)

**31.** If the site offers psychosocial support to women, what kind of psychosocial support is provided? *(Tick all that apply)*

- Support to women who test positive
- Disclosure support
- Other (describe):

**32.** If the site offers psychosocial support to women, what are some of the challenges to providing psychosocial support?

**33.** If the site offers psychosocial support to women, who provides psychosocial support? *(Tick all that apply)*

- PMTCT staff
- Trained peer counselors
- Other (describe): \_\_\_\_\_
- Comments:

**34.** Does this facility routinely offer couples counseling and testing as part of its PMTCT program? *(Tick one)*

- Yes

What challenges have you had with couples counseling and testing?

Do partners show up at couples counseling and testing?

- No

Have you seen an increase in partners getting tested?

- Yes
- No

35. What challenges has the site faced in adopting the testing and counseling practices that are in place here?

## 5. FAMILY PLANNING

36. Is FP counseling offered to every woman who comes for ANC? (*Tick one*)

- Yes

If yes, where and when is this service offered? (*Tick one*)

- Within ANC, anytime during regular clinic hours
- Within ANC, limited to certain designated hours
- Elsewhere on-site
- No

*(Probe: Can you show me where it is offered?)*

- Yes, data collector verified location by sight
- No, data collector did not verify location by sight

If no, is the patient given a written referral for this service? (*Tick yes or no*)

- Yes
- No

(If no, skip to Section 6 “CD4 Testing...”)

- Depends

Comments:

37. What is the most common form of FP method used by women at this facility? (*Tick one*)

- Condoms
- Depo-Provera (the shot)
- Oral contraceptive pills (OCP)
- IUCD
- Implants
- Sterilization / Bilateral tubal ligation (procedure)

Comment:

38. Please tell me what the availability of each of the following FP supplies is now and what it has been in the last three months (*circle the appropriate responses and comment as needed*).

Drug/item	Does the site carry this item? (Circle one)	If yes, the site carries this item...		Comments
		Is the item currently available? (Circle one)	Has there been a stockout in last 3 months? (Circle one)	
a. Condoms	Yes / No	Yes / No	Yes / No	
b. Depo-Provera (the shot)	Yes / No	Yes / No	Yes / No	
c. Oral contraceptive pills (OCP)	Yes / No	Yes / No	Yes / No	
d. IUCD	Yes / No	Yes / No	Yes / No	
e. Implants	Yes / No	Yes / No	Yes / No	
f. Sterilization / Bi lateral tubal ligation	Yes / No	Yes / No	Yes / No	

## 6. CD4 TESTING AND ELIGIBILITY FOR ANTIRETROVIRAL TREATMENT (FOR WOMEN'S HEALTH)

39. Does this facility draw blood for CD4 count on-site? (*Tick yes or no*)

Yes

If yes, where and when is the service offered? (*Tick one*)

Within ANC, anytime during regular clinic hours

Within ANC, limited to certain designated hours

Elsewhere on-site

No

Comments:

(*Probe: Can you show me where it is offered?*)

Yes, data collector verified location by sight

No, data collector did not verify location by sight

If no, is the patient given a written referral for this service? (*Tick yes or no*)

Yes

- No

(If blood is not drawn for CD4 count on-site, skip to question 43.)

**40.** If blood is drawn for CD4 count on-site, does this facility analyze blood samples in a lab on-site? (*Tick yes or no*)

- Yes
- No

Comments:

**41.** If blood is drawn for CD4 count on-site, when are women who are tested told to return for their CD4 count results? (*Tick one*)

- Within one week
- From 8 days to 2 weeks
- From 15 days to 1 month
- More than a month
- Other (describe):
- Comments:

**42.** If blood is drawn for CD4 count on-site, where and when are the results of CD4 returned to patients?

(*Tick one*)

- Within ANC, anytime during regular clinic hours
- Within ANC, limited to certain designated hours
- Elsewhere on-site

*(Probe: Can you show me where it is offered?)*

- Yes, data collector verified location by sight
- No, data collector did not verify location by sight

**43.** Does the facility discuss treatment and support options with women eligible for ART? (*Tick yes or no*)

- Yes

If yes, where and when is this service offered? (*Tick one*)

- Within ANC, anytime during regular clinic hours
- Within ANC, limited to certain designated hours
- Elsewhere on-site

*(Probe: Can you show me where it is offered?)*

- Yes, data collector verified location by sight
- No, data collector did not verify location by sight

If no, is the patient given a written referral for this service? *(Tick yes or no)*

- Yes
- No

**44.** Is ART for women's health provided at this facility? *(Tick yes or no)*

- Yes

If yes, where and when is this service offered? *(Tick one)*

- Within ANC, anytime during regular clinic hours
- Within ANC, limited to certain designated hours
- Elsewhere on-site
- No

*(Probe: Can you show me where it is offered?)*

- Yes, data collector verified location by sight
- No, data collector did not verify location by sight

If no, is the patient given a written referral for this service? *(Tick yes or no)*

- Yes
- No

If ART is not provided at this facility, why not?

*(If ART is not provided, skip the remainder of Section 6.)*

**45.** If ART for women's health is offered here, how long do pregnant women who are positive and who meet the established criteria for ART initiation usually have wait to receive ART at this facility?

*(Tick one)*

- One week or less
- From 8 days to 1 month
- More than a month
- Depends (specify):
- Other (describe):

**46.** If ART for women's health is offered here, do you use CD4 counts as initiation criteria? *(Tick yes or no)*

- Yes

No

If Yes, what CD4 count determines whether you initiate ART? (*Tick one*)

CD4 count of 350 or less

CD4 count of 250 or less

**47.** If ART for women's health is offered here, do you use WHO clinical staging as initiation criteria? (*Tick yes or no*)

Yes

No

**48.** If ART for women's health is offered here, are the following regimens offered to HIV-positive pregnant women who meet the WHO criteria for ART for their own health?

	<i>Please circle one (either "yes" or "no")</i>	
<b>a. Initiate ART irrespective of gestational age If "no", skip to 48b.</b>	Yes	No <b>(skip to 48b)</b>
i. AZT + 3TC + NVP	Yes	No
ii. AZT + 3TC + EFV	Yes	No
iii. AZT + 3TC + LPV/r	Yes	No
iv. TDF + 3TC (or FTC) + EFV	Yes	No
v. Other (specify):	Yes	No
<b>b. Delay initiation of ART until after the first trimester if possible</b>	Yes	No
i. NVP + 2 NRTIs (AZT+ 3TC)	Yes	No
ii. PI (Lopinavir/r) + 2 NRTIs (AZT + 3TC)	Yes	No
iii. EFV + 2 NRTIs (AZT + 3TC)	Yes	No
<b>c. Other, specify:</b>	Yes	No

Why do you use the regimen(s) indicated above? In other words, why do you use one regimen over another?

Does the availability of supplies influence which regimen you use?

Yes, explain:

No

Comments:

## **7. INTEGRATION OF PMTCT WITHIN ANC/MNCH**

**49.** Are referrals that are issued for services offsite tracked within the ANC?

**49a.** What kind of difficulties have you had with referrals?

**50.** Are there any patient costs associated with PMTCT services (ARV prophylaxis, CD4 tests, other special services) for the patient/caregiver? (*Tick one*)

Yes, patients bear the cost of all services

Yes, patients bear some costs

If they bear some costs, which services do patients cover?

If they bear some or all costs, what happens if a person is unable to pay the costs?

No, all PMTCT services are provided without cost

51. Are there any patient costs associated with family planning? (Tick one)

Yes, patients bear the cost of all services

Yes, patients bear some costs

No, all FP services are provided without cost

If they bear some costs, which services do patients cover?

If they bear some or all costs, what happens if a person is unable to pay the costs?

52. What challenges has this facility faced in providing PMTCT services to women who are positive?

53. What challenges has this facility faced in providing MNCH services?

54. Has your facility integrated or tried to integrate PMTCT services within ANC or other programs?  
(Tick one)

Yes

No

If yes, what challenges have you faced in integrating PMTCT services within ANC or other programs?

What areas do you feel need strengthening?

If yes, what kind of assistance might you need to improve integration?

*Sections 8-9 Suggested Respondent: Labor Ward Matron*

## **8. LABOR, DELIVERY, AND POSTNATAL CARE**

55. Is delivery offered here? (Tick yes or no)

Yes

No (skip out of section 8)

Comments:

56. Are basic emergency obstetric care services available for all women in labor and delivery? (Tick yes or no)

Yes

No

Comments:

57. Does this facility have a labor ward? (Tick yes or no)

Yes

No

**58.** Does this facility perform Caesarean sections? (*Tick yes or no*)

Yes

No

If yes, when are Caesarean sections performed at this facility? (*Tick all that apply*)

When mother's life endangered (maternal indications)

When fetus is endangered (fetal indications)

When mother is HIV-positive

Other (describe):

If yes, where and when is this service offered? (*Tick one*)

Within ANC, anytime during regular clinic hours

Within ANC, limited to certain designated hours

Elsewhere on-site

*(Probe: Can you show me where it is offered?)*

Yes, data collector verified location by sight

No, data collector did not verify location by sight

If no, is the patient given a written referral for this service? (*Tick yes or no*)

Yes

No

If yes, how do they obtain this information?

**59.** Are all women of unknown HIV status tested at labor and delivery? (*Tick yes or no*)

Yes

No

Comments:

**60.** Does the labor and delivery staff in this facility know whether women are HIV-positive? (*Tick yes or no*)

Yes

No

**61.** Does the labor and delivery staff adopt any specific procedures when they know women are HIV-positive? (*Tick yes or no*)

Yes

- No

Comments:

If yes, which procedures? *(Tick all that apply.)*

- Elective C-section where possible
- Limit episiotomy
- Limit fetal scalp monitoring
- Limit artificial rupture of membranes
- Other (describe):

## 9. EXPOSED-INFANT CARE

62. How are exposed infants first identified? *(Tick all that apply)*

- First postnatal visit to the MNCH
- Infants of infected mothers have exposure status recorded on their immunization cards and are followed monthly at MNCH clinics
- CHEW identify children who are symptomatic
- Other (describe):

63. Does this site conduct exposed-infant evaluations on a regular schedule? *(Tick yes or no)*

- Yes

If yes, where and when is this service offered? *(Tick one)*

- Within ANC, anytime during regular clinic hours
- Within ANC, limited to certain designated hours
- Elsewhere on-site
- No

*(Probe: Can you show me where it is offered?)*

- Yes, data collector verified location by sight
- No, data collector did not verify location by sight

If no, is the patient given a written referral for this service? *(Tick yes or no)*

- Yes
- No

64. Does this site draw blood (DBS sample) for PCR testing? *(Tick yes or no)*

- Yes

If yes, where and when is this service offered? (*Tick one*)

- Within ANC, anytime during regular clinic hours
- Within ANC, limited to certain designated hours
- Elsewhere on-site
- No

*(Probe: Can you show me where it is offered?)*

- Yes, data collector verified location by sight
- No, data collector did not verify location by sight

If no, is the patient given a written referral for this service? (*Tick yes or no*)

- Yes
- No

If no, is there regular periodic clinical monitoring and diagnostic testing if symptoms develop?

- Yes
- No

(If the site does not draw blood for PCR testing, skip to question 68.)

**65.** If this site draws blood for PCR testing, is PCR analyzed on-site at this facility? (*Tick yes or no*)

- Yes
- No

**66.** If this site draws blood for PCR testing, is the DBS sample taken at the same time as immunization at this facility? (*Tick yes or no*)

- Yes
- No

**67.** If this site draws blood for PCR testing, when is PCR (DBS sample taken) done at this facility? (*Tick all that apply*)

- Between 4 – 6 weeks of age
- Earlier than 18 months if baby is symptomatic
- At 18 months of age

**68.** Does this facility offer serologic testing for exposed infants? (*Tick yes or no*)

- Yes
- No

If yes, when is serologic testing conducted? (*Tick one*)

- At 18 months ONLY
- <18 months if mother's status is unknown ONLY
- Both 18 months and <18 months if mother's status is unknown

69. Does this facility offer postnatal services to **children** born to HIV-positive mothers? (*Tick yes or no*)

- Yes
- No

If yes, what services are offered? (*Tick all that apply*)

- Early antiretroviral therapy
- Treatment adherence support
- Counseling and support for optimizing nutrition and infant and young child feeding
- TB screening and diagnosis
- TB prevention, including isoniazid prophylaxis
- TB management and treatment
- Psychosocial support
- Other (describe):

70. Does this facility offer cotrimoxazole (Septrin) to exposed infants?

- Yes

If yes, where and when is this service offered? (*Tick one*)

- Within ANC, anytime during regular clinic hours
- Within ANC, limited to certain designated hours
- Elsewhere on-site
- No

*(Probe: Can you show me where it is offered?)*

- Yes, data collector verified location by sight
- No, data collector did not verify location by sight

If no, is the patient given a written referral for this service? (*Tick yes or no*)

- Yes
- No

71. Please tell me what the availability of each of the following exposed infant-related items is now and what it has been in the last three months (*circle the appropriate responses and comment, as needed*).

Drug/item	Does the site carry this item? (Circle one)	If yes, the site carries this item...		Comments
		Is the item currently available? (Circle one)	Has there been a stockout in last 3 months? (Circle one)	
a. Cotrimoxazole/ Septrin	Yes / No	Yes / No	Yes / No	
b. DBS supplies	Yes / No	Yes / No	Yes / No	
c. Nevirapine syrup for infants	Yes / No	Yes / No	Yes / No	

72. Are basic newborn care services provided at this facility? (*Tick yes or no*)

- Yes
- No
- If yes, which basic newborn care services? (*Tick all that apply*)
- Immediate thorough drying
- Cord clamping and cutting after the first minutes after birth
- Skin-to-skin contact of the newborn with the mother
- Early initiation of breastfeeding, and exclusive breastfeeding (within 1 hour of delivery)
- Newborns who do not start breathing on their own by one minute after birth receive positive-pressure ventilation with room air by a self-inflating bag and mask
- Eye care
- Vitamin K
- Birth dose of oral polio vaccine (OPV)
- Hepatitis B
- Bacillus Calmette-Guérin (BCG) vaccine
- Other: describe \_\_\_\_\_

73. Does this facility monitor and follow-up on HIV-positive mother-infant pairs? (*Tick yes or no*)

- Yes

If yes, where does the facility monitor and follow-up? (*Tick all that apply*)

- Postpartum clinic
- Pediatric clinic
- Pediatric HIV clinic

- ART clinic
- Nutrition/infant-feeding counseling sessions
- Growth monitoring sites in communities
- Other (describe):
- No

74. Does this facility offer adherence support to mother/infant pairs? (*Tick yes or no*)

- Yes
- No

If yes, when and where is this service offered? (*Tick one*)

- Within ANC, anytime during regular clinic hours
- Within ANC, limited to certain designated hours
- Elsewhere on-site

**(Probe: Can you show me where it is offered?)**

- Yes, data collector verified location by sight
- No, data collector did not verify location by sight

If no, is the patient given a written referral for this service? (*Tick yes or no*)

- Yes
- No

75. What is the follow-up schedule for examining exposed infants postpartum who return to this site? (*Tick one*)

- Monthly from birth
- Two weeks after birth, then monthly
- Every two weeks after birth for six weeks, then monthly
- Other:

76. Does this facility offer immunization for children?

- Yes
- No

If yes, where and when is this service offered? (*Tick one*)

- Within ANC, anytime during regular clinic hours
- Within ANC, limited to certain designated hours

- Elsewhere on-site

*(Probe: Can you show me where it is offered?)*

- Yes, data collector verified location by sight
- No, data collector did not verify location by sight

If no, is the patient given a written referral for this service? *(Tick yes or no)*

- Yes
- No

77. Does this facility offer sick-child services?

- Yes

If yes, where and when is this service offered? *(Tick one)*

- Within ANC, anytime during regular clinic hours
- Within ANC, limited to certain designated hours
- Elsewhere on-site
- No

*(Probe: Can you show me where it is offered?)*

- Yes, data collector verified location by sight
- No, data collector did not verify location by sight

If no, is the patient given a written referral for this service? *(Tick yes or no)*

- Yes
- No

78. Please tell me what the availability of each of the following malaria-related and general items is now and what it has been in the last three months *(circle the appropriate responses and comment, as needed).*

Drug/item	Does the site carry this item? (Circle one)	If <u>yes</u> , the site carries this item...		Comments
		Is the item currently available? (Circle one)	Has there been a stockout in last 3 months? (Circle one)	
a. Rapid diagnostic test for Malaria	Yes / No	Yes / No	Yes / No	
b. Long lasting insecticide-treated nets	Yes / No	Yes / No	Yes / No	
c. Artemisinin Combination therapy	Yes / No	Yes / No	Yes / No	
d. SP/fansidar	Yes / No	Yes / No	Yes / No	
e. Phlebotomy supplies	Yes / No	Yes / No	Yes / No	

(lancets)			
f. Needles/syringes	Yes / No	Yes / No	Yes / No

**Section 10 Suggested Respondent: Pediatric HIV Focal Person**

## 10. INFANT AND YOUNG-CHILD FEEDING

79. Does this facility have a policy on infant and young-child feeding for HIV-positive women?

(Tick yes or no)

Yes

No

If yes, what is the policy? (*Tick one*)

Exclusive breastfeeding

Formula feeding

Mixed feeding (providing a combination of breast milk and other foods)

Other (describe):\_

80. Does this facility have a policy on infant and young-child feeding for women of unknown status?

(Tick yes or no)

Yes

No

If yes, what is the policy? (*Tick one*)

Exclusive breastfeeding

Formula feeding

Mixed feeding (providing a combination of breast milk and other foods)

Other (describe):\_

81. Does this facility provide infant-feeding counseling? (*Tick yes or no*)

Yes

If yes, when is infant-feeding counseling provided? (*Tick all that apply*)

During the antenatal visit

During the postnatal visit

Other (community-based?)

No

Comments:

If yes, who provides infant-feeding counseling? (*Tick all that apply*)

- PMTCT-trained counselors
- Nutritional counselors
- Peer counselors (specify)\_\_\_\_\_
- Other (describe):\_\_\_\_\_

82. Does this facility provide infant-feeding counseling for HIV-positive women? (*Tick yes or no*)

- Yes

If yes, where and when is this service offered? (*Tick one*)

- Within ANC, anytime during regular clinic hours
- Within ANC, limited to certain designated hours
- Elsewhere on-site
- No

*(Probe: Can you show me where it is offered?)*

- Yes, data collector verified location by sight
- No, data collector did not verify location by sight

If no, is the patient given a written referral for this service? (*Tick yes or no*)

- Yes
- No

83. What is the most common infant feeding method chosen by HIV-positive women at this facility? (*Tick one*)

- Exclusive breastfeeding
- Formula feeding
- Mixed feeding (providing a combination of breast milk and other foods)
- Other (describe):\_

84. Does this facility provide follow-up support and lactation management to women who are positive postpartum? (*Tick yes or no*)

- Yes
- No

If yes, where does the facility provide it? (*Tick all that apply*)

- At home through home visitors
- At postnatal care
- Other (describe):\_\_\_\_\_

85. Is infant formula supplied or subsidized to HIV-positive women at this facility? *(Tick yes or no)*

Yes

If yes, how long are mothers supplied with free or subsidized formula? \_\_\_months

If yes, where and when is this service offered? *(Tick one)*

Within ANC, anytime during regular clinic hours

Within ANC, limited to certain designated hours

Elsewhere on-site

No

*(Probe: Can you show me where it is offered?)*

Yes, data collector verified location by sight

No, data collector did not verify location by sight

If no, is the patient given a written referral for this service? *(Tick yes or no)*

Yes

No

*(If infant formula not supplied or subsidized, skip question 86)*

Comments:

86. If infant formula is offered, in the last three months, have there been stockouts on formula? *(Tick yes or no)*

Yes

No

If yes, how often do stockouts of formula occur? *(Tick one)*

Often (every few months or more often)

Occasionally (once or twice a year)

Other (describe):\_\_\_\_\_

87. Does this facility offer vitamin A for children?

Yes

If yes, where and when is this service offered? *(Tick one)*

Within ANC, anytime during regular clinic hours

Within ANC, limited to certain designated hours

Elsewhere on-site

No

*(Probe: Can you show me where it is offered?)*

- Yes, data collector verified location by sight
- No, data collector did not verify location by sight

If no, is the patient given a written referral for this service? *(Tick yes or no)*

- Yes
- No

**88.** Does this facility offer growth monitoring for children?

- Yes

If yes, where and when is this service offered? *(Tick one)*

- Within ANC, anytime during regular clinic hours
- Within ANC, limited to certain designated hours
- Elsewhere on-site
- No

*(Probe: Can you show me where it is offered?)*

- Yes, data collector verified location by sight
- No, data collector did not verify location by sight

If no, is the patient given a written referral for this service? *(Tick yes or no)*

- Yes
- No

## **II. NUTRITION COUNSELING**

**89.** Does this facility offer nutrition counseling? *(Tick yes or no)*

- Yes
- No

If yes, to whom does this facility offer nutrition counseling? *(Tick all that apply)*

- All pregnant women
- All HIV-positive women
- Other (describe):\_\_\_\_\_

If no, does this facility refer women who are HIV-positive elsewhere for nutritional support (e.g., micronutrients)? *(Tick one)*

- Yes (where?) \_\_\_\_\_

No

## 12. COMMUNITY-BASED SERVICES

90A. Does this facility have linkages with community-based organizations?

Yes

No (Skip questions 90, 91, and 93)

90. I'd like to ask about the community-based organizations (CBOs) that this health facility refers HIV-positive women and their infants to for various services.

<b>Does this health facility refer HIV-positive women and their infants to CBOs for...?</b>			
	<b>YES</b>	<b>NO</b>	<b>If yes, please name CBOs:</b>
a. Psychosocial support?	<input type="radio"/>	<input type="radio"/>	
b. Breastfeeding support?	<input type="radio"/>	<input type="radio"/>	
c. Socioeconomic support? Describe:	<input type="radio"/>	<input type="radio"/>	
d. Growth monitoring for infants?	<input type="radio"/>	<input type="radio"/>	
e. Immunization follow-up?	<input type="radio"/>	<input type="radio"/>	
f. Family planning referrals?	<input type="radio"/>	<input type="radio"/>	
g. Any other services? Describe:	<input type="radio"/>	<input type="radio"/>	

91. Next I'd like to ask about the CBOs that refer HIV-positive women and their infants to this facility for various services.

<b>Do CBOs refer HIV-positive women and their infants to this health facility for...?</b>			
	<b>YES</b>	<b>NO</b>	<b>If yes, please name CBOs:</b>
a. Psychosocial support?	<input type="radio"/>	<input type="radio"/>	
b. Breastfeeding support?	<input type="radio"/>	<input type="radio"/>	
c. Socioeconomic support? Describe:	<input type="radio"/>	<input type="radio"/>	
d. Growth monitoring for infants?	<input type="radio"/>	<input type="radio"/>	
e. Immunization follow-up?	<input type="radio"/>	<input type="radio"/>	
f. Family planning referrals?	<input type="radio"/>	<input type="radio"/>	
g. Home-based care?	<input type="radio"/>	<input type="radio"/>	
h. Any other services? Describe:	<input type="radio"/>	<input type="radio"/>	

92. Do you have linkages to community organizations who follow up on women who are lost to follow-up? (*Tick yes or no*)

Yes

No

Comments:

If yes, what kind of women do these community organizations follow-up on?

(Tick all that apply)

- Women who do not return for HIV test results
- Women who do not return for single-dose Nevirapine
- Other (describe)

### 13. STAFFING AND STAFF TRAINING

93. Now I would like to ask about your staffing levels. For each type of health provider, please tell me how many were working in ANC/MNCH and PMTCT on your last clinic day. Then tell me whether each type of staff is shared between ANC and PMTCT.

Staff category	Number		Are staff shared between ANC and PMTCT?	
	No. of ANC/MNCH	No. of PMTCT	YES	NO
a. Medical Officer			○	○
b. Nurse/Midwife or Midwife			○	○
c. Nurse			○	○
d. Community Health Officer- PHCs			○	○
e. Community Health Extension Worker- PHCs			○	○
f. Pharmacist			○	○
g. Pharmacy Technician			○	○
h. Lab Scientist			○	○
i. Lab Technician			○	○
j. Medical Record Officer/Clerk			○	○
k. Consultant OB/GYN			○	○

Staff category (For question 94, ask the respondent to check daily patient count records to determine the number of patients seen in the facility over the last three days.)

94. How many patients were seen at this facility on the last clinic day?

Number of Patients Seen on Last Clinic Day	
ANC/MNCH/RH	PMTCT

95. Did you or any other staff receive training in any of the following topics that I will read to you during the last year? (Ask appropriate staff) Please tell me who received the training — nurses, doctors, midwives, counselors, lab techs, or any other staff members? (Interviewer please tick a box to indicate “yes”. Numbers of staff who received training not necessary).

Staff	Medical Officer	Nurse/ Midwife	Comm. Health Officer- PHCs	Comm. Health Extension	Pharmacist	Pharmacy Technician	Lab Scientist	Lab Technician	Medical Record Officer/ Clerk	Consultant OB/GYN

				Worke r-PHCs						
a. General training in PMTCT service provision										
b. HIV testing and counseling										
c. Basic ART training										
d. Provision of ART in pregnancy										
e. Newborn care of HIV-exposed infants										
f. Breastfeeding for HIV-positive women										
g. Nutrition counseling for positive mothers and children										
h. Family planning										
i. EID/DBS training										
j. Other trainings:										

96. Is supervision/observation for the PMTCT clinical nursing staff offered on a regular basis (*scheduled at regular intervals*)? (*Tick yes or no*)

Yes

If yes, when was the last time supervision was provided to the clinical nursing staff that provides PMTCT services? (*Tick one*)

Within the past three months

Longer than three months ago, but less than six months

Longer than six months ago, but less than one year

No

Comments:

If yes, what kind of supervision was provided at the last round of supervision?

(Tick all that apply)

The supervisor . . .

Observed staff at their work

Provided feedback on your performance

Discussed any problems you have encountered

Checked your records or reports

Other (describe):

# ANNEX B. INDICATOR COLLECTION TOOLS

## INDICATOR COLLECTION TOOL FOR IMPLEMENTING PARTNERS

We are requesting each of the following indicators at the site level for each individual site in the sample.

	Indicator	Denominator	Notes	Suggested Data Source/ Register Question
1	# of new patients in ANC	N/A	This is a denominator rather than an indicator	Unique women listed in the General ANC Register
2	# of women with known HIV+ status in ANC	N/A	This is one of four numbers used to calculate # of pregnant HIV+ women (the four numbers are: # tested HIV+ in ANC, # known HIV+ in ANC, # tested HIV+ in L&D, # new clients known HIV+ in L&D). # of HIV+ pregnant women is used as a denominator for several of our indicators.	General ANC Register HIV Status = Known Pos
3	# of women who received pre- test counseling at ANC	# of new patients in ANC	This should only include women who are registered at ANC-- this should NOT include women who were served during outreach or are not registered at ANC. This should be a count of unique women (even though women may be offered test more than once).	ANC Counseling and Testing Register: Woman Had Pre- Test Counseling - Group=Y OR Individual=Y
4	# of women who accepted HIV test at ANC	# of new patients in ANC	This should only include women who are registered at ANC-- this should NOT include women who were served during outreach or are not registered at ANC. This also does NOT include women tested at L&D. This should be a count of unique women (even though women may be offered test more than once).	ANC Counseling and Testing Register: Women Accepts HIV Test = YES
5	# of women who have an HIV test result at ANC	# of new patients in ANC	This should only include women who are registered at ANC-- this should NOT include women who were served during outreach or are not registered at ANC. This also does NOT include women tested at L&D. This should be a count of unique women (even though women may be offered test more than once).	ANC Counseling and Testing Register: Woman HIV Test = Pos, Neg, or Indeterminate
6	# of women who tested HIV+ at ANC	# of women who have an HIV test result at ANC	This should only include women who are registered at ANC-- this should NOT include women who were served during outreach or are not registered at ANC. This also does NOT include women tested at L&D. This is one of four numbers used to calculate # of pregnant HIV+ women (the four numbers are: # tested HIV+ in ANC, # known HIV+ in ANC, # tested HIV+ in L&D, # new clients known HIV+ in	ANC Counseling and Testing Register: Woman HIV Test = Pos

			L&D). # of HIV+ pregnant women is used as a denominator for several of our indicators.	
7	# of new clients (UNBOOKED WOMEN) who have an HIV test result in L&D	# of women in L&D	We are interested in new clients, and NOT registered clients. Registered clients should already be captured in "# of women who have an HIV test result at ANC."	
8	# of new clients (UNBOOKED WOMEN) who received pre- test counseling in L&D	# of women in L&D	We are interested in new clients, and NOT registered clients. Registered clients should already be captured in "# of women who received pre-test counseling at ANC."	
9	# of new clients (UNBOOKED WOMEN) arriving in L&D with known positive status	# of women in L&D	We are interested in new clients, and NOT registered clients. Registered clients should already be captured in "# of women with known HIV+ status in ANC." This is one of four numbers used to calculate # of pregnant HIV+ women (the four numbers are: # tested HIV+ in ANC, # known HIV+ in ANC, # tested HIV+ in L&D, # new clients known HIV+ in L&D). # of HIV+ pregnant women is used as a denominator for several of our indicators.	PMTCT Delivery Register: New Client = YES AND Time of HIV Diagnosis = Past
10	# of women who tested HIV+ in L&D	# of women in L&D	This indicator should include both registered patients and new clients. This is one of four numbers used to calculate # of pregnant HIV+ women (the four numbers are: # tested HIV+ in ANC, # known HIV+ in ANC, # tested HIV+ in L&D, # new clients known HIV+ in L&D). # of HIV+ pregnant women is used as a denominator for several of our indicators.	PMTCT Delivery Register: Time of HIV Diagnosis = LABOUR
11	# of HIV+ mothers who delivered at the health facility and initiated exclusive breastfeeding	# of HIV+ pregnant women who delivered at the health facility		PMTCT Delivery Registry, Feeding Choice = EBF
12	# of HIV+ pregnant women who delivered at the health facility	N/A		PMTCT Delivery Registry
13	# of HIV+ pregnant women who are receiving triple ARV	# of pregnant HIV+ women (# tested HIV+ in ANC, # known HIV+ in ANC, # tested HIV+ in L&D, # new clients known HIV+ in L&D)	This should include only HIV+ pregnant women who are registered with ANC or who delivered at the facility. This should NOT include outreach. This should include all HIV+ pregnant women receiving triple ARV, regardless of whether they are receiving it for their own health or for prophylaxis only. This should be a count of unique women--women should not be "double counted" across different months, even if they take ARV therapy across different months.	
14	# of HIV+ pregnant women who receive other regimens (not triple and not only sdNVP)	# of pregnant HIV+ women (# tested HIV+ in ANC, # known HIV+ in ANC, # tested HIV+ in L&D, # new clients known HIV+ in L&D)	This should include regimens that are NOT triple ARV and are NOT only sdNVP. This should include only HIV+ pregnant women who are registered with ANC or who delivered at the facility. This should NOT include outreach. This should be a count of unique women--women should not be "double counted" across different months, even if they take ARV therapy across different months.	
15	# of HIV+ pregnant women who received only sdNVP during labor	# of pregnant HIV+ women (# tested HIV+ in ANC, # known HIV+ in ANC, # tested HIV+ in L&D, # new clients	This should include only HIV+ pregnant women who are registered with ANC or who delivered at the facility. This should NOT include outreach.	

		known HIV+ in L&D)		
16	# of HIV-exposed infants	N/A	This should include babies born to HIV+ women registered with ANC, HIV-exposed infants born at the facility, and HIV-exposed infants who were brought to the facility after delivery. This does NOT include outreach.	Child Follow-Up Register
17	# of HIV-exposed infants who received any ARV prophylaxis	# of HIV-exposed infants	This should be a count of unique babies who have received any ARV prophylaxis. This includes sdNVP, daily NVP, NVP+AZT, and AZT only. This does NOT include outreach.	Child Follow-Up Register: ARV = 1, 2, 3
18	# of HIV-exposed infants who received only sdNVP	# of HIV-exposed infants	This does NOT include outreach.	
19	# of HIV-exposed infants who tested HIV PCR positive	# of HIV-exposed infants	This does NOT include outreach.	Child Follow-Up Register
20	# of women visiting FP clinic	N/A		
21	# of women using oral contraceptive pills	# of women visiting FP clinic	# of women visiting FP clinic. This should include women recorded as visiting the FP clinic. This should NOT include outreach.	
22	# of women using injectables	# of women visiting FP clinic	This should include women recorded as visiting the FP clinic. This should NOT include outreach.	
23	# of women using condoms	# of women visiting FP clinic	This should include women recorded as visiting the FP clinic. This should NOT include outreach.	
24	# of women using IUCDs	# of women visiting FP clinic	This should include women recorded as visiting the FP clinic. This should NOT include outreach.	
25	# of women using condoms	# of women visiting FP clinic	This should include women recorded as visiting the FP clinic. This should NOT include outreach.	
26	# of women using implants	# of women visiting FP clinic	This should include women recorded as visiting the FP clinic. This should NOT include outreach.	
27	# of women who have been sterilized	# of women visiting FP clinic	This should include women recorded as visiting the FP clinic. This should NOT include outreach.	
28	# of women using natural family planning methods	# of women visiting FP clinic	This should include women recorded as visiting the FP clinic. This should NOT include outreach.	
29	# of eligible pregnant women receiving two doses of intermittent preventive treatment of malaria	# of pregnant women booked for ANC between 16-36 weeks	This should only include women who are registered at ANC-- this should NOT include women who were served during outreach or are not registered at ANC.	
30	# of pregnant women booked for ANC between 16 - 36 weeks	N/A		
31	# of HIV+ pregnant women receiving at least three doses of intermittent preventive treatment of malaria	# of HIV-positive pregnant women booked for ANC between 16 - 36 weeks  N/A	This should only include women who are registered at ANC-- this should NOT include women who were served during outreach or are not registered at ANC.	
32	# of HIV-positive pregnant women booked for ANC between 16 - 36 weeks	# of pregnant HIV+ women	This should NOT include outreach.	
33	# of HIV+ pregnant women who were fully immunized for tetanus	(# tested HIV+ in ANC, # known HIV+ in ANC, # tested HIV+ in L&D, #		

		new clients known HIV+ in L&D)		
34	# of pregnant women screened for syphilis	# of new patients in ANC	This should only include women who are registered at ANC-- this should NOT include women who were served during outreach or are not registered at ANC.	
35	# of children under one-year old given DPT3 immunizations	# of children under one-year old registered with the facility	This should only include children who are registered with the facility. This should NOT include outreach.	
36	# of children under one-year old registered with the facility	N/A		

## INDICATOR COLLECTION TOOL

Facility:

State:

Local Government Area:

Data Collector Name:

Team Number:

Date:

Special Instructions:

Write “99999” if service not offered - the indicator is not applicable because the facility does not offer that service.

Ex: If the facility does not offer family planning services, write “99999” for *# of HIV+ women who received family planning counseling services*.

Write “88888” if data not captured - the indicator is applicable and the facility offers that service, but the facility does not capture the indicator.

Ex: If the facility offers family planning services but has not kept records, write “88888” for *# of HIV+ women who received family planning counseling services*.

Write “0” if indicator is truly 0 - the indicator is applicable and the facility offers that service, but the indicator is truly 0.

Ex: If the facility offers family planning services and saw 0 family planning patients that month, write “0” for *# of HIV+ women who received family planning counseling services*.

**Please write comments** to describe special situations. For example, if the facility only started to offer PMTCT in Jan 2012, please explain this in the comments. As another example, if an indicator is 0 because the facility experienced stockout of supplies, please explain this.

If any type of summary form(s) is available, collect data for all 12 months.

If **no summary form of any type is available**, focus on collecting Nov 2011 – Apr 2012 first. If you have time, then collect May 2011 – Oct 2011.

# ANNEX C. POWER ANALYSIS

	Indicator	Instructions	May 2011	Jun 2011	Jul 2011	Aug 2011	Sep 2011	Oct 2011	Nov 2011	Dec 2011	Jan 2011	Feb 2011	Mar 2011	Apr 2011
	<b>Source: PMTCT Monthly Summary Form</b>	<b>Copy numbers from the monthly summary form. If the monthly summary form is not available, gather data from the original source</b>												
1	# of antenatal first visit	Original source: General ANC Register Count number of patients listed on the register												
2	# of pregnant women who tested HIV- positive	Original source: ANC Counseling and Testing Register Count number of ticks under <b>Women's HIV Test Result – Pos</b> column												
3	# of pregnant women who received HIV counseling and testing and result	Original source: ANC Counseling and Testing Register Count total number of ticks under <b>Woman's HIV Test Result (Pos, Neg, and Ind)</b> columns												
4	# of HIV+ women who received family planning counseling services	Original source: Maternal Follow-Up Register Count number of ticks under <b>Counselled for FP, Y</b> column												
5	# of HIV+ women who received infant feeding and counseling services	Original source: Maternal Follow-Up Register Count number of ticks under <b>Counselled for Infant Feeding, Y</b> column												

6	Total # of HIV+ pregnant women who received complete course of ARV prophylaxis for PMTCT	Original source: PMTCT ARV Register Count number of ticks under <b>Completed Course of ARV, Yes</b> column												
7	Total # of live births at facility	General Delivery Register												
8	# of live babies born to HIV+ women	Original source: Delivery Register Count number of ticks under <b>Child Status, Alive</b> column												
9	# of HIV PCR results received for babies born to HIV+ women	Original Source: Child Follow-Up Register Count number of total responses under <b>1st PCR, Result (Pos/Neg)</b> column												
10	# of babies born to HIV+ women who tested HIV PCR positive	Original Source: Child Follow-Up Register Count number of "Pos" responses under <b>1st PCR, Result (Pos/Neg)</b>												
	<b>Source: Child Follow-Up Register</b>													
11	# of babies born to HIV+ women who received daily NVP ( <b>code = 1</b> )	Count number of " <u>1</u> " responses under <b>Child Information, **ARV</b> column												
12	# of babies born to HIV+ women who received NVP and AZT ( <b>code = 2</b> )	Count number of " <u>2</u> " responses under <b>Child Information, **ARV</b> column												
13	# of babies born to HIV+ women who received AZT only ( <b>code = 3</b> )	Count number of " <u>3</u> " responses under <b>Child Information, **ARV</b> column												
	<b>Source: Maternal Follow-Up Register</b>													
14	# of HIV+ women visiting FP clinic	Count total number of patients listed on form												
15	# of HIV+ women using no FP method ( <b>code = 1</b> )	Count number of " <u>1</u> " responses under <b>FP Method Used</b> column												
16	# of HIV+ women using	Count number of " <u>2</u> "												

	hormonal FP methods ( <b>code = 2</b> )	responses under <b>FP Method Used</b> column												
17	# of HIV+ women using condoms as FP method ( <b>code = 3</b> )	Count number of “ <u>3</u> ” responses under <b>FP Method Used</b> column												
18	# of HIV+ women using abstinence as FP method ( <b>code = 4</b> )	Count number of “ <u>4</u> ” responses under <b>FP Method Used</b> column												
19	# of HIV+ women using IUD as FP method ( <b>code = 5</b> )	Count number of “ <u>5</u> ” responses under <b>FP Method Used</b> column												
20	# of HIV+ women using other FP method ( <b>code = 6</b> )	Count number of “ <u>6</u> ” responses under <b>FP Method Used</b> column												
	<b>Source: ART Register</b>													
21	# of women receiving ART for their own health	Count number of “ <u>female</u> ” responses under <b>Sex</b> column												
	<b>Source: Consult Staff</b>													
22	# of HIV-positive women with at least 4 visits to the ANC	Consult Staff / ANC Cards												
23	Total # of women identified as eligible for ART	Consult Staff / ANC Cards												
24	# of pregnant women who had received 2 doses of IPT (SP)	Consult Staff / ANC Cards												
25	# of PMTCT clients receiving at least 3 doses of IPT (SP)	Consult Staff / ANC Cards												
26	# of HIV-positive pregnant women who were fully immunized for tetanus	Consult Staff / ANC Cards												
27	# of pregnant women screened for anemia in 3rd trimester	Consult Staff / ANC Cards												
28	# of pregnant women screened for syphilis	Consult Staff / ANC Cards												
29	# of children under 1 year old given DPT3 immunizations	Consult Staff/ Pediatric Health Clinic Cards												
30	# of children under 1 year old served by the facility	Consult Staff/ Pediatric Health Clinic Cards												



# **ANNEX D. SAMPLE OF 101 SELECTED FACILITIES**

No.	Facility	IP	State
1	Awka General Hospital	FHI	Anambra
2	Regina Caeli Hospital	FHI	Anambra
3	Comprehensive Health Centre, Ukpo	IHVN	Anambra
4	Comprehensive Health Centre, Umunya	IHVN	Anambra
5	Immaculate Heart Hospital, Aguleri	CHARIS	Anambra
6	Holy Rosary Hospital, Onitsha	CHARIS	Anambra
7	Onitsha General Hospital	FHI	Anambra
8	St Charles Borromeo Hospital	FHI	Anambra
9	Odoakpu Model Primary Health Centre	FHI	Anambra
10	Oko Community Hospital	FHI	Anambra
11	Immaculate Heart Hospital (Nkpor)	FHI	Anambra
12	Iyi-Enu Hospital	FHI	Anambra
13	St. Martins Obosi	CHARIS	Anambra
14	Nnamdi Azikwe Teaching Hospital Nnewi	IHVN	Anambra
15	Comprehensive Health Centre, Neni	IHVN	Anambra
16	Ekwulobia General Hospital	FHI	Anambra
17	Nkst Clinic Wannune	CIHP	Benue
18	Township Clinic Wannune	CIHP	Benue
19	Nkst Hospital Mkar	CIHP	Benue
20	Gboko General Hospital	FHI	Benue
21	Katsina-Ala General Hospital	FHI	Benue
22	St. Anthony Zakibiam	CHARIS	Benue
23	NKST Hosiptal Zaki Biam	FHI	Benue
24	St. Monicas Hospital, Adikpo	CHARIS	Benue
25	CHC Kartyo	IHVN	Benue
26	St. Mary's Hospital, Okpoga	CHARIS	Benue
27	PHC orokam	IHVN	Benue
28	General Hospital Aliade, Gwer East	IHVN	Benue
29	Oju General Hospital	FHI	Benue
30	NKST Hospital Anyiin	FHI	Benue
31	Bishop Murray medical center, Makurdi	CHARIS	Benue
32	PHC GAKEM	CIHP	Cross River
33	Model Primary Health Center Abuochichie	CIHP	Cross River
34	CATHOLIC MATERNITY HOSPITAL	CIHP	Cross River
35	GH OGOJA	CIHP	Cross River
36	Phc Kakwagom	CIHP	Cross River
37	Chc Okundi	CIHP	Cross River
38	Effraya Primary Health Centre	FHI	Cross River
39	Ofatura Primary Health Centre	FHI	Cross River
40	Obubra General Hospital	FHI	Cross River
41	Ugep General Hospital	FHI	Cross River
42	Akpet Cottage Hospital	FHI	Cross River
43	Akamkpa General Hospital	FHI	Cross River
44	St. Joseph Hospital Akpabuyo	CIHP	Cross River
45	University of Calabar Teaching Hospital	IHVN	Cross River
46	Calabar General Hospital	FHI	Cross River
47	Maitama General Hospital	FHI	FCT
48	PHC Dagiri	IHVN	FCT
49	Gwagwalada Township Clinic	IHVN	FCT
50	fc St Mary's Catholic Hospital	FHI	FCT
51	Wuse General Hospital	FHI	FCT

No.	Facility	IP	State
52	Garki General Hospital	IHVN	FCT
53	Asokoro Distict Hospital	IHVN	FCT
54	Bwari General Hospital	FHI	FCT
55	Kubwa General Hospital	FHI	FCT
56	General Hospital Karshi	IHVN	FCT
57	University of Abuja Teaching Hospital, Gwagwalda	IHVN	FCT
58	Nyanya General Hospital	FHI	FCT
59	Karu Custom Medical Centre	FHI	FCT
60	National Hospital, Abuja	IHVN	FCT
61	PHC BADARAWA	CIHP	Kaduna
62	Phc Barnawa	CIHP	Kaduna
63	St. Gerard's Hospital Kaduna	CHARIS	Kaduna
64	Obi General Hospital	FHI	Nasarawa
65	Awe General Hosiptal	FHI	Nasarawa
66	GEN HOSP GARAKU (KOKONA LGA)	IHVN	Nasarawa
67	GEN HOSP AKWANGA	IHVN	Nasarawa
68	GEN HOSP WAMBA	IHVN	Nasarawa
69	GH NASARAWA EGGON	IHVN	Nasarawa
70	PHC AKWANGA	IHVN	Nasarawa
71	COTTAGE HOSP DOMA	IHVN	Nasarawa
72	GH UKE	IHVN	Nasarawa
73	DASH Lafia	IHVN	Nasarawa
74	MEDICAL CENTER M/GURKU	IHVN	Nasarawa
75	Kachia General Hospital	FHI	Kaduna
76	PHC Masaka	IHVN	Nasarawa
77	PHC Angwan Waje	IHVN	Nasarawa
78	FMC Keffi	IHVN	Nasarawa
79	NMPHC Agwada	IHVN	Nasarawa
80	Badagry General Hospital	FHI	Lagos
81	Ajeromi/Ifelodun General Hospital	FHI	Lagos
82	Orile Agege General Hospital	FHI	Lagos
83	Regina Mundi Clinic	FHI	Lagos
84	Lagos University of Teaching Hospital (LUTH)	APIN	Lagos
85	Redeemed Aid Programme Action Committee CSO (Lagos)	FHI	Lagos
86	Lagos Island Maternity Hospital	FHI	Lagos
87	General Hospital Onikan	APIN	Lagos
88	Iru Primary Health Center	APIN	Lagos
89	Nassarawa General Hospital	FHI	Nasarawa
90	Keana General Hospital	FHI	Nasarawa
91	MCH Donga	MSH	Taraba
92	PHC Mararaba	MSH	Taraba
93	First Refferral Hospital Donga	MSH	Taraba
94	First Refferral Hospital Ibi	MSH	Taraba
95	Mutum Biyu First Referral Hospital	FHI	Taraba
96	First Refferral Hospital Sunkani	MSH	Taraba
97	St. Thomas Ihugh	CHARIS	Benue
98	First Refferral Hospital Gashaka	MSH	Taraba
99	Jalingo Federal Medical Centre	FHI	Taraba
100	Specialist Hospital Jalingo	MSH	Taraba
101	Oban General Hospital	Cross River	Cross River



# ANNEX E. DETAILS ON-SITE REPLACEMENT

## Sites That Were Replaced

No.	Facility	State	IP	Reason Replaced
1	MCH Gashaka	Taraba	MSH	PMTCT services stopped in July 2011 when a focal person was transferred
2	CRCN Health Centre	Taraba	MSH	PMTCT services stopped in 2009 when a focal person was transferred
3	Madek Hospital	Lagos	IHVN	Did not meet minimum requirement of offering ARVs
4	Haruna Ogun Memorial Hospital	Lagos	IHVN	Did not meet minimum requirement of offering ARVs
5	PHC Obussa	Benue	IHVN	Started Feb 2012 and has not yet had any HIV+ pregnant client
6	Barau Dikko Specialist Hospital	Kaduna	IHVN	Inaccessible due to 24-hour curfew in Kaduna
7	Jibrin Maigwari General Hospital	Kaduna	IHVN	Inaccessible due to 24-hour curfew in Kaduna
8	Hajiya Gambo Sawaba Hospital	Kaduna	IHVN	Inaccessible due to 24-hour curfew in Kaduna
9	PHC Babandodo	Kaduna	IHVN	Inaccessible due to 24-hour curfew in Kaduna
10	Ibrahim Abdullai M.H.	Kaduna	IHVN	Inaccessible due to 24-hour curfew in Kaduna
11	General Hospital Makarfi	Kaduna	IHVN	Inaccessible due to 24-hour curfew in Kaduna
12	Ikari General Hospital	Kaduna	IHVN	Inaccessible due to 24-hour curfew in Kaduna
13	PHC Dan Alhaji	Kaduna	IHVN	Inaccessible due to 24-hour curfew in Kaduna
14	Zangon Kataf General Hospital	Kaduna	IHVN	Inaccessible due to 24-hour curfew in Kaduna

**Replacement Sites**

<b>No.</b>	<b>Facility</b>	<b>State</b>	<b>IP</b>
1	First Referral Hospital Sunkani	Benue	FHI
2	NKST Hospital Anyiin	Benue	FHI
3	St. Thomas Ihugh	Benue	CHARIS
4	Orile-Agege General Hospital	Lagos	FHI
5	Ajeromi General Hospital	Lagos	FHI
6	Oban General Hospital	Cross River	FHI
7	General Hospital Doma	Nasarawa	IHVN (MAPS)
8	Dash Nasarawa	Nasarawa	IHVN (MAPS)
9	Uke General Hospital	Nasarawa	IHVN (MAPS)
10	Garuku General Hospital (Kokona)	Nasarawa	IHVN (MAPS)
11	Akwanga General Hospital	Nasarawa	IHVN (MAPS)
12	Akwanga PHC	Nasarawa	IHVN (MAPS)
13	Wamba General Hospital	Nasarawa	IHVN (MAPS)
14	Nasarawa Eggon General Hospital	Nasarawa	IHVN (MAPS)
15	Maraba Garuku Medical Centre	Nasarawa	IHVN (MAPS)

# ANNEX F. RESPONDENT DETAILS

No.	Region	Site Name	Respondent Cadre	Respondent Designation
1	Nasarawa	GH Nasarawa Eggon	Nurse/Midwife	Chief Nursing Officer (CNO)
2			Nurse/Midwife	Assistant CNO
3				
4	Nasarawa	Keana General Hospital	Medical Officer	Medical Superintendent
5			Lab Scientist	HOD Lab services
6			Medical Record Officer/Clerk	M & E Officer
7	Taraba	MCH Donga	Community Health Extension Worker	PMTCT/Immunization Officer
8			Community Health Officer	Officer-in-Charge
9	Taraba	PHC Mararaba	Community Health Extension Worker	PMTCT focal person
10			Community Health Officer	Officer-in-Charge
11			Community Health Extension Worker	Maternity Officer
12	Taraba	First Referral Hospital Donga	Nurse/Midwife	PMTCT Coordinator/In-Charge of ANC
13			Lab Technician	Senior Lab Technician
14			Pharmacy Technician	Staff
15	Taraba	First Referral Hospital Ibi	Nurse/Midwife	CNO/PMTCT Coordinator
16			Medical Officer	Principal Medical Officer
17			Pharmacy Technician	HOD Pharmacy
18	Taraba	Mutum Biyu First Referral Hospital	Nurse/Midwife	CNO/PMTCT Coordinator
19			Medical Record Officer/Clerk	Officer-in-charge
20			Pharmacy Technician	Assistant Pharmacist Officer
21	Taraba	First Referral Hospital Gashaka	Nurse/Midwife	PMTCT Unit Assistant
22			Medical Officer	Principal Medical Officer
23			Lab Scientist	HOD Lab. Services
24	Taraba	Jalingo Federal Medical Centre	Consultant OB/GYN	PMTCT Coordinator
25			Pharmacist	ART Focal Pharmacist
26			Lab Scientist	PMTCT Unit
27	Taraba	Specialist Hospital Jalingo	Medical Officer	Site PMTCT Coordinator
28			Pharmacist	Director Pharmacy unit
29			Nurse/Midwife	CNO in-charge of HCT, Labour and Family Planning, respectively
30	Taraba	First Referral Hospital Sunkani	Medical Officer	Principal Medical Officer
31			Nurse	PMTCT Focal Person
32			Nurse/Midwife	PMTCT Assistant
33	Kaduna	PHC Badarawa	Lab Technician	PMTCT Officer
34			Nurse/Midwife	FP Officer
35	Kaduna	Phc Barnawa	Community Health Officer	PMTCT Focal Person
36	Kaduna	St. Gerard's Hospital Kaduna	Nurse/Midwife	PMTCT Focal Site Coordinator
37			Medical Record Officer/Clerk	M & E Officer
38			Pharmacist	Pharmacist

39	Nasarawa	Obi General Hospital	Nurse/Midwife	PMTCT Focal Person
40			Nurse	FP Officer
41			Pharmacist	Pharmacist
42	Nasarawa	Awe General Hospital	Lab Scientist	PMTCT Focal Person
43			Lab Technician	HCT Focal Person
44			Nurse/Midwife	FP. Site Coordinator
45	FCT Abuja	Karu Custom Medical Centre	Nurse/Midwife	PMTCT Focal Person
46			Pharmacist	Pharmacist
47			Lab Scientist	Lab Scientist
48	Nasarawa	Gen Hosp Garaku (Kokona Lga)	Nurse/Midwife	PMTCT Focal Person
49			Pharmacist	Pharmacist
50			Lab Scientist	Lab Scientist
51	Nasarawa	Gen Hosp Akwanga	Nurse/Midwife	PMTCT In-Charge (Matron)
52			Nurse/Midwife	PMTCT/ANC Nurse
53			Pharmacist	Pharmacist
54	Nasarawa	PHC Akwanga	Community Health Officer	PMTCT Focal Person
55	Nasarawa	Gen Hosp Wamba	Lab Scientist	PMTCT Focal Person
56			Pharmacist	Pharmacist
57			Nurse/Midwife	ANC Matron
58	Nasarawa	Nassarawa General Hospital	Nurse/Midwife	PMTCT Focal Person
59			Pharmacist	Pharmacist
60			Nurse/Midwife	Matron
61	Kaduna	Kachia General Hospital	Nurse/Midwife	PMTCT Focal Person
62			Pharmacist	Pharmacist
63			Lab Scientist	Lab Scientist
64	Benue	Nkst Clinic Wannune	Community Health Officer	CHEW
65			Nurse/Midwife	CNO
66	Benue	Township Clinic Wannune	Nurse/Midwife	CNO
67			Community Health Extension Worker	CHEW
68	Benue	Nkst Hospital Mkar	Nurse/Midwife	CNO
69			Nurse/Midwife	Matron-in-Charge
70	Benue	Gboko General Hospital	Nurse/Midwife	CNO
71			Nurse/Midwife	
72	Benue	Katsina-Ala General Hospital	Nurse/Midwife	CNO
73			Pharmacy Technician	
74	Benue	St. Anthony Zakibiam	Nurse/Midwife	CNO
75	Benue	NKST Hosiptal Zaki Biam	Nurse/Midwife	Focal Person PMTCT
76	Benue	St. Monicas Hospital, Adikpo	Nurse/Midwife	PMTCT Nurse
77			Nurse/Midwife	CNO
78	Benue	CHC Kartyo	Nurse/Midwife	CNO
79	Benue	St. Mary's Hospital, Okpoga	Nurse/Midwife	HOD Maternity Ward
80	Benue	PHC orokam	Community Health Officer	In-Charge
81			Community Health Extension Worker	Pharmacy Technician
82	Benue	General Hospital Aliade, Gwer East	Nurse/Midwife	CNO
83	Benue	Oju General Hospital	Nurse/Midwife	CNO
84	Benue	Bishop Murray medical center, Makurdi	Nurse/Midwife	CNO
85	Nasarawa	Cottage Hosp Doma	Nurse/Midwife	CNO
86	Nasarawa	DASH Lafia	Nurse/Midwife	CNO PMTCT
87			Nurse/Midwife	CNO ANC
88	Benue	NKST Hospital Anyiin	Medical Officer	Medical Officer-in-Charge
89			Lab Technician	HOD Laboratory Services
90			Nurse/Midwife	PMTCT Coordinator

91	Benue	St. Thomas Ihugh	Medical Officer	Site PMTCT Coordinator
92			Nurse/Midwife	PMTCT Assistance
93			Pharmacist	HOD Pharmacy
94	Cross River	St. Joseph Hospital Akpabuyo	Medical Officer	Medical Superintendent
95			Nurse/Midwife	PMTCT Focal Person
96			Medical Record Officer/Clerk	Data Entry clerk
97	Cross River	Model Primary Health Center Abuochichie	Nurse/Midwife	PHC i/C
98			Community Health Officer	PMTCT Focal Person
99	Cross River	Catholic Maternity Hospital	Medical Officer	Medical Superintendent
100			Nurse/Midwife	PMTCT Focal Person
101			Community Health Extension Worker	Assistant PMTCT Focal Person
102	Cross River	GH Ogoja	Nurse/Midwife	PMTCT Focal Person
103			Nurse/Midwife	Head of Labour Ward
104			Nurse/Midwife	Triad Nurse
105	Cross River	Phc Kakwagom	Community Health Officer	PMTCT Focal Person
106			Lab Technician	Lab. Focal Person
107			Community Health Officer	Assistant Chief Community Health Officer
108	Cross River	Chc Okundi	Nurse/Midwife	PMTCT Focal Person
109	Cross River	Effraya Primary Health Centre	Nurse/Midwife	In-Charge
110			Community Health Extension Worker	PMTCT Focal Person
111			Medical Record Officer/Clerk	Medical Records Officer
112	Cross River	Ofatura Primary Health Centre	Community Health Extension Worker	PMTCT Focal Person
113			Community Health Extension Worker	HCT Officer
114			Community Health Extension Worker	
115	Cross River	Obubra General Hospital	Nurse/Midwife	Site Coordinator
116			Medical Officer	Programme Manager
117			Lab Technician	Laboratory Focal person
118	Cross River	Ugep General Hospital	Nurse/Midwife	PMTCT Focal Person
119			Nurse/Midwife	FP/MCH Focal Person
120			Pharmacist	ART Pharmacist
121	Cross River	Akpet Cottage Hospital	Medical Officer	PMTCT Focal person
122			Medical Record Officer/Clerk	M&E Focal person
123			Pharmacy Technician	ART Pharmacist
124	Cross River	Akamkpa General Hospital	Medical Officer	Medical Superintendent
125			Nurse/Midwife	PMTCT Focal person
126			Pharmacist	ART Pharmacist
127	Cross River	PHC Gakem	Community Health Extension Worker	In-Charge
128			Community Health Extension Worker	PMTCT Focal
129	Cross	University of Calabar	Medical Officer	PMTCT Focal Person

	River	Teaching Hospital		
130			Medical Record Officer/Clerk	M&E Officer-in-Charge
131				Program Manager
132	Cross River	Calabar General Hospital	Nurse/Midwife	PMTCT Focal person
133			Medical Officer	ART Clinician
134			Medical Record Officer/Clerk	M&EO
135	Cross River	Oban General Hospital	Nurse/Midwife	PMTCT Focal Person
136			Medical Officer	Medical Superintendent
137	Nasarawa	PHC Masaka	Nurse/Midwife	PMTCT Coordinator
138	Nasarawa	NMPHC Agwada	Community Health Extension Worker	PMTCT Focal Person
139	Nasarawa	FMC Keffi	Nurse/Midwife	PMTCT Focal Person
140			Nurse	Pediatric HIV Focal Person
141			Nurse	NPI Focal Person
142	Nasarawa	PHC Angwan Waje	Community Health Officer	PMTCT Focal Person
143	Lagos	Badagry General Hospital	Nurse/Midwife	HCT Focal Person
144	Lagos	Regina Mundi Clinic	Nurse/Midwife	Matron
145	Lagos	Lagos University of Teaching Hospital (LUTH)	Medical Officer	APIN Site Coordinator
146			Medical Officer	Medical Officer PMTCT
147			Consultant OB/GYN	Pediatric HIV Coordinator
148	Lagos	Redeemed Aid Programme Action Committee CSO (Lagos)	Lab Scientist	PMTCT Coordinator
149			Medical Record Officer/ Clerk	M&E Officer
150	Lagos	Lagos Island Maternity Hospital	Nurse/ Midwife	Voluntary Counsellor
151			Nurse/ Midwife	PMTCT Focal Person
152	Lagos	Iru Primary Health Center	Medical Officer	APIN Site Physician
153			Nurse/Midwife	APEX Matron
154	Lagos	General Hospital Onikan	Medical Officer	PMTCT Focal Person
155			Medical Officer	Pediatric Physician
156			Medical Officer	APIN Site Coordinator
157	Lagos	Orile Agege General Hospital	Nurse/Midwife	Counselor on PMTCT
158			Lab Scientist	HOD Lab
159			Pharmacist	
160	Lagos	Madek Hospital Agege	Nurse/Midwife	PMTCT Focal Person
161			Lab Scientist	HOD
162	Anambra	Awka General Hospital	Nurse/Midwife	Chief Nursing Officer
163			Pharmacist	Senior Pharmacist
164			Nurse	Chief Nursing Officer
165	Anambra	Regina Caeli Hospital	Nurse/Midwife	HIV Counselling and Testing Focal Person
166			Nurse/Midwife	PMTCT Focal Person
167			Pharmacy Technician	Pharmacy Personnel
168	Anambra	Comprehensive Health Centre, Ukpo		Head of Department, Consultant Public Health Physician
169			Nurse/Midwife	Assistant Chief Nursing Officer (A.C.N.O)
170			Nurse/Midwife	Chief Nursing Officer (C.N.O)
171	Anambra	Comprehensive Health Centre, Umunya	Nurse/Midwife	Chief Nursing Officer (C.N.O)
172			Lab Scientist	Second In Command Lab

173			Medical Officer	Doctor
174	Anambra	Immaculate Heart Hospital, Aguleri	Nurse/Midwife	Senior Nursing Sister
175			Medical Officer	ART Doctor
176			Pharmacy Technician	
177	Anambra	Holy Rosary Hospital, Onitsha		Project Manager
178			Nurse/Midwife	HIV Counselor
179			Lab Scientist	Head of Department Lab
180	Anambra	Onitsha General Hospital	Nurse/Midwife	Chief Nursing Officer/PMTCT Focal Person
181			Nurse/Midwife	CNO/Monitoring & Evaluation Personnel
182	Anambra	St. Charles Borromeo Hospital		PMTCT Focal Person
183				Referral Coordinator
184			Pharmacist	Focal Person In Pharmacy
185	Anambra	Comprehensive Health Centre, Neni	Medical Officer	Doctor
186			Medical Officer	Doctor
187			Nurse/Midwife	Senior Nursing Sister
188	Anambra	Oko Community Hospital	Nurse/Midwife	Senior Nursing Sister/PMTCT Focal Person
189			Lab Scientist	
190	Anambra	Immaculate Heart Hospital (Nkpor)	Pharmacist	Focal Pharmacist
191			Nurse/Midwife	Matron
192			Medical Record Officer/Clerk	Monitoring & Evaluation Officer
193	Anambra	Iyi-Enu Hospital	Medical Officer	Project Officer
194			Lab Scientist	Focal Lab Person
195			Pharmacy Technician	Chief Pharmacy Technician
196	Anambra	St. Martins Obosi	Nurse/Midwife	Project Manager
197			Pharmacy Technician	ART Focal Person
198	Anambra	Nnamdi Azikwe Teaching Hospital Nnewi	Nurse/Midwife	Chief Nursing Officer
199			Medical Officer	Doctor
200			Nurse/Midwife	Nursing Sister
201	Anambra	Odoakpu Model Primary Health Centre	Community Health Officer	Director Nursing Service
202	Anambra	Ekwulobia General Hospital	Nurse/Midwife	Chief Nursing Officer
203			Nurse/Midwife	Chief Nursing Officer
204			Lab Scientist	EID/TB Focal Person
205	FCT Abuja	Maitama General Hospital	Nurse/Midwife	Chief Nursing Officer
206			Pharmacist	Pharmacy Officer I
207			Community Health Officer	Principal Com Health Officer
208	FCT Abuja	PHC Dagiri	Nurse/Midwife	Chief Nursing Officer
209			Community Health Extension Worker	SCHEW
210			Lab Scientist	Lab Scientist
211	FCT Abuja	Gwagwalada Township Clinic	Medical Officer	SMO
212			Community Health Extension Worker	CHEW
213			Nurse/Midwife	CNO
214	FCT Abuja	St. Mary's Catholic Hospital	Medical Record Officer/Clerk	Site Coordinator
215	FCT Abuja	Wuse General Hospital	Nurse/Midwife	CNO
216			Pharmacist	PPO
217			Nurse/Midwife	CNO
218	FCT Abuja	Garki General Hospital	Nurse/Midwife	PNO

219				Social Worker
220			Medical Officer	Consultant O/G
221	FCT Abuja	Asokoro Distict Hospital	Consultant OB/GYN	
222			Community Health Officer	ACHO
223			Pharmacist	ART Pharm FP
224	FCT Abuja	Bwari General Hospital	Medical Officer	Site Coordinator for CNO/FP Provider
225			Nurse/Midwife	FP/CHO
226			Nurse/Midwife	CNO
227	FCT Abuja	Kubwa General Hospital	Medical Officer	SMO
228			Community Health Officer	ACNO
229	FCT Abuja	General Hospital Karshi	Nurse/Midwife	CNO
230			Lab Scientist	PMLS
231			Nurse/Midwife	ACNO
232	FCT Abuja	University of Abuja Teaching Hospital, Gwagwalda	Nurse/Midwife	CNO
233			Lab Scientist	LFP/PLMS
234			Nurse/Midwife	CNO
235	FCT Abuja	Nyanya General Hospital	Medical Officer	Site Coordinator
236			Nurse/Midwife	PPO
237			Lab Scientist	MLSI
238	Nasarawa	Medical Center M/Gurku	Nurse/Midwife	CNO I/C Nurse
239			Pharmacist	Chief Pharmacist
240			Lab Scientist	CAMLS
241	FCT Abuja	National Hospital, Abuja	Pharmacist	Chief Pharmacist
242			Nurse/Midwife	CNO
243			Nurse	ACNO
244	Nasarawa	GH UKE	Pharmacy Technician	Chief Pharmacist
245			Nurse/Midwife	CNO
246			Lab Scientist	CNLS

# ANNEX G. PMTCT TREATMENT GUIDELINES AND PROTOCOLS (WHO 2010)

	<b>Pregnancy</b>	<b>Labor</b>	<b>Postpartum (mother)</b>	<b>Postnatal (infant)</b>
2010 Recommendations Option A	AZT after 14 weeks	Single dose Nevirapine; AZT+3TC	AZT+3TC for seven days	Daily NVP until one week after breastfeeding has finished
2010 Recommendations Option B	Triple ARVs after 14 weeks	Triple ARVs	Triple ARVs until one week after breastfeeding has finished	Six weeks of daily NVP
2006 Recommendations	AZT after 28 weeks	Single dose Nevirapine; AZT+3TC for seven days	Single dose Nevirapine; AZT+3TC	AZT for seven days
Alternative (higher risk of drug resistance)	AZT after 28 weeks	Single dose Nevirapine	N/A	Single dose Nevirapine; AZT for seven days
Minimum (less effective)	N/A	Single dose Nevirapine; AZT+3TC	AZT+3TC for seven days	Single dose Nevirapine
Minimum (less effective; higher risk of drug resistance)	N/A	Single dose Nevirapine	N/A	Single dose Nevirapine





**ANNEX H. NIGERIA'S  
NATIONAL GUIDELINES FOR  
THE PREVENTION OF  
MOTHER-TO-CHILD  
TRANSMISSION OF HIV (2010)**

**Table 3.1 Clinical Setting I: Recommendations for pregnant HIV positive women who meet WHO criteria for ART  
Pregnant woman who is ART eligible, but not currently on ART**

**Mother**

- Confirm that ART eligibility criteria are met
  - o CD4 count is  $\leq 350$  cells/mm<sup>3</sup> regardless of WHO clinical stage
  - o WHO Clinical Stage III and IV regardless of CD4 count
- Initiate ART irrespective of gestational age
- Include \*AZT in the regimen whenever possible
  - o Preferred regimen is AZT+3TC+(NVP or EFV\*\*)
  - o Alternative regimen for hepatitis B co-infection is TDF+ (3TC or FTC) + (NVP or \*\*EFV)
- Closely monitor for hepatotoxicity and systemic toxicity ESPECIALLY women on NVP-based regimen.

*\*Avoid AZT if hemoglobin is  $\leq 8$ g/dl or PCV  $\leq 24\%$*

*\*\*EFV-based regimen should NOT be used in the 1st trimester. Women on EFV should be counselled and offered effective contraception after delivery. Use in early pregnancy associated with congenital neural tube defect [potential risk <1%]*

*\*\*\*Women on AZT, 3TC and NVP and found to react to NVP in 1st trimester, stop NVP and replace with a PI (LPV/r, SQV/r, NFV or IDV/r)*

*++When NVP is used in women with CD4 count between 250-350, caution should be exercised.*

**Previous exposure to single-dose Nevirapine**

NVP resistance disappears after 6 months of stopping NVP exposure. Where ARVs are required if NVP was last used:

- < 6 months ago, use PI\* + 2 NRTIs
- > 6 months ago, use:
  - o NVP + 2NRTIs in 1st trimester
  - o EFV + 2NRTIs in 2nd and 3rd trimesters (use CD4 criteria to monitor for virologic failure with alpha response#)
  - o AZT + 3TC + ABC
  - o AZT + 3TC + TDF

*#Alpha response: Check VL 1 month after starting treatment. A drop of  $\geq 1.0$  log<sub>10</sub> suggests that treatment is very likely to succeed.*

**Infant:**

- All infants irrespective of type of feeding should receive daily NVP **from within 72 hours of birth to 6 weeks of age:**
  - o For babies with weight <2,500g, give NVP 10mg or 1ml once daily
  - o For babies with weight  $\geq 2,500$ g, give NVP 15mg or 1.5ml once daily.

**Table 3.2. Clinical Setting II: Recommendations for pregnant HIV positive women who do not meet the criteria for ART**  
**Pregnant HIV positive women who do not meet the criteria for ART**

**1. For facilities with capacity (on-site or by linkage) to provide and monitor triple ARV medication:**

**Mother:**

- Commence triple ARV prophylaxis from 14 weeks or as soon as possible when the woman presents late in pregnancy, labour or delivery. Any of the following combinations is recommended as appropriate:
  - o AZT + 3TC + LPV/r
  - o AZT + 3TC + EFV
  - o AZT + 3TC (or FTC) + EFV
  - o AZT + 3TC + ABC
  - o TDF + 3TC (or FTC) + EFV
- Maternal triple ARV prophylaxis should continue until 1 week after cessation of infant's exposure to breast milk
- Mothers who decide not to breastfeed should stop ARV prophylaxis 1 week after delivery.

*NB: NVP should be avoided in women with CD4 count >350.*

**Infant:**

All infants in this clinical scenario should be given daily NVP from birth to 6 weeks of age.

**Dosage of daily NVP:**

*From birth to 6 weeks of age*

- Birth weight < 2,500g: NVP 10mg (1ml) daily
- Birth weight ≥ 2,500g: NVP 15mg (1.5ml) daily

*From 6 weeks to 6 months of age:*

- NVP 20mg (2ml) daily

*From 6 months to 9 months of age:*

- NVP 30mg (3ml) daily

*From 9 months to 12 months of age:*

- NVP 40mg (4ml) daily.

**2. For facilities with limited capacity (on – site or by referral) to provide and monitor triple ARV medication.**

**Mother**

- AZT from 14 weeks gestation.
- *sd* NVP at onset of labour
- AZT+3TC 12 hourly during labour and delivery
- AZT+3TC 12 hourly for 7 days postpartum

*(NB: If Hb is ≤ 8g/dl (PCV ≤ 24%), avoid AZT and refer to next level of care.)*

**Infant**

**(A)** For breastfeeding infants, start daily NVP; continue until 1 week after cessation of all exposure to breast milk.

**(B)** For non-breastfeeding infants, give daily NVP until 6 weeks of age

*(See Scenario above for NVP dosing)*

Table 3.4. Clinical Setting IV: Recommendations for HIV positive women who are diagnosed or seen for the first time in labor

Pregnant HIV positive women who are diagnosed or seen for the first time in labour

1. For facilities with capacity (on-site or by linkage) to provide and monitor triple ARV medication:

**Mother**

- Triple ARV prophylaxis commencing during labour and continuing until one week after cessation of all breastfeeding.

For details of regimen see clinical setting II.

**NB:** Assessment for eligibility for ART should be done as soon after birth as practicable.

**Infant:**

- Give daily NVP from birth to six weeks of age.

**Dose:**

- Birth weight < 2,500g: NVP 10mg (1ml) daily
- Birth weight ≥ 2,500g: NVP 15mg (1.5ml) daily.

2. For facilities with limited capacity (on-site or by referral) to provide and monitor triple ARV medication.

**Mother:**

• **Intra-partum:**

- o Sd NVP
- o AZT + 3TC 12 hourly as soon as diagnosis is made in labour

- **Postpartum:** AZT + 3TC 12 hourly for one week after delivery

**NB:**

*Determine mother's ART eligibility within 5 days of delivery, and follow appropriate guidelines including referral to ART /Care programme (see Appendix I for WHO Clinical Staging).*

**Infant:**

***If mother is breastfeeding but not yet commenced on ART:***

- Give daily NVP to infants from birth until one week after cessation of all exposure to breast milk.

***If mother is breastfeeding and eventually commenced on ART:***

- Give daily NVP to infants from birth and continue until six weeks after maternal commencement of ART.

***If mother is not breastfeeding:***

- Give daily NVP to infants from birth until 6 weeks of age.

**Dosage of daily NVP:** (See Scenario above for NVP dosing)

Table 3.8 Summary of eligibility criteria for use of ARVs in HIV positive pregnant women Facility where CD4 count is available

**CD4 ≤350 cells/mm<sup>3</sup>**

Start ART regardless of clinical stage

**WHO Clinical stage**

Stage 1

Stage 2

Stage 3

Stage 4

**CD4 >350 cells/mm<sup>3</sup>**

Start ART only if symptomatic (AIDS stage 3 or 4)

Offer ARV prophylaxis

Offer ARV prophylaxis

Commence ART

Commence ART

**Facility where CD4 count is not available**

Refer client or send client's specimen to the nearest centre with CD4 capability

For more information, please visit [aidstar-one.com](http://aidstar-one.com).

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