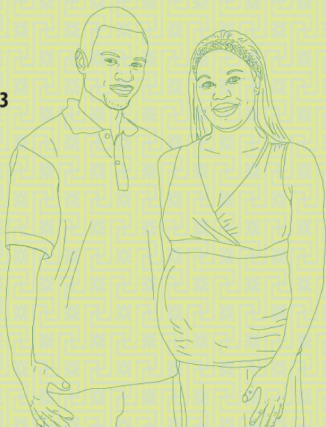




The United Republic of Tanzania
**Ministry of Health
and Social Welfare**

*Prevention of Mother-to-Child
Transmission of HIV*
Pocket Guide

September 2013



This pocket guide is a reference tool for healthcare workers that provides easy access to guidance on prevention, treatment, care, and support services for mothers and families at risk for or infected with HIV. It was developed by FXBT Health for and in collaboration with the Ministry of Health and Social Welfare of the United Republic of Tanzania in May 2013, with support from the US Department of Health and Human Services – Centers for Disease Control and Prevention.

This guide is part of a comprehensive package of PMTCT training materials available online at <http://pmtct.or.tz>.

Table of Contents

<i>Abbreviations and Acronyms</i>	iii
<i>Mother-to-Child Transmission of HIV</i>	5
<i>Tanzania PMTCT Interventions</i>	7
<i>HIV Testing and Counselling (Adults and Adolescents)</i>	8
<i>Types of HIV Tests</i>	9
<i>HIV Testing Guidelines</i>	10
<i>HIV Pre-Test Information</i>	12
<i>HIV Pre-Test Information for Couples</i>	14
<i>HIV Pre-Test Information and Testing in Labour</i>	16
<i>Post-Test Counselling</i>	19
<i>HIV Testing of Infants and Children</i>	21
<i>HIV Testing of Infants and Children: Pre-Test Information</i>	23
<i>HIV Testing of Infants and Children: Post-Test Counselling</i>	24
<i>DBS Specimen Collection</i>	25
<i>Management of the DBS Specimen</i>	30
<i>Antenatal Care</i>	31
<i>WHO Clinical Staging for Adults and Adolescents</i>	32
<i>Antiretroviral Therapy</i>	34
<i>Cotrimoxazole Preventative Therapy (CPT)</i>	36
<i>Care for HIV-Infected Woman During Labour</i>	37
<i>Immediate Postpartum Care of HIV-Infected Women</i>	39
<i>Follow-up Postpartum Care for the Mother</i>	42
<i>Continuation of ART</i>	44
<i>Adherence to ART</i>	44
<i>Family Planning and Safer Sex</i>	46
<i>Opportunistic Infections: Screening and Prophylaxis</i>	48

Immediate Care of the HIV-Exposed Newborn	52
Infant-Feeding Recommendations.....	53
Infant-Feeding Counselling.....	55
Safe Preparation of Commercial Infant Formula.....	57
Feeding From 6-24 Months.....	59
Follow-Up Care of HIV-Exposed Infants.....	60
Assessment of HIV-specific and nonspecific symptoms of illness.....	62
Presumptive diagnosis of HIV infection in an exposed infant.....	63
Infant ARV prophylaxis.....	65
Cotrimoxazole preventive therapy (CPT).....	66
Immunisations.....	67
Vitamin A supplementation.....	67
ART for HIV-Infected Children.....	68
WHO Clinical Staging for Infants and Children.....	70
Creating a Safe Work Environment.....	73
Safe Decontamination of Equipment.....	75
Risk Reduction in the Labour and Delivery Setting.....	76
Steps in Post-Exposure Management.....	77
PMTCT Programme Management.....	81
Organisation of the National PMTCT Programme.....	82
PMTCT commodities management.....	83
Equipment, supplies and medications needed for PMTCT services... 84	
PMTCT programme monitoring and evaluation.....	86
PMTCT monitoring indicators.....	87
Adult Dosing Information.....	89
Paediatric Dosing Information.....	90
Notes.....	92

Abbreviations and Acronyms

3TC	<i>Lamivudine</i>
ABC	<i>Abacavir</i>
AFASS	<i>Acceptable, feasible, affordable, sustainable and safe</i>
AHU	<i>Adolescent Health Unit</i>
AIDS	<i>Acquired immune deficiency syndrome</i>
ANC	<i>Antenatal care</i>
ART	<i>Antiretroviral treatment</i>
ARV	<i>Antiretroviral</i>
ATV/ r	<i>Atazanavir/ ritonavir</i>
AZT	<i>Azidothymidine, also known as zidovudine</i>
BCG	<i>Bacillus Calmette-Guérin</i>
BD	<i>Twice daily</i>
CDC	<i>U.S. Centers for Disease Control and Prevention</i>
CPT	<i>Cotrimoxazole preventive therapy</i>
CTC	<i>Care and Treatment Clinic</i>
TMP-SMX	<i>Cotrimoxazole</i>
d4T	<i>Stavudine</i>
DBS	<i>Dried blood spot</i>
ddI	<i>Didanosine</i>
DNA-PCR	<i>Deoxyribonucleic acid-polymerase chain reaction</i>
DMO	<i>District Medical Officer</i>
DRCHCO	<i>District Reproductive and Child Health Coordinator</i>
EFV	<i>Efavirenz</i>
ELISA	<i>Enzyme-linked immunosorbent assay</i>
EPI	<i>Expanded Program on Immunization</i>
FTC	<i>Emtricitabine</i>
HCW	<i>Healthcare worker</i>
HEID	<i>HIV Early Infant Diagnosis</i>
HIV	<i>Human immunodeficiency virus</i>
HLD	<i>High-level disinfection</i>
HPV	<i>Human papillomavirus</i>
HTC	<i>HIV testing and counselling</i>

IEC	<i>Information, communication and education</i>
IMCI	<i>Integrated management of childhood illnesses</i>
IPT	<i>Isoniazid preventive therapy</i>
LPV/r	<i>Lopinavir / ritonavir</i>
msd	<i>Medical Stores Department</i>
MoHSW	<i>Ministry of Health and Social Welfare</i>
MTCT	<i>Mother-to-child transmission of HIV</i>
NACP	<i>National AIDS Control Program</i>
NGO	<i>Nongovernmental organization</i>
NNRTI	<i>Non-nucleoside reverse transcriptase inhibitor</i>
NRTI	<i>Nucleoside reverse transcriptase inhibitor</i>
NVP	<i>Nevirapine</i>
OI	<i>Opportunistic infection</i>
OPV	<i>Oral polio vaccine</i>
PCP	<i>Pneumocystis pneumonia</i>
PCR	<i>Polymerase chain reaction</i>
PEP	<i>Post-exposure prophylaxis</i>
PI	<i>Protease inhibitor</i>
PLHIV	<i>People living with HIV</i>
PMTCT	<i>Prevention of mother-to-child transmission of HIV</i>
RCH	<i>Reproductive and Child Health</i>
RCHCO	<i>Regional Reproductive and Child Health Coordinator</i>
RNA-PCR	<i>Ribonucleic acid-polymerase chain reaction</i>
sdNVP	<i>Single-dose nevirapine</i>
STI	<i>Sexually transmitted infection</i>
TB	<i>Tuberculosis</i>
TDF	<i>Tenofovir</i>
UNICEF	<i>United Nations Children's Fund</i>
USAID	<i>United States Agency for International Development</i>
VCT	<i>Voluntary counselling and testing</i>
WHO	<i>World Health Organization</i>
ZDV	<i>Zidovudine, the generic name for azidothymidine (AZT)</i>

Mother-to-Child Transmission of HIV

The term “mother-to-child transmission” (MTCT) is used to describe transmission of HIV infection from a pregnant woman to her infant. It is the main cause of HIV infection in infants and children worldwide. MTCT is also referred to as vertical transmission or perinatal transmission.

Definition

PMTCT (prevention of mother-to-child transmission of HIV) is the commonly used term for programmes and interventions designed to reduce the risk of mother-to-child transmission of HIV.

Tanzania’s national PMTCT programme targets prevention of HIV in pregnant women, women of reproductive age and their sexual partners, children, families and communities. The goal of the PMTCT programme is virtual elimination of MTCT of HIV by 2015.

The comprehensive approach to PMTCT recommended in Tanzania consists of four elements:

- ◆ Primary prevention of HIV infection
- ◆ Prevention of unintended pregnancies among women living with HIV
- ◆ Prevention of HIV transmission from mothers to their infants
- ◆ Provision of treatment, care, and support to women living with HIV, their partners, infants and families

MTCT may occur during:

- ◆ *Pregnancy: As the foetus develops, HIV may cross the placenta.*
- ◆ *Labour and delivery: During delivery, the infant is exposed to high volumes of maternal fluids.*

- ◆ *Breastfeeding: Breast milk contains virus that may be transmitted through the infant's digestive tract.*

An infant will not always get HIV from its mother. Of 100 infants born to HIV-infected mothers, without any PMTCT intervention, up to 45 may become infected:

- ◆ *5–10 will become infected during pregnancy.*
- ◆ *10–15 will become infected during labour and delivery.*
- ◆ *5–20 will become infected during breastfeeding.*

Factors increasing risk of MTCT during pregnancy, labour, and breastfeeding:

- ◆ *High HIV viral load (large amount of virus in blood)*
 - *Newly infected with HIV*
 - *Advanced HIV disease (AIDS)*
- ◆ *Placental infection (viral, bacterial, fungal, parasitic)*
- ◆ *Prolonged rupture of membranes during labour (>4hrs)*
- ◆ *Sexually transmitted infections*
- ◆ *Mixed feeding (breastfeeding combined with other foods or fluids) before 6 months of age*
- ◆ *Cracked nipples while breastfeeding or oral disease in the infant*

Tanzania PMTCT Interventions

Major PMTCT interventions take place during:

ANC

- ◆ *HIV counselling and testing*
- ◆ *Antiretroviral treatment (ART), comprehensive care and support for women who are HIV-infected.*

Labour & delivery

- ◆ *HIV testing and counselling during labour and delivery*
- ◆ *ART for the mother and ARV prophylaxis for the infant*
- ◆ *Obstetric interventions during labour and delivery, including safer delivery practices*

On-going RCH care

- ◆ *ART for the mother and ARV prophylaxis for the infant*
- ◆ *Adherence support*
- ◆ *Infant feeding counselling*
- ◆ *Follow-up visits, with comprehensive care and support for women who are living with HIV and their children, including infant/child HIV testing*

HIV Testing and Counselling (Adults and Adolescents)

HIV counselling is a confidential dialogue between an individual and a healthcare worker aimed at enabling the client to make personal decisions about HIV testing in order to know their serostatus.

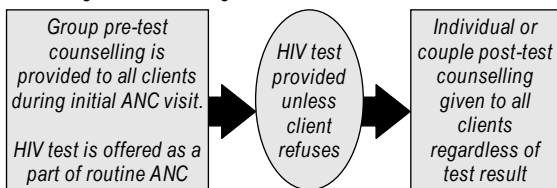
HIV testing is a process that determines if a person is infected with HIV.

The 3 guiding principles of counselling and testing are:

- 1. Confidentiality*
- 2. Informed consent*
- 3. Post-test support and services*

HIV testing and counselling (HTC) should be accessible to all women of childbearing age. The primary advantage of HTC is that it helps people to learn of their HIV status and to make appropriate decisions based on that status.

HIV testing and counselling in ANC



HIV testing and counselling in ANC is provider-initiated and routine

- ◆ HIV testing is offered as a routine part of ANC and RCH services.*
- ◆ All women are given information about HIV, PMTCT and HIV testing and are routinely tested for HIV unless they specifically refuse (opt-out).*

Types of HIV Tests

HIV antibody tests: tests to detect antibodies formed in response to the virus

- ◆ *Rapid tests: Accurate, inexpensive tests that yield a result in less than 30 minutes*
- ◆ *ELISA: Enzyme-linked immunosorbent assay; must be conducted in a laboratory and takes about 2 weeks to obtain results*

Antibody test results may be negative in a recently infected person. There is a “window period” of up to 3 months during which there may not be enough HIV antibodies in the blood to be detected by a standard test.

In Tanzania, the nationally approved HIV rapid testing algorithm for adults and children ≥ 18 months of age utilizes a ‘serial’ testing strategy. That is, a blood sample is tested with one HIV test kit first, and a second test kit is used only when the first HIV test kit revealed an HIV-positive test result.

The actual tests used in the nationally approved HIV testing algorithm may change from time to time, based on the availability of new technologies and assessment of existing technologies.

HIV viral tests: tests to detect presence of virus

- ◆ *Polymerase Chain Reaction (PCR) test:*
 - *DNA PCR—Detects the presence of virus*
 - *RNA PCR—Measures the amount of virus in the blood, also known as the “viral load”*

HIV Testing Guidelines

- ◆ *HIV testing is a routine part of ANC. All clients are provided with pre-test information and HIV testing unless they decline testing. Written informed consent for HIV testing is not required.*
- ◆ *Results are given on the same day, whenever possible, and are entered in the client's ANC card.*
- ◆ *All clients receive individual post-test counselling when they receive their HIV test results.*

Interpreting HIV antibody tests

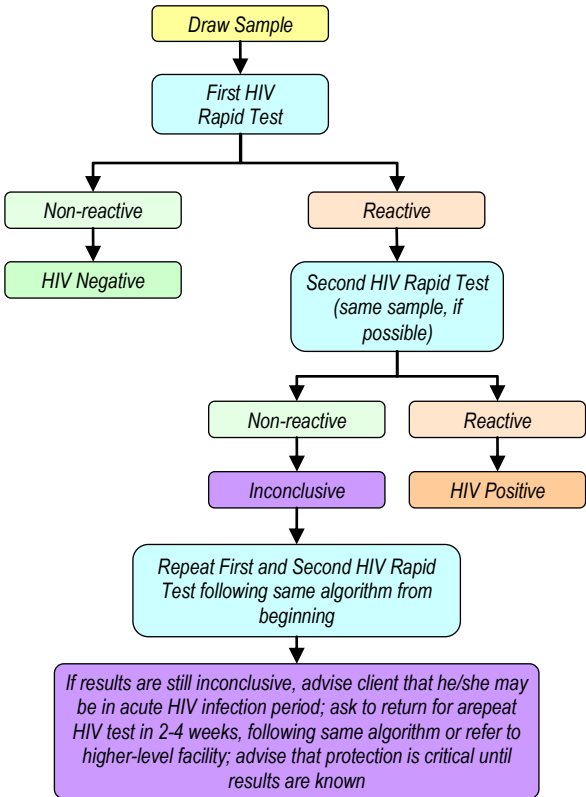
The result of an HIV test can be positive, negative, or inconclusive.

A confirmed positive HIV test means that antibodies to HIV are present in a person's blood and that the person is infected with the virus.

A negative test results can mean one of two things:

- ◆ *Either the person is not infected with HIV,*
- or*
- ◆ *The person is infected with the virus but the body has not had enough time to make a detectable amount of antibodies (the client was in the window period).*

An inconclusive test result can mean that the test kit was damaged, the test was performed incorrectly, or the client was in the window period.



HIV Pre-Test Information

Offer all ANC clients HIV pre-test information at their first ANC visit.

HIV pre-test information session

- ◆ Assess client's knowledge of HIV and MTCT.
- ◆ Share information on benefits of testing and counselling.
- ◆ Provide information about HIV infection and the risk of MTCT.
- ◆ Discuss implications of negative and positive HIV test results.
- ◆ Discuss PMTCT interventions, including care and treatment available for the mother, partner(s) and child if the test results are positive.
- ◆ State when the test results will be available.
- ◆ Discuss the window period.
- ◆ Discuss repeat testing later in pregnancy.
- ◆ Explain the advantages of couple counselling.
- ◆ Explain the benefits and possible risks of sharing HIV test results with sexual partners.
- ◆ Discuss the persons with whom clients should share test results.
- ◆ Provide information on the benefits of early infant diagnosis (infant HIV testing at 6 weeks of age).
- ◆ Provide information about how to prevent HIV infection, including safer sex practices.
- ◆ Allow time for questions.

When clients opt-out of HIV testing

- ◆ Reassure client that declining testing will not affect access to ANC or related services.
- ◆ Explore reasons for declining to be tested and address specific questions and concerns.

- ◆ *Re-offer testing. If she still declines testing, inform the client that if she changes her mind, an HIV test can always be provided during a later visit.*
- ◆ *Document the refusal on the mother's ANC card so that HIV counselling and testing can be offered at subsequent visits.*

HIV Pre-Test Information for Couples

Couples counselling is highly recommended by the MoHSW. Partner participation in PMTCT programmes has been shown to be an important factor in the success of a PMTCT programme.

Ensure that both partners agree to:

- ◆ *Be counselled together and receive their test results together*
- ◆ *Disclose the test results to each other after testing*
- ◆ *Make decisions about disclosure to other persons together*
- ◆ *Discuss HIV risk concerns together and support one another*

Discordant HIV results: Discordance refers to a difference in HIV status, such as when one partner is HIV positive and the other partner is HIV negative.

During counselling, HCWs should:

- ◆ *Inform partners that they will receive the results together.*
- ◆ *Mention the possibility of discordant results (when one partner is infected but the other is not).*
- ◆ *Confirm the benefits of knowing one's HIV status and discuss concerns about the possible risk of such knowledge.*
- ◆ *Provide results and attend to emotional reactions.*
- ◆ *Explain discordant results and discuss possible reasons for discordant results, including the window period.*
- ◆ *In the case of discordant results, encourage condom use and initiation of ART for the partner living with HIV.*
- ◆ *Refer the couple for further counselling, if indicated.*

Follow-up services that should be provided to all couples, especially discordant couples, include:

- ◆ *Linkage to HIV care, treatment and support*
- ◆ *Linkage to male circumcision programmes (HIV-uninfected males)*
- ◆ *Retesting the HIV-uninfected partner in a discordant relationship four weeks after the first discordant result, then annually OR 4 weeks after a potential exposure (e.g. unprotected sex)*
- ◆ *Condom demonstration; offer condoms and explain where to access more condoms*
- ◆ *On-going risk-reduction counselling*
- ◆ *Counselling on family planning; provide contraceptives as appropriate*
- ◆ *Reproductive health counselling*

Due to the high risk of HIV transmission among HIV discordant couples, HCWs should emphasize linking discordant couples with appropriate services and providing on-site follow-up counselling and support as needed.

HIV Pre-Test Information and Testing in Labour

Tanzania guidelines recommend that healthcare workers ask women who present in labour if they were tested for HIV during ANC. Women of unknown HIV status who present to labour and delivery should be tested as follows:

When a woman presents in early labour,

- ◆ *Provide pre-test information session. (See next page)*
- ◆ *Conduct HIV testing unless she declines testing.*
- ◆ *If the test is positive, offer life-long ART for the mother and ARV prophylaxis for the infant.*
- ◆ *Provide post-test counselling before and/or after delivery (but before discharge) depending on the woman's condition.*

When a woman presents in late labour (active phase),

- ◆ *Defer counselling and testing until after delivery.*
- ◆ *After delivery, provide pre-test information.*
- ◆ *Conduct HIV testing unless she declines testing.*
- ◆ *If she tests HIV-positive, offer lifelong ART for the mother and ARV prophylaxis for the infant.*
- ◆ *Provide post-test counselling and linkage to on-going care before discharge.*

Neither women nor their infants should be provided with ARVs unless the woman has been tested for HIV and found to be positive.

Conducting the labour and delivery pre-test session

Pre-test information sessions are shorter in the labour and delivery setting than in ANC. Information is presented between contractions. Only the

most critical information is given during labour. Non-critical information can be given in the post-test session after delivery.

Example of essential pre-test information script for women in labour

- ◆ *Hello, I am checking to make sure you have had all of the tests you needed for this pregnancy.*
- ◆ *Your ANC card shows you have not been tested for HIV during your pregnancy. Do you know what HIV is?*
- ◆ *(If the women says no) HIV is the virus that causes AIDS. Not everyone who has HIV looks or feels sick.*
- ◆ *If you have HIV, you can pass it to your baby during pregnancy, labour and delivery and breastfeeding.*
- ◆ *This is why we recommend that all pregnant women have an HIV test.*
- ◆ *If the test shows you have HIV, we can give you medicine immediately to lower the chance of passing HIV to your baby.*
- ◆ *After you give birth, you will continue to take medicine for your own health. The baby will also receive medicine for a few weeks to lower the chance of HIV infection and we will refer you to where you, your baby and the rest of your family can get care and treatment.*
- ◆ *The HIV test will be done by drawing blood (or by a simple finger-prick).*
- ◆ *HIV testing is private. This means that only you and HCWs who are caring for you know your HIV test results.*
- ◆ *You have the right to refuse testing for HIV but we strongly recommend that you accept testing for your own health and to help protect your baby.*
- ◆ *Unless you refuse, we will test you now and give you and your baby the best care based on your test results.*

HIV Coding for ANC Cards

- ◆ Positive: PMTCT-1
- ◆ Negative: PMTCT-2
- ◆ Date tested or date refused: dd-mm-yyyy

Confidentiality must be protected

- ◆ Client's personal and medical information, including HIV test results, may only be disclosed to other healthcare providers to ensure that the client receives the appropriate medical care.
- ◆ Only those healthcare workers who are directly involved in the client's care will have access to the client's records—and only on a "need-to-know" basis.
- ◆ All medical records and registers, whether or not they include HIV-related information, should be kept confidential and stored in a safe, secure place.
- ◆ Registers used to record services should use registration numbers to identify clients instead of names.
- ◆ When possible, the same counsellor should provide pre-test, post-test, and on-going counselling.
- ◆ All HIV test results, whether positive or negative, must be given in person.
- ◆ Initial post-test counselling is provided to each client separately and privately, unless it is being conducted with a couple.
- ◆ Always give the results as soon as possible after the test

Post-Test Counselling

Post-test counselling activities for all clients:

- ◆ Ask the client if she has any questions and address them if you can.
- ◆ Provide the HIV test result and assess the client's understanding of the meaning of the result.
- ◆ Discuss partner HIV testing and the issue of discordance—the fact that her partner's HIV status may be different from her own.
- ◆ Explore and encourage disclosure and partner testing, if such disclosure is safe and appropriate.
- ◆ Provide HIV risk assessment and individualised risk-reduction plans. Encourage risk-reducing behaviour, including safer sex.
- ◆ Provide the appropriate PMTCT essential messages according to the client's HIV status.
- ◆ Offer appropriate information and referral according to women's HIV status.
- ◆ Encourage and support follow-up ANC visits. These visits provide the opportunity to reinforce key PMTCT messages, provide follow-up counselling and make referrals for HIV treatment, care and support as necessary.

Post-test counselling for a negative test result should include:

- ◆ Advice on adopting safer sex practices and family planning. It is important that women know that if they become infected during pregnancy or while breastfeeding, they face an increased risk of MTCT.
- ◆ Support to exclusively breastfeed for the first 6 months of life.
- ◆ Information on re-testing at 36 weeks of gestation, or before 36 weeks of gestation.

Post-test counselling for a positive test result should involve the following steps:

- ◆ Opportunity to discuss her feelings about her test result and her immediate concerns.
- ◆ Inform client about essential PMTCT services including ARVs for herself and for her infant. Discuss initiation of ART.
- ◆ Provide infant-feeding education, counselling and support.
- ◆ Discuss safer sex practices and family planning.
- ◆ Give appointment for follow-up HIV care and treatment for her, her partner and her children or provide referral where appropriate.
- ◆ Discuss care for HIV-exposed children and infant/child testing.
- ◆ Identify sources of hope for the client, such as family, friends, community-based services, spiritual supports and treatment options. Make referrals when appropriate.
- ◆ Encourage client to keep subsequent ANC visits, stress the importance of delivering in a health facility, and schedule next ANC visit.

When the client's HIV status is inconclusive:

- ◆ Inform client that she may be in the window period.
- ◆ Explain the need for repeat testing and reinforce information about MTCT and PMTCT.
- ◆ Give post-test counselling messages as for a HIV-negative client.
- ◆ Schedule repeat test for next ANC visit (sooner if she prefers) or within 6 weeks

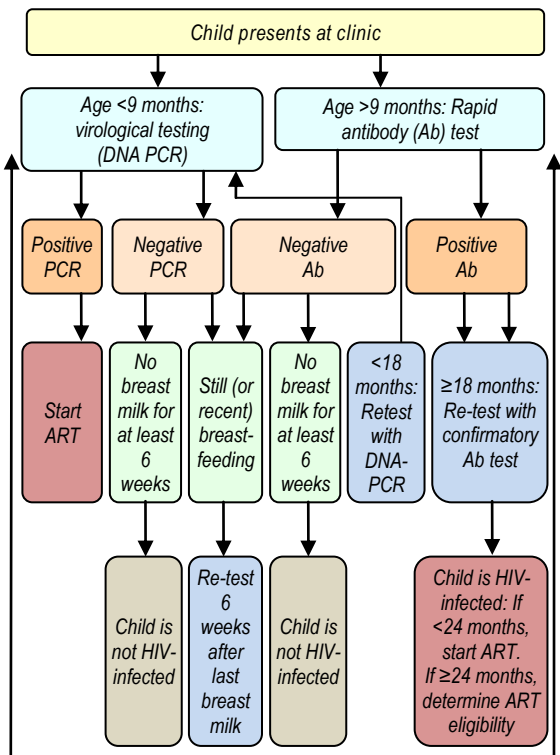
HIV Testing of Infants and Children

Diagnostic services for HIV-exposed infants and young children are a critical part of follow-up care. However,

- ◆ *Infants may have on-going exposure to HIV through breastfeeding. Negative test results are therefore not definitive until 6 weeks after the complete cessation of breastfeeding.*
- ◆ *Maternal antibodies cross the placenta during pregnancy. All infants born to mothers living with HIV receive maternal antibodies and will test antibody positive at birth, regardless of their own infection status. Maternal antibodies persist in the infant's system for 15–18 months, therefore a positive antibody test results for an infant less than 18 months of age may not reflect the infant's true HIV infection status.*
- ◆ *Viral tests such as HIV DNA PCR detect the actual virus (not the antibody) and can be used for a definitive diagnosis in HIV-exposed infants at 4 weeks of age.*

Guidelines for diagnosis of HIV-exposed infants and children

- ◆ *HIV-exposed infants and children should receive viral testing at 4 – 6 weeks of age to determine their HIV status.*
- ◆ *If the infant or child is breastfeeding, HIV testing should be repeated 6 weeks after the complete cessation of breastfeeding,*
- ◆ *When viral testing is not available, symptomatic children <18 months of age should receive antibody testing to confirm HIV exposure. Healthcare workers can make a presumptive diagnosis of HIV infection based on a positive antibody test, the child's clinical symptoms and, if available, the child's CD4 percentage.*
- ◆ *Any child >18 months of age can be tested with antibody tests.*
- ◆ *A positive HIV test result at 18 months usually indicates infection.*



HIV Testing of Infants and Children: Pre-Test Information

Pre-test information for parents/caregivers:

Before conducting HIV testing procedures for an infant or child:

- ◆ *Review basic information (as needed) about MTCT.*
- ◆ *Discuss the benefits of determining the child's HIV status.*
- ◆ *Discuss confidentiality.*
- ◆ *Explain the testing procedure.*
- ◆ *Review the meaning of positive and negative results, keeping in mind the age of the child and whether or not the child is breastfeeding.*
- ◆ *Emphasise the importance of follow-up, CPT and ARV prophylaxis.*
- ◆ *Discuss the availability of HIV care and treatment.*

HIV Testing of Infants and Children: Post-Test Counselling

Post-test information for parents/caregivers:

The key discussion points of the post-test session are:

- ◆ *Provide the test result.*
- ◆ *Explain the meaning of the result.*
- ◆ *Discuss the need for any follow-up or confirmatory testing, if indicated.*
- ◆ *Discuss CPT, maternal ART and infant ARV prophylaxis (or infant ART, if HIV-infected), as appropriate to the context.*
- ◆ *Discuss infant feeding.*
- ◆ *Explore the need for social support.*
- ◆ *Discuss post-test follow-up according to the results of the test, the age of the child, infant feeding method and needs of the child and family.*
- ◆ *Discuss care and treatment needs of the mother and other family members as indicated.*

DBS Specimen Collection

Step 1: Collect supplies

- ◆ *Supplies for conducting a heel or toe prick*
 - *Sterile lancets (2 mm long)*
 - *Sterile gauze pads or cotton wool*
 - *Alcohol wipes or disinfectant for skin (70% spirit)*
- ◆ *Paperwork supplies*
 - *Pen*
 - *DNA-PCR Test Laboratory Requisition Form*
 - *Specimen Delivery Checklist*
- ◆ *Safety supplies*
 - *Gloves (powder-free preferred)*
 - *Rubbish bin*
 - *Sharps container*
- ◆ *Supplies for collecting, drying and storing specimens*
 - *DBS filter paper blood collection card*
 - *Drying rack*
 - *Glassine paper*
 - *Sealable plastic bags*
 - *Desiccant packs*
 - *Humidity indicator cards*
 - *Permanent marker to label bag*
 - *Large envelope*

Step 2: Use Universal Precautions

- ◆ *Always use Universal Precautions when collecting blood specimens.*

Step 3: Complete the laboratory form and label the sample card

- ◆ *Mislabelling specimens is the most common error in DBS specimen collection.*

Step 4: Choose the puncture site

- ◆ *Small infants ≤ 9 kg: Prick the heel. Heel puncture should be performed on the plantar surface of the heel, beyond the lateral and medial limits of the heel bone. Choose the lowest point in recommended area. The back of the heel and the Achilles tendon are not suitable sites and should not be punctured.*
- ◆ *Larger infants >9 kg: Prick the heel or lateral aspect of the big toe. Fingers and small toes should still be avoided because of the risk of hitting bone.*

Step 5: Demonstrate to caregiver how to hold the child for the procedure

- ◆ *Ask the caregiver to sit holding the baby in an upright position against her or his chest. Position the infant with her or his foot hanging downward. This will increase venous pressure and will help the blood flow more easily.*
- ◆ *Ask the caregiver to hold the child securely so that the blood sample can be taken.*

Step 6: Prepare the puncture site

- ◆ *If the child's finger or foot is not clean it should be washed with soap and clean water.*
- ◆ *Warm the site to increase blood supply. The parent or caregiver can do this by holding the child's foot and rubbing gently. A cloth or clean nappy soaked in warm water (no warmer than 41°C) can also be kept on the puncture site for three minutes.*
- ◆ *Wash hands and put on powder-free gloves. If powdered gloves are being used, rinse glove-covered hands after putting them on to remove the powder.*
- ◆ *Clean the child's foot with alcohol. Start in the middle and work outward to prevent contaminating the area. Allow to air dry for 30 seconds. It is important to allow the site to dry because residual alcohol may cause haemolysis (haemolysis refers to the breakdown of*

red blood cells, which can interfere with laboratory testing), which will invalidate the specimen.

Step 7: Collect the specimen

- ◆ *Encourage the caregiver to comfort her/his baby during the procedure. Comforting reduces distress and makes it easier for the baby to regain calm after the procedure. Ask the caregiver to hold the infant securely so that the blood sample can be taken.*
- ◆ *Hold the child's foot and firmly puncture the site off-centre with a new sterile 2 mm lancet. A 2 mm lancet is the correct length to puncture safely without damaging bone. Do not use a needle, scalpel or longer lancet. The puncture should be with one continuous, deliberate motion at an angle (slightly less than 90 degrees).*
- ◆ *Allow a large blood drop to form and wipe it away with a dry sterile gauze pad. The first drop of blood may contain tissue fluids that could contaminate the specimen.*
- ◆ *Allow a second large blood drop to form.*
- ◆ *Holding the filter paper card by its edges, bring the card surface to the drop. Lightly touch the one circle on the filter paper card to this drop of blood, allowing the blood to soak through and completely fill the pre-printed circle by natural flow.*
- ◆ *Do not drag the infant's foot down to the filter paper card as this causes them to struggle and you may lose the drop of blood or spoil the card.*
- ◆ *Fill the circle completely but avoid layering blood. The blood should be drawn onto the filter paper card by capillary action, with no contact between the infant's foot and the paper. Apply blood to one side of filter paper card only. Each drop should permeate through to the other side of the card.*
- ◆ *Repeat this procedure, filling the remaining circles with successive drops of blood. Fill all circles if possible. If this is not possible collect enough blood to fill at least three circles on the filter paper card.*
- ◆ *If blood flow diminishes, wipe away the congealed blood with a sterile gauze pad and gently massage or apply pressure to the whole lower*

leg and foot. It is important to avoid squeezing or “milking” the area directly around the puncture site. Milking the site may contaminate the blood specimen with tissue fluids, resulting in an invalid specimen. If the puncture is still not bleeding after applying pressure, a second puncture is required. The second puncture can be taken from the other foot or from a different safe part of the same foot.

- ◆ Filter paper cards are designed to absorb blood uniformly. Blotting or smearing the blood onto the paper, or placing a blood drop on top of another drop, damages the paper’s absorption capacity and leads to inaccurate test results. It is therefore crucial that the blood be properly placed on the filter paper card.

Step 8: Apply gauze to puncture site and place filter paper card for drying

- ◆ When at least three, but preferably five, of the circles have been filled, wipe excess blood from the infant’s foot and apply gentle pressure to the wound with gauze pad, discarding gauze in a bin after use. Place the filter paper card in a drying rack or place it flat on a clean dry surface.

Step 9: Complete documentation

- ◆ After the specimen collection is completed, record the test in the infant’s Under 5 Card and medical record. Remind caregivers to:
 - Return to the clinic to receive their child’s test result. Make an appointment for the delivery of the results and post-test counselling. If the child is hospitalised, an appointment should be given upon discharge for children whose test results were not received during the hospital stay.
 - Promptly bring the child in for care if there are any signs of illness.
- ◆ The test result will be recorded in the General Counselling and Testing Register when the result is received.
- ◆ Incorrectly collected specimens can result in either erroneous laboratory results or delays due to the need for a new blood specimen.

Summary of DBS Collection Procedure:

- ◆ *Apply blood to one side of the filter paper card only. Either side may be used for blood specimen collection*
- ◆ *Do not press the filter paper card against the puncture site*
- ◆ *Do not layer drops of blood on one circle or apply blood more than once in the same collection circle*
- ◆ *Avoid touching the circles or smearing them*
- ◆ *It is critical that entire circle be uniformly saturated*

Remember—It is better to complete three good circles than five incomplete ones!

Management of the DBS Specimen

Drying, packing and storing the DBS Specimen:

Drying the DBS specimen:

- ◆ *Place DBS card on a horizontal drying rack to air dry for at least 3 hours.*
- ◆ *Keep sample away from sunlight, dust and insects.*
- ◆ *Do not allow blood spots to come into contact with any surface or with each other.*

Packaging of the DBS specimen:

- ◆ *Place dried DBS card into glassine/paper bag.*
- ◆ *Place maximum of ten DBS cards into a Ziploc bag.*
- ◆ *Add a minimum of two desiccants per specimen.*
- ◆ *Add one humidity indicator card.*
- ◆ *Remove air and seal bag.*

Antenatal Care

ANC for women living with HIV includes the same basic services provided for all pregnant women. However, obstetric and medical care should be expanded to address the specific needs of women with HIV infection.

Pregnant women living with HIV should attend ANC clinic every month to ensure close follow-up and on-going counselling and support for adherence to medications.

Essential ANC services for women living with HIV	
History	◆ Routine information as per obstetric record.
Physical exam	◆ Assess for signs of HIV, TB, malaria, cancer of the cervix and STIs. Conduct nutritional assessment.
Laboratory	◆ Syphilis, urinalysis, FBP, CD4 count, liver/renal function
HIV staging	◆ Clinical and immunological staging
ART	◆ Initiate ART
OI prophylaxis	◆ Prescribe CPT. Note: Women on CPT <u>do not need</u> sulfadoxine-pyrimethamine prophylaxis for malaria
Tetanus	◆ Administer vaccine
Counselling	<ul style="list-style-type: none"> ◆ Delivery at a health facility ◆ Post-partum follow-up and continuation of ART ◆ Infant feeding ◆ Care of the HIV-exposed infant ◆ Pregnancy/Safe Motherhood ◆ Safer sex and effective family planning ◆ Disclosure, partner testing, testing of other children
Support	◆ Refer for community-based support

WHO Clinical Staging for Adults and Adolescents

<i>Clinical stage 1</i>	
<ul style="list-style-type: none"> ◆ Asymptomatic ◆ Persistent generalized lymphadenopathy (PGL) 	
<i>Clinical stage 2</i>	
<ul style="list-style-type: none"> ◆ Unexplained moderate weight loss (<10% of presumed or measured body weight) ◆ Papular pruritic eruptions ◆ Seborrhoeic dermatitis ◆ Fungal nail infections 	<ul style="list-style-type: none"> ◆ Recurrent respiratory tract infections (sinusitis, tonsillitis, otitis media and pharyngitis) ◆ Herpes zoster ◆ Angular cheilitis ◆ Recurrent oral ulcerations
<i>Clinical stage 3</i>	
<ul style="list-style-type: none"> ◆ Unexplained^a severe weight loss (>10% of presumed or measured body weight) ◆ Unexplained persistent fever (above 37.5°C intermittent or constant, for longer than 1 month) ◆ Oral hairy leukoplakia ◆ Persistent oral candidiasis ◆ Unexplained anaemia (<8g/dL), neutropenia (<0.5 x 10⁹ per litre) and/or chronic thrombocytopenia (<50 x 10⁹ per litre) 	<ul style="list-style-type: none"> ◆ Unexplained chronic diarrhoea for longer than 1 month ◆ Severe bacterial infections (e.g. pneumonia, empyema, pyomyositis, bone or joint infection, meningitis, bacteraemia) ◆ Pulmonary TB ◆ Acute necrotizing ulcerative stomatitis, gingivitis or periodontitis

a. Unexplained refers to where the condition is not explained by other conditions.

Clinical stage 4

- ◆ *HIV wasting syndrome*
- ◆ *Pneumocystis pneumonia*
- ◆ *Recurrent severe or radiological bacterial pneumonia*
- ◆ *Chronic herpes simplex infection (orolabial, genital or anorectal of more than 1 month's duration or visceral at any site)*
- ◆ *HIV encephalopathy*
- ◆ *Extrapulmonary cryptococcosis including meningitis*
- ◆ *Disseminated non-tuberculous mycobacteria infection*
- ◆ *Progressive multifocal leukoencephalopathy (PML)*
- ◆ *Chronic cryptosporidiosis*
- ◆ *Chronic isosporiasis*
- ◆ *Visceral herpes simplex infection*
- ◆ *Oesophageal candidiasis (or candidiasis of trachea, bronchi or lungs)*
- ◆ *Extrapulmonary TB*
- ◆ *Kaposi's sarcoma*
- ◆ *Central nervous system (CNS) toxoplasmosis*
- ◆ *Cytomegalovirus infection (retinitis or infection of other organs)*
- ◆ *Disseminated mycosis (extrapulmonary histoplasmosis or coccidiomycosis)*
- ◆ *Recurrent septicaemia (non-typhoidal Salmonella)*
- ◆ *Lymphoma (cerebral or B cell non-Hodgkin)*
- ◆ *Invasive cervical carcinoma*
- ◆ *Atypical disseminated leishmaniasis*
- ◆ *Symptomatic HIV-associated nephropathy or symptomatic HIV-associated cardiomyopathy*

Antiretroviral Therapy

ART: Long-term use of antiretroviral medications to treat maternal HIV to improve health and slow progression of the disease. ART also reduces MTCT.

Benefits of ART:

- ◆ Improve maternal health by reducing HIV-related illness
- ◆ Reduce the risk of HIV transmission to an uninfected partner
- ◆ Reduce the risk of HIV transmission to the infant during pregnancy, labour and delivery and during breastfeeding.

Any clinician who has been trained and certified can prescribe ARV medicines.

- ◆ All pregnant or breastfeeding women who are infected with HIV should be started on life-long ART for their own health and for PMTCT.
- ◆ ART should be initiated in women who are not pregnant or breastfeeding if their CD4 cell count is <350 cells/mm³ OR women in WHO Clinical Stage 3 or 4.

When to start ART:

- ◆ ART should be initiated in pregnant or breastfeeding women as soon as HIV is diagnosed.
- ◆ HIV-infected women who are already receiving ART should switch ART regimen to tenofovir (TDF) + lamivudine (3TC) + efavirenz (EFV); continue TDF/3TC/EFV during pregnancy, labour and delivery and postpartum.

Continuing ART:

- ◆ ART should be continued during labour and delivery, postpartum and on-going (for life).

Infant ARV prophylaxis: All infants born to women living with HIV should receive ARV prophylaxis from birth (or as soon as possible thereafter) until 6 weeks of age. See “Infant ARV Prophylaxis”

ART regimens for pregnant or breastfeeding women

The recommended first line ART regimen for pregnant or breastfeeding women is:

- ◆ Tenofovir (TDF) 300 mg + Lamivudine (3TC) 300 mg + Efavirenz (EFV) 600 mg taken once daily in a fixed-dose combination tablet.

Alternative first line ART regimens are:

- ◆ AZT + 3TC + EFV or
- ◆ AZT + 3TC + NVP

ARV medications for pregnant women	
Tenofovir (TDF)	<ul style="list-style-type: none"> ◆ Absorbed quickly ◆ Take with or without food ◆ Renal toxicity possible
Lamivudine (3TC)	<ul style="list-style-type: none"> ◆ Absorbed quickly ◆ Take with or without food ◆ May cause headache or nausea
Efavirenz (EFV)	<ul style="list-style-type: none"> ◆ Take with or without food ◆ May cause vivid dreams, nightmares or confusion.
Zidovudine (ZDV, AZT)	<ul style="list-style-type: none"> ◆ Absorbed quickly ◆ Take with or without food ◆ Mild anaemia may occur
Nevirapine (NVP)	<ul style="list-style-type: none"> ◆ Absorbed quickly ◆ Take with or without food ◆ Severe rash and hepatotoxicity can occur.

Cotrimoxazole Preventative Therapy (CPT)

CPT should be given to all HIV positive pregnant women starting at 14 weeks gestation or as soon as possible thereafter. In the post-part period, the decision to stop or continue CPT should be based on adult HIV treatment guidelines.

CPT dosing

960 mg once daily (either as 1 double-strength tablet or two single-strength tablets of 480 mg). Start at 14 weeks gestation or as soon as possible thereafter.

Care for HIV-Infected Woman During Labour

On admission, the admitting nurse should ask clients for their ANC card.

- ◆ *Staff must look for identifying code on ANC card or referral notes.*

Administer ART during labour in accordance with Tanzania guidelines.

- ◆ *Initiate or continue ART during labour to reduce maternal viral load.*

Use Standard Precautions (good infection prevention practices) for all client care.

- ◆ *Use protective gear, safely use and dispose of sharps, sterilize equipment, and safely dispose of contaminated materials.*

Minimise vaginal examinations.

- ◆ *Perform vaginal examinations only when absolutely necessary using appropriate sterile technique.*

Record all vaginal examinations on the partogram.

Avoid prolonged labour.

- ◆ *Use a partogram to monitor the progress of labour and indicate medications used during labour, including ARV prophylaxis.*
- ◆ *Avoid artificial rupture of membranes, unless necessary.*

Avoid unnecessary trauma during delivery.

- ◆ *Avoid invasive procedures.*
- ◆ *Avoid routine episiotomy.*
- ◆ *Prevent genital tract/perineal lacerations.*
- ◆ *Minimise the use of vacuum extractors.*
- ◆ *Minimise the risk of postpartum haemorrhage.*

Carefully manage all stages of labour to prevent infection and avoid prolonged labour.

- ◆ *Actively manage the third stage of labour, by using oxytocic medications and controlled cord traction.*
- ◆ *Perform uterine massage.*
- ◆ *Carefully remove all products of conception.*

Use safe transfusion practices.

- ◆ *Minimise blood transfusions.*
- ◆ *Use only blood screened for HIV, Hepatitis B and C, and when available, syphilis and malaria.*

Immediate Postpartum Care of HIV-Infected Women

Immediate post-delivery care

Use Standard Precautions when assessing vaginal bleeding and dispose of blood-stained linens and pads safely.

HIV counselling and testing

- ◆ *Women who received HIV testing during labour and delivery should receive additional HIV post-test counselling postpartum.*
- ◆ *Women of unknown HIV status should receive pre-test information, counselling and HIV testing, unless they decline, so that their infants can receive ARV prophylaxis if needed.*
- ◆ *Partners of women living with HIV who desire HIV testing should receive pre-test information, counselling and HIV testing.*

Counselling about safer infant feeding

- ◆ *Provide all women, regardless of HIV status, with counselling and support to exclusively breastfeed their infants for the first 6 months of life. Mothers who choose to replacement feed and for who replacement feeding is AFASS should also be provided with counselling and support to replacement feed.*

ARV prophylaxis for mother and infant

- ◆ *Teach mothers about the importance of and the correct way to administer ARV prophylaxis to their infants and to themselves.*

Vitamin A supplementation

- ◆ *Before discharge, administer vitamin A 200,000 IUs to the mother.*

Immediate postpartum education

Regardless of HIV status, the mother will need the following information before discharge:

- ◆ *How to access help in the event of postpartum haemorrhage*
- ◆ *How to dispose of potentially infectious materials such as lochia and blood-stained sanitary pads*
- ◆ *Perineal and breast care*
- ◆ *Care for the infant's umbilicus*
- ◆ *Proper hygiene; changing diapers and washing the infant*
- ◆ *Recognizing signs and symptoms of postpartum infection and where to seek help*
- ◆ *Recognizing signs and symptoms of infant illness and HIV infection*
- ◆ *Infant feeding*
- ◆ *Dual protection for family planning and HIV infection prevention*

Symptoms of postpartum infection

- ◆ *Burning with urination*
- ◆ *Fever*
- ◆ *Increased heart rate*
- ◆ *Foul smelling lochia*
- ◆ *Cough (dry or producing sputum), shortness of breath*
- ◆ *Redness, pain, pus, or drainage from incision or episiotomy*
- ◆ *Severe lower abdominal tenderness*

Education about and scheduling of comprehensive care visits for the mother and infant

- ◆ *Schedule postpartum follow-up for the mother and infant, including immunisations before discharge.*
- ◆ *Record infant's HIV exposure status on their immunisation cards. Let mothers know that infants should be followed monthly at the Under-Five clinic.*

- ◆ Educate mothers about need for the infant to start cotrimoxazole preventive therapy (CPT) at 4 weeks of age or as soon as possible thereafter.
- ◆ Educate mothers about the importance of infant HIV testing at 4-6 weeks of age.

How to promote linkages for postpartum care

- ◆ During ANC, tell all clients that postpartum care is important.
- ◆ Give mothers referral information for follow-up care including the time, location, and contact information for the appointment.
- ◆ Give women postpartum appointments upon discharge from labour and delivery facility.
- ◆ For women likely to give birth at home, schedule the first follow-up appointment during ANC.
- ◆ Infants delivered at home should initiate ARV prophylaxis as soon as possible after birth. Train home birth attendants to encourage women who give birth at home to come into a health facility within 24 hours.
- ◆ Establish procedures to confirm that women attend a referral appointment.

All postpartum follow-up appointments for the mother and infant, including infant HIV testing and immunisations, should be scheduled prior to discharge.

Follow-up Postpartum Care for the Mother

- ◆ *The first postpartum appointment should be within one week (7 days) after birth. Subsequent visits should take place at 28 days and again 42 days after birth.*
- ◆ *For RCH clinics that do not provide ART, the mother should be referred to a nearby CTC for ARV services. ARV services must be confirmed through a review of the client's CTC card.*

Comprehensive Postpartum Maternal Care, Treatment and Support

- ◆ *Assessment of healing and routine physical assessment*
- ◆ *Determination of CD4 count and WHO clinical stage*
- ◆ *Provision of ART*
 - *Adherence monitoring, support and counselling*
- ◆ *Screening and prophylaxis for OIs*
- ◆ *Sexual and reproductive health care, including family planning counselling, provision of contraceptives and counselling about safer sex*
- ◆ *Cervical cancer screening*
- ◆ *Psychological and social support*
- ◆ *Nutritional support and counselling*
- ◆ *Linkage to on-going care and treatment (mother, infant and family)*

Assessment of healing and routine physical assessment during postpartum visits:

- ◆ *Measure blood pressure and temperature.*
- ◆ *Monitor uterine involution (shrinking).*
- ◆ *Check healing of any repaired genital/perineal lacerations or episiotomy.*

- ◆ *Examine the vulva and perineum for signs of infection: redness, tears, swelling or pus.*
- ◆ *Screen for cervical cancer (visual inspection with acetic acid or rapid HPV screening)*
- ◆ *Confirm cessation of postpartum bleeding.*
- ◆ *Check breasts for signs of mastitis (i.e. redness, tenderness, cracks).*
- ◆ *Check for signs of anaemia (e.g. pallor) and ask about fatigue.*
- ◆ *Obtain blood sample for CD4 count.*
- ◆ *Conduct WHO clinical staging.*

Continuation of ART

All confirmed HIV-positive pregnant or breastfeeding women are eligible for ART. Once initiated, ART should be continued for life. During pregnancy and during the postpartum period, HCWs at all RCH facilities are responsible for

- ◆ *Referral and linkage to community service organisations and agencies*
- ◆ *Identifying women eligible for ART*
- ◆ *Assessing and monitoring clinical and immunological WHO stage*
- ◆ *Initiating and monitoring ART during pregnancy and the postpartum period*
- ◆ *Providing counselling about ART and supporting adherence, and*
- ◆ *Linking women to on-going care and treatment.*

Non-adherence to ART is the most common cause of treatment failure.

Adherence to ART

Adherence to ART includes taking ARVs correctly, as prescribed, even if the person feels healthy. Non-adherence includes missing one or more doses of medicine, sharing medicines with other people, stopping medicine temporarily, taking medicines at the wrong times, etc.

Measures to increase ART adherence

<i>Educate and support</i>	<ul style="list-style-type: none">◆ <i>Review medication names and dosing</i>◆ <i>Plan a dosing schedule that works well for the client.</i>◆ <i>Explain that medications are effective only if taken every day, as prescribed.</i>◆ <i>Discuss life-long treatment. ART does not cure HIV</i>
----------------------------	---

	<p><i>and must be taken continuously to control HIV.</i></p> <ul style="list-style-type: none"> ◆ <i>Encourage disclosure to another person who can provide support.</i> ◆ <i>Discuss potential side effects and how to manage them, e.g. take with food to prevent nausea or take at bedtime to reduce other side effects.</i> <ul style="list-style-type: none"> • <i>Differentiate between short-term side effects that will resolve with time (e.g. mild nausea) vs. serious side effects that should prompt medical attention (e.g. rash and fever)</i> ◆ <i>Refer to support groups or community based organisations for additional support.</i>
<p><i>Assess and monitor</i></p>	<ul style="list-style-type: none"> ◆ <i>Use open-ended questions to ask about adherence at every visit, e.g. "Tell me about any problems you've experienced taking your medicine"</i> ◆ <i>Problem-solve barriers to adherence with the client.</i>

Family Planning and Safer Sex

Provide counselling about various family planning methods in an accurate and unbiased manner. Whenever possible, involve partners in the discussion.

- ◆ *Discuss condom use as dual protection against STIs, HIV, and unplanned pregnancy.*
- ◆ *Discuss the importance of safer sex to prevent the spread of HIV and other STIs.*
- ◆ *Support the mother's choice of contraceptive method.*
- ◆ *Give the mother advice on how to recognize STI symptoms and where to go for STI assessment and treatment.*
- ◆ *Answer any questions she may have about safer sex.*

All mothers should be counselled to start using some form of contraception within six weeks of delivery.

Lactation amenorrhea method (LAM) is a temporary contraceptive method that should only be used by women who:

- ◆ *Are less than 6 months postpartum*
- ◆ *Are exclusively breastfeeding, and*
- ◆ *Have not resumed menstruating.*

Women who meet all three of these criteria have only a 1% to 2% chance of getting pregnant. However, because the effectiveness of LAM diminishes over time, it is important to help women plan ahead and choose a new family planning method before it is needed (i.e. before 6 months postpartum).

Contraceptive choices for HIV-infected women

- ◆ *Hormonal methods of birth control appear to be safe for women with HIV, including women on ART.*
- ◆ *The effectiveness of oral contraceptives may be reduced when used in combination with ART, although the clinical significance of this risk has not been fully established. This risk does not apply to injectable or implanted hormonal birth control measures.*
- ◆ *The effectiveness of oral contraceptives is reduced if co-administered with the anti-tuberculosis antibiotic rifampicin, which speeds up the metabolism of contraceptive hormones.*
- ◆ *Emergency contraceptives can be used by all women, including those with HIV.*
- ◆ *Most women living with HIV – including women with AIDS – can safely use an intrauterine device (IUD). Women should be on ART and clinically well.*
- ◆ *Women with HIV or women who are at high risk for HIV infection should not use spermicides. Frequent use of spermicides containing nonoxynol-9 may increase the risk of HIV transmission.*

Important notes about hormonal contraceptives.

- ◆ *Combined oral contraceptives may decrease breast milk production.*
- ◆ *Progestin-only contraceptives should be started 6 weeks after delivery.*

Opportunistic Infections: Screening and Prophylaxis

As HIV progresses, the immune function weakens and a person infected with HIV may develop opportunistic infections (OIs). Healthcare workers in RCH settings should be able to assess and recognise the signs and symptoms of the following common OIs and refer symptomatic patients for appropriate care:

- ◆ TB
- ◆ PCP
- ◆ Candidiasis
- ◆ Herpes zoster
- ◆ Lymphoma
- ◆ Toxoplasmosis
- ◆ Cryptococcal meningitis

Tuberculosis

Healthcare workers should carefully assess clients for signs and symptoms of TB infection.

Assessment	Yes	No
Has the individual had a cough for ≥ 2 weeks?		
Has the individual coughed up blood-stained sputum (haemoptysis)?		
Has the individual had a fever for ≥ 2 weeks?		
Has the individual noticed weight loss (new patients) or is there a three kg weight loss in a month (in a subsequent visit)?		
Has the individual had excessive sweating at night for ≥ 2 weeks?		

- ◆ If the response to one or more questions below is "YES", refer for a chest x-ray, clinical evaluation and sputum examination.
- ◆ If the answer to all questions below is NO, then stop TB investigation and repeat screening at the subsequent visit.

Isoniazid Preventive Therapy (IPT)

TB preventive therapy is an intervention that should be part of the package of care for people living with HIV. IPT is given to individuals with latent TB infection to prevent progression to active disease. IPT has been shown to reduce the risk of developing TB disease by at least 60%; the protective effect of IPT is expected to last for 18 months.

IPT should only be offered in the following situations:

- ◆ *Where quality supportive counselling is available*
- ◆ *After effective screening for active TB*
- ◆ *Where there is capacity for follow up and monitoring of patients to encourage adherence to IPT.*
- ◆ *Where there is capacity to manage side effects and exclude active TB during IPT*

Eligibility for IPT

For clients with no history of TB treatment:

- ◆ *All clients living with HIV with no signs or symptoms of active TB are eligible for IPT.*

For clients with history of TB treatment:

- ◆ *Clients who had active tuberculosis in the past 2 years should not be considered for IPT. Clients who were treated for TB more than 2 years earlier may be considered because they may have already been re-infected with TB.*
- ◆ *Clients who receive IPT may also initiate ART, if eligible, as there is no interaction between Isoniazid and the current ART regimen.*

It is important that HCWs in RCH services are prepared to provide counselling and support around adherence for IPT, whether it was prescribed at the CTC or in RCH.

IPT dosage (adults):

- ◆ *Isoniazid (INH) 300 mg daily for 6 months.*

Malaria

Referral for evaluation of malaria should be considered in any patient presenting with the following symptoms:

- ◆ Fever
- ◆ Chills
- ◆ Mental confusion
- ◆ Diarrhoea, nausea and vomiting
- ◆ Malaise
- ◆ Muscle aches and/or joint pain
- ◆ Enlarged spleen
- ◆ Abdominal pain
- ◆ Loss of appetite

All women should receive information about use of insecticide-treated bed nets and eliminating possible mosquito breeding places in and around the home. CPT protects against malaria and other infections. (See below "Pneumocystis Pneumonia" for information on CPT.)

Pneumocystis Pneumonia (PCP)

To prevent PCP, malaria and toxoplasmosis, women should receive CPT according to the National Guidelines for the Clinical Management of HIV and AIDS (2009).

Cotrimoxazole preventive therapy (CPT) should be offered to:

- ◆ All pregnant women living with HIV, regardless of clinical stage. Initiate CPT at 14 weeks gestation or as soon as possible thereafter.
- ◆ Non-pregnant women with HIV
- ◆ Symptomatic HIV (WHO stages 2, 3 and 4) and/or
- ◆ CD4 cell counts <350 cells/mm³

Cotrimoxazole dosing 960 mg daily

1 double strength tablet (160 mg TMP/800mg SMX)
or
2 single strength tablets (80mg TMP/400mg SMX) daily

- ◆ Cotrimoxazole should not be given to clients allergic to sulpha.
- ◆ Monitor clients on CPT closely for side effects and rare adverse events such as severe skin reactions, renal and hepatic insufficiency and haematological toxicity.
- ◆ CPT should be stopped if the patient develops significant side effects. Replace with dapsone, 100 mg daily.

Other Opportunistic Infections

Clinical signs and symptoms of selected diseases or infections	
Candidiasis	<ul style="list-style-type: none"> ◆ Oral (thrush): creamy white patches on a red base on posterior pharynx. ◆ Oesophageal: painful difficulty swallowing ◆ Vaginal: white or yellow discharge with itching, burning; sometimes painful intercourse.
Herpes zoster	<ul style="list-style-type: none"> ◆ Starts with an acute sensitivity in a band-like region of the skin on one side of the trunk, head or neck, one arm or thigh, usually followed by bumpy reddish rash. Later symptoms include pain, burning, itching or tingling sensation, usually with a rash
Toxoplasmosis	<ul style="list-style-type: none"> ◆ Symptoms of encephalitis, including fever, headache, confusion, weakness, disorientation, speech disturbances, seizures, visual defects, movement disorders and/or personality changes.
Cryptococcal meningitis	<ul style="list-style-type: none"> ◆ Severe headache with fever, memory problems, nausea or blurred vision.

Immediate Care of the HIV-Exposed Newborn

Procedural recommendations

- ◆ Clamp cord immediately after delivery; avoid milking cord.
- ◆ Cover the cord with gloved hand or gauze before cutting.
- ◆ Wipe infant's mouth and nostrils at delivery of the head.
- ◆ Wipe infant dry with towel.
- ◆ Use suction only when the infant shows signs of distress or aspiration. Use either mechanical suction at less than 100 mm Hg pressure or bulb suction, rather than mouth-operation suction.
- ◆ Determine the mother's feeding choice and provide support.
- ◆ Administer ARV prophylaxis as soon as possible following birth
 - All HIV exposed infants should receive ARV prophylaxis from birth or as soon as feasible thereafter to six weeks of age. The sooner the infant dose of ARV prophylaxis is given, the greater its protective effect.

Infant NVP dosing recommendations*	
Infant age	NVP daily dosing
Birth to 6 weeks*	
◆ Birth weight 2000–2499 g	◆ 1 ml (10 mg) once daily
◆ Birth weight ≥2500 g	◆ 1.5 ml (15 mg) once daily

*Low birth weight infants should receive mg/kg dosing, suggested starting dose is 2 mg/kg once daily.

- ◆ Administer BCG and polio vaccines.
- ◆ If mother is NOT breastfeeding, administer vitamin A 50,000 IUs at birth or within 6 months.

Infant-Feeding Recommendations

Infant-feeding guidelines for HIV-infected women

- ◆ *Women living with HIV should be encouraged to breastfeed exclusively for the first six months of life and to then introduce complementary foods while continuing to breastfeed to 12 months of age.*
- ◆ *Replacement feeding with commercial infant formula is not recommended unless replacement feeding is acceptable, feasible, affordable, sustainable and safe as described in “Conditions needed for safe exclusive formula feeding” on page 59.*

Exclusive Breastfeeding: Feeding infant ONLY breast milk and no other liquids or solids, with the exception of prescribed drops or syrups consisting of vitamins, mineral supplements or medicines.

Replacement Feeding: Feeding infant something OTHER THAN breastmilk. During the first 6 months of life, the only replacement feed that meets an infant’s nutritional requirements is commercial infant formula.

Mixed Feeding: Feeding both breast milk and other liquids (such as water, tea, formula, cow’s milk) or foods (such as porridge or rice). Mixed feeding during the first 6 months of life is never recommended and should be avoided by all women, regardless of HIV status.

Complementary Feeding: Any food, whether manufactured or locally prepared, that is added to a child’s diet when the child reaches 6 months of age. Complementary foods are needed because breastmilk or replacement foods alone do not satisfy the child’s nutritional requirements after this age.

<i>Infant feeding recommendations according to HIV status</i>		
<i>Client situation</i>	<i>First 6 months</i>	<i>>6 months</i>
<i>HIV-negative woman</i>	<i>Exclusive breastfeeding</i>	<ul style="list-style-type: none"> ◆ <i>Introduce complementary foods while continuing to breastfeed till 2 years of age and beyond</i>
<i>Woman living with HIV</i>	<i>Exclusive breastfeeding</i>	<ul style="list-style-type: none"> ◆ <i>Introduce complementary foods while continuing to breastfeed (with prophylaxis) to 12 months of age. At 12 months:</i> ◆ <i>If the child is HIV-uninfected or of unknown HIV status—stop breastfeeding gradually if a nutritionally adequate and safe diet without breast milk can be provided.</i> ◆ <i>If the child is known to be HIV-infected — continue breastfeeding till 2 years of age and beyond.</i>
<i>Woman of unknown HIV status</i>	<i>Exclusive breastfeeding</i>	<ul style="list-style-type: none"> ◆ <i>Breastfeeding and complementary foods until 2 years and beyond. Encourage HIV testing</i>
<i>Replacement feeding is safe</i>	<i>Replacement feeding</i>	<ul style="list-style-type: none"> ◆ <i>Replacement feeding and complementary foods until 2 years and beyond</i>

b. If replacement feeding with infant formula is safe, then an HIV-infected woman may gradually stop breastfeeding after 6 months.

Infant-Feeding Counselling

Infant-feeding counselling should be offered during ANC and as part of postnatal care. Additional counselling sessions may be required when the:

- ◆ Child is sick
- ◆ Child is nearing 6 months of age, to discuss the introduction of complementary foods at 6 months of age
- ◆ Mother returns to work
- ◆ Mother decides to change feeding methods

<i>Steps in Infant feeding counselling for women with HIV</i>
<i>Step 1: Explain the risks of MTCT and how to reduce risks.</i>
<i>Step 2: Discuss advantages and disadvantages of infant feeding options starting with the mother's preference</i>
<i>Step 3: Explore with the mother her home and family situation, discuss conditions needed for replacement</i>
<i>Step 4: Recommend exclusive breastfeeding for 6 months and continued breastfeeding for up to 1 year</i>
<i>Step 5: Demonstrate how to the mother should breastfeed</i>
<i>Step 6: Explain when and how to stop breastfeeding</i>
<i>Step 7: Provide follow-up counselling and support</i>

Postnatal Visits

- ◆ Monitor growth.
- ◆ Check feeding practices and whether any change is envisaged.
- ◆ Check for signs of illness.
- ◆ Discuss complementary feeding from 6 months.
- ◆ Discuss transition to animal milk.

Conditions needed for safe exclusive formula feeding

- ◆ *Mothers known to be HIV-infected should only give commercial infant formula to their infants when specific conditions are met:*
- ◆ *Safe water and sanitation are assured at the household level and in the community; and*
- ◆ *The mother, or other caregiver can reliably provide enough infant formula to support normal growth and development of the infant; and*
- ◆ *The mother or caregiver can prepare it cleanly and frequently enough so that it is safe and carries a low risk of diarrhoea and malnutrition; and*
- ◆ *The mother or caregiver can, in the first six months, exclusively give infant formula; and*
- ◆ *The family is supportive of this practice; and*
- ◆ *The mother or caregiver can access health care that offers comprehensive child health services*

Safe Preparation of Commercial Infant Formula

Getting ready Step 1: Gather supplies needed for formula feeding, supplies needed for formula feeding include the following:

- ◆ Pot for sterilising
- ◆ Fuel (firewood, gas, electricity, paraffin)
- ◆ Feeding cup for the infant
- ◆ Clean water
- ◆ Soap
- ◆ Measuring utensil calibrated in millilitres
- ◆ Tin of formula with the scoop provided by the manufacturer
- ◆ Brush for cleaning the cup

Getting ready Step 2: Clean, sterilise and store equipment for formula feeding

Cleaning

- ◆ Wash hands with soap and water and dry using a clean cloth.
- ◆ Wash all feeding and preparation equipment thoroughly in hot soapy water.
- ◆ Rinse thoroughly in safe water.

Sterilising

- ◆ Fill a large pan with water.
- ◆ Place the cleaned feeding and preparation equipment into the water. Make sure that the equipment is completely covered with water and that no air bubbles are trapped.
- ◆ Cover the pan with a lid and bring to a rolling boil for at least 1–2 seconds.
- ◆ Keep the pan covered until the feeding equipment is needed.
- ◆ Equipment for feeding may also be sterilised in a commercial steriliser (follow manufacturer's instructions).

Storing

- ◆ Wash and dry hands; use sterilised forceps or clean hands to handle sterilised equipment. If removed from the steriliser before it is needed, keep covered in a clean place.

How to prepare a cup feed: The 12 steps

1. Clean and disinfect a surface on which to prepare the feed.
2. Wash hands with soap and water and dry using a clean cloth.
3. Boil some safe water. Make sure the water comes to a rolling boil for at least 1–2 seconds.
4. Read the instructions on the formula packaging to find out how much water and how much powder you need. Adding more or less formula than instructed could make infants ill.
5. Pour the correct amount of boiled water into a cleaned and sterilised feeding cup. The water should be no cooler than 70°C, so do not leave it for more than 30 minutes after boiling.
6. Add the exact amount of formula to the water in the feeding cup. Level the scoop (that came with the formula) with a clean knife or the handle of a spoon. Never use heaped scoops.
7. Mix thoroughly by stirring with a cleaned and sterilised spoon.
8. Cool to feeding temperature.
9. Dry the outside of the cup with a clean or disposable cloth.
10. Check the temperature of the feed by dripping a little onto the inside of the wrist. It should feel lukewarm, not hot.
11. Feed the infant.
12. Throw away any feed that has not been consumed within 1 hour.

Feeding From 6-24 Months

Introducing complementary foods:

- ◆ Begin offering foods at 6 months, gradually increasing the amount, variety, and consistency of the foods offered.
- ◆ Continue feeding breast milk or milk in some form throughout the day.

Age appropriate complementary foods and their characteristics

Age	Texture	Frequency	Amount at each meal
6-8 months	Start with thick porridge, well mashed foods; continue with	2-3 meals per day plus frequent breastfeeds. Depending on the child's appetite, offer 1-2 snacks	Start with 2-3 spoonfuls, increase to 2/3 cup*
9-11 months	Finely chopped or mashed foods, and foods that baby can pick up	3-4 meals plus breastfeeds. Depending on the child's appetite, offer 1-2 snacks	3/4 cup*
12-24 months	Family foods, chopped or mashed if necessary	3-4 meals plus breastfeeds. Depending on the child's appetite, offer 1-2 snacks	1 full cup*
If infant is not breastfed, give in addition: 1-2 cups of milk per day and 1-2 extra meals per day.			

* One teaspoon = 5 ml

+ One cup = 250 ml

Follow-Up Care of HIV-Exposed Infants

Follow up visits

HIV-exposed infants must be followed closely in order to provide important interventions that reduce the risk of MTCT and promote the health of the infant, mother and family. Because PMTCT interventions can only reduce the risk of perinatal transmission, a critical part of infant follow-up is to establish the HIV status of the infant. Early diagnosis of HIV infection allows the infant to be started on ART as soon as possible.

The goals of care for all HIV-exposed infants are to:

- ◆ *Minimise the risk of MTCT*
- ◆ *Establish HIV status (early infant diagnosis)*
- ◆ *Prevent opportunistic infections (OIs)*
- ◆ *Optimise safer infant feeding*
- ◆ *Optimise growth and development*
- ◆ *Provide routine care (e.g., immunisations, vitamin A)*
- ◆ *Conduct routine screening for tuberculosis*
- ◆ *Monitor for signs and symptoms of HIV*
- ◆ *Ensure access to care, treatment and psychosocial support for the infant, mother and family*

The HIV-exposed newborn should be seen in the healthcare facility as soon as possible after delivery so that ARV prophylaxis may be initiated and infant feeding can be assessed and supported. ARV prophylaxis should be initiated within 6-12 hours or as soon as possible thereafter.

The follow-up schedule for HIV-exposed infants is shown below:

Follow-up visit schedule

Tanzania guidelines recommends that follow-up care for infants coincide with the immunisation schedule indicated on the Road to Health Card:

- ◆ At birth (for infants delivered at home)
- ◆ At ages 4, 8 and 12 weeks
- ◆ Once a month from 12 weeks to 1 year
- ◆ Quarterly from 1 to 2 years
- ◆ At 18 months for HIV diagnosis

Follow-up care should follow the routine care summarised below.

Care of the HIV-Exposed Infant	
Action	Description
<i>History and physical exam</i>	◆ If the child is ill, follow Integrated Management of Childhood Illness (IMCI) guidelines to assess and classify the sick child. HIV testing should be performed if signs and symptoms of HIV disease are present.
<i>ARV prophylaxis</i>	◆ Evaluate the status of ARV prophylaxis: Should ARV prophylaxis be initiated, continued or stopped? See "Infant ARV prophylaxis"
<i>Growth and development</i>	◆ Check for developmental delay or failure to achieve milestones. Weigh and measure the infant, plot growth on the Road to Health card and interpret the growth curve.
<i>HIV testing</i>	◆ Conduct virologic or antibody testing according to national guidelines. Initial DBS collection for viral testing should be performed at four to six weeks of age; follow-up testing should be conducted six weeks after complete cessation of breastfeeding. See "Infant HIV Testing".
<i>CPT</i>	◆ Start CPT from six weeks of age and continue until the child is determined to be HIV-uninfected and is

	<i>no longer breastfeeding. See “Cotrimoxazole preventive therapy (CPT)” below.</i>
<i>Immunisations and Vitamin A</i>	◆ <i>Immunise and administer Vitamin A according to national guidelines. See schedules below.</i>
<i>Infant feeding</i>	◆ <i>Assess feeding status and provide infant feeding counselling and support. See Section “Infant Feeding”.</i>
Mother and family	
<i>Maternal health</i>	◆ <i>Assess the mother’s general health and access to care. See Section “Follow-Up Care for HIV-Infected Women”</i>
<i>Family</i>	◆ <i>Assess need for psychosocial support; offer counselling and referral for community support. Discuss disclosure, HIV testing for partner/children.</i>

Assessment of HIV-specific and nonspecific symptoms of illness

Healthcare workers should teach mothers and other caregivers to recognise early signs and symptoms that may indicate HIV infection and to seek care urgently for sick children whose HIV status is unknown. Healthcare workers should strongly encourage mothers and families living with HIV to adhere to all infant follow-up appointments and to seek medical help when the child becomes ill or if the mother suspects a problem.

<i>Is symptom specific to HIV?</i>	<i>Signs and conditions</i>
<i>Common in children who are HIV infected; also seen in ill, uninfected children</i>	<ul style="list-style-type: none"> ◆ <i>Chronic, recurrent otitis media with discharge</i> ◆ <i>Persistent or recurrent diarrhoea</i>

	<ul style="list-style-type: none"> ◆ Failure to thrive (slow growth) ◆ TB
<p><i>Common in children who are HIV infected; uncommon in uninfected children</i></p>	<ul style="list-style-type: none"> ◆ Severe bacterial infections, particularly if recurrent ◆ Persistent or recurrent oral thrush ◆ Chronic parotiditis (swelling of the parotid gland, often painless) ◆ Generalised persistent noninguinal lymphadenopathy in two or more sites ◆ Hepatosplenomegaly (enlargement of the liver and spleen) ◆ Persistent or recurrent fever ◆ Neurologic dysfunction ◆ Herpes zoster (shingles), single dermatome ◆ Persistent generalised dermatitis unresponsive to treatment
<p><i>Specific to HIV infection</i></p>	<ul style="list-style-type: none"> ◆ PCP ◆ Oesophageal candidiasis ◆ Lymphoid interstitial pneumonitis ◆ Herpes zoster (shingles) with multidermatomal involvement ◆ Kaposi sarcoma

Presumptive diagnosis of HIV infection in an exposed infant

If an infant is <18 months old and has symptoms that are suggestive of HIV infection, and viral testing is not available, it is possible to make a presumptive diagnosis of HIV infection for the purposes of starting ART.

Infants <18 months of age can be diagnosed with HIV on the basis of symptoms and a positive antibody test. Nonetheless, a DBS sample should be collected and sent for DNA-PCR while initiating ART and treating opportunistic infections.

The use of symptoms to guide diagnosis of HIV should be followed by efforts to confirm the diagnosis with the best available tests for the infant's age.

If the child is at least 18 months old, an antibody test should be used to diagnose HIV infection.

Presumptive diagnosis of a severe HIV infection should be made if the child:

1. Has a confirmed positive HIV antibody test^a, AND
2. Has a diagnosis of any AIDS-indicating condition^b, OR
3. Is symptomatic with two or more of the following:
 - a. Oral thrush^b
 - b. Severe pneumonia^b
 - c. Severe sepsis^b

Other factors that support the diagnosis of HIV disease in an HIV-seropositive infant include:

- ◆ Recent HIV-related maternal death or advanced AIDS in the mother
- ◆ If available, a CD4 percentage of less than 20%

- a. Although HIV antibody tests are difficult to interpret for children under the age of 18 months, when accompanied by these other symptoms, the antibody test can be used to form the presumptive diagnosis of HIV.
- b. AIDS-indicating conditions include some but not all HIV WHO Paediatric Clinical Stage 4 indicators, such as PCP, oesophageal candidiasis, cryptococcal meningitis, cerebral toxoplasmosis, HIV wasting and Kaposi sarcoma.
- c. As defined by the Integrated Management of Childhood Illness.

Infant ARV prophylaxis

It is crucial to identify infants who are infected with HIV as early as possible — ideally in infancy — to prevent death, illness and growth and developmental delays. HIV testing and counselling in infants and children is described in the Section “HIV Testing and Counselling in Infants and Children”. Children with HIV infection should begin ART as soon as possible to prevent or limit disease progression.

- ◆ It is crucial that HCWs properly record information related to HIV status on the mother’s RCH card and on the child’s Road to Health card.
- ◆ HIV-exposure status must be documented for every infant seen at the Under 5 clinic.
- ◆ If the HIV-exposure status of the infant is not documented, the HCW must determine if the mother and/or infant have undergone HTC. If HTC has not been performed or if test results cannot be determined, HTC should be provided.

Infant NVP dosing recommendations*	
Infant age	NVP daily dosing
Birth to 6 weeks*	
◆ Birth weight 2000–2499 g	◆ 1 ml (10 mg) once daily
◆ Birth weight \geq 2500 g	◆ 1.5 ml (15 mg) once daily

*Low birth weight infants should receive mg/kg dosing, suggested starting dose is 2 mg/kg once daily.

Cotrimoxazole preventive therapy (CPT)

HIV-exposed infants should receive prophylaxis against PCP and other opportunistic infections using CPT, beginning at 4 weeks of age (or at first encounter with the healthcare system if the child was not seen within 4 to 6 weeks of delivery) and continued until HIV infection can be excluded. For breastfeeding infants, HIV infection cannot be excluded until six weeks after complete cessation of breastfeeding.

For HIV-infected children, CPT should be given to:

- ◆ All HIV-infected infants <12 months of age.
- ◆ All HIV-infected children between 1 and 4 years of age who have clinical signs or symptoms suggestive of mild, advanced or severe HIV disease (WHO Stage 2, 3 and 4).
- ◆ All children >12 months of age whose CD4 % is less than 15%.
- ◆ All HIV-infected children >5 years of age should start or continue CPT according to adult guidelines.

Recommended daily dosage	Suspension	Paediatric tablet	SS adult tablet	DSadult tablet
<6 months 100 mg SMX /20 mg TMP	2.5ml	1 tablet	¼ tablet	----
6 months – 5 years 200mg SMX /40 mg TMP	5 ml	1 tablets	½ tablet	----
>6 – 14 years 400 mg SMX /80 mg TMP	10 ml	4 tablets	1 tablet	½ tablet
>14 years 800 mg SMX/ 160 mg TMP	----	----	2 tablets	1 tablet
Frequency: once a day Suspension: 5 ml syrup 200 mg/40 mg. Paediatric tablet: 100 mg/20 mg. Single-strength adult tablet: 400 mg/80 mg. Double-strength adult tablet: 800 mg/160 mg				

Immunisations

Age of Infant	Vaccine
Birth	BCG*, OPV-0
4 weeks	DPT-HBV-1, OPV-1
8 weeks	DPT-HBV-2, OPV-2
12 weeks	DPT-HBV-3, OPV-3
9 months	Measles* (if no severe immunodeficiency)
Key: BCG = Bacille Calmette Guerin OPV = oral polio vaccine DPT-HBV = combined diphtheria, pertussis, tetanus and hepatitis B vaccine	

* BCG and measles vaccine should be given to all children except those children with symptoms of advanced HIV/AIDS.

Vitamin A supplementation

Age	Dose: Breastfed infants	Dose: Replacement fed infants
Before 6 of age months	None	50,000 IU
At 9-12* months	100,000 IU	100,000 IU
At 15-18 months	200,000 IU	200,000 IU
At 21-24 months	200,000 IU	200,000 IU

*Timing should correspond with measles vaccination.

ART for HIV-Infected Children

All HIV infected infants and children below two years of age should be initiated on ART irrespective of their CD4 count. HCWs must monitor older children for symptoms of HIV infection that would make them candidates for ART. The national guidelines contain detailed clinical and social criteria for initiating ART in children.

All children with confirmed or presumptive HIV infection should be referred for HIV treatment either in the RCH facility or to a CTC. Presumptive diagnoses of HIV infection should be confirmed with antibody tests at 18 months of age at facilities where DNA PCR is not available. Only children with confirmed HIV infection continue ART.

The first-line ARV regimens for children are outlined below. Paediatric dosages have to be adjusted frequently for growth. Healthcare workers should assess the child's growth, adherence and the tolerance to the ARV regimen at every visit and adjust the dosages accordingly.

Clinical criteria for starting ART in HIV-infected children

- ◆ *All HIV-infected children less than 24 months of age, regardless of CD4 percentage or clinical stage*
- ◆ *All HIV-infected children 24 months to five years of age with confirmed HIV infection:*
 - *WHO paediatric clinical stage 3 or 4 regardless of CD4 percentage*
 - OR
 - *WHO paediatric clinical stage 1 or 2 if CD4 percentage <25%*

Preferred First Line ART options for children

- ◆ Zidovudine (AZT) + Lamivudine (3TC) + Nevirapine (NVP) for children <3 years
 - ◆ Zidovudine (AZT) + Lamivudine (3TC) + Efavirenz (EFV) or Nevirapine (NVP) for children ≥ 3 years old
 - ◆ Abacavir (ABC) + Lamivudine (3TC) + Efavirenz (EFV) for children ≥ 3 years or Nevirapine (NVP) for children <3 years
 - ◆ Stavudine (d4T) + Lamivudine (3TC) + Nevirapine (NVP) available also as FDC for children
- ◆ d4T is an alternate for AZT in cases of anaemia (Hgb<7.5 g/dL). It should be noted that d4T in liquid formulation needs refrigeration. Also, potential side effects, such as peripheral neuropathy, are difficult to recognise in children.

WHO Clinical Staging for Infants and Children

<i>Clinical stage 1</i>	
◆ <i>Asymptomatic</i>	
◆ <i>Persistent generalised lymphadenopathy</i>	
<i>Clinical stage 2</i>	
◆ <i>Unexplained persistent hepatosplenomegaly</i>	◆ <i>Recurrent oral ulcerations</i>
◆ <i>Papular pruritic eruptions</i>	◆ <i>Unexplained persistent parotid gland enlargement</i>
◆ <i>Extensive wart virus infection</i>	◆ <i>Lineal gingival erythema (LGE)</i>
◆ <i>Extensive molluscumcontagiosum</i>	◆ <i>Herpes zoster</i>
◆ <i>Fungal nail infections</i>	◆ <i>Recurrent or chronic upper respiratory tract infections (otitis media, otorrhoea, sinusitis or tonsillitis)</i>
<i>Clinical stage 3</i>	
◆ <i>Unexplained moderate malnutrition not adequately responding to standard therapy</i>	◆ <i>Oral hairy leukoplakia</i>
◆ <i>Unexplained persistent diarrhoea (14 days or more)</i>	◆ <i>Acute necrotizing ulcerative gingivitis or periodontitis</i>
◆ <i>Unexplained persistent fever (above 37.5 intermittent or constant, for longer than one month)</i>	◆ <i>Pulmonary TB</i>
◆ <i>Persistent oral candidiasis (after first 6-8 weeks of life)</i>	◆ <i>Severe recurrent bacterial pneumonia</i>

◆ Oral hairy leukoplakia	◆ Unexplained anaemia (<8 g/dl), neutropaenia (<0.5 x 10 ⁹ per litre) and/or chronic thrombocytopaenia (<50 x 10 ⁹ per litre)
◆ Symptomatic lymphoid interstitial pneumonitis (LIP)	◆ Chronic HIV-associated lung disease including bronchiectasis
Clinical stage 4	
◆ Unexplained severe wasting or severe malnutrition not adequately responding to standard therapy	◆ HIV encephalopathy
	◆ Kaposi's sarcoma
◆ Pneumocystis pneumonia	◆ Oesophageal candidiasis (or candidiasis of trachea, bronchi or lungs)
◆ Recurrent severe presumed bacterial infections (such as empyema, pyomyositis, bone or joint infection or meningitis but excluding pneumonia)	◆ Chronic herpes simplex infection; (orolabial or cutaneous of more one month's duration or visceral at any site)
◆ Central nervous system toxoplasmosis (after one month of life)	◆ Extrapulmonary TB
◆ HIV encephalopathy	◆ Chronic cryptosporidiosis
◆ Cytomegalovirus infection (retinitis or cytomegalovirus infection affecting another organ, with onset at age older than one month)	◆ Disseminated endemic mycosis (extrapulmonary histoplasmosis, coccidiomycosis)
◆ Extrapulmonary cryptococcosis (including meningitis)	◆ Disseminated non-tuberculous mycobacteria infection
◆ Chronic isosporiasis	◆ Candida of trachea, bronchi or lungs

◆ HIV-associated cardiomyopathy or HIV-associated nephropathy	◆ Cerebral or B cell non-Hodgkin lymphoma
◆ Progressive multifocal leukoencephalopathy (PML)	

Creating a Safe Work Environment

Standard Precautions include the following interventions:

- ◆ *Consider every person (patient or healthcare worker) as potentially infectious and susceptible to infection.*
- ◆ *Use appropriate hand hygiene techniques.*
- ◆ *Wear personal protective equipment.*
- ◆ *Appropriately handle sharps, which include hypodermic and suture needles, scalpel blades, lancets, razors and scissors, patient care and resuscitation equipment and linen.*
- ◆ *Appropriately manage patient placement and patient environmental cleaning.*
- ◆ *Safely dispose of infectious waste materials, including sharps, to protect those who handle them and to prevent injury and the spread of infection to the community.*
- ◆ *Process instruments by decontamination, cleaning and then either sterilisation or high-level disinfection using national recommended procedures.*
- ◆ *Apply waterproof dressing to cover all cuts and abrasions on healthcare workers.*
- ◆ *Promptly and carefully clean spills, blood or other body fluids.*

Hand washing with plain soap and water is one of the most effective methods to prevent transmission of bloodborne pathogens and minimise the spread of infection.

Tips for effective glove use

- ◆ *Wear gloves that are the correct size.*
- ◆ *Use water-soluble hand lotions and moisturisers to prevent hands from drying and cracking. Avoid oil-based lotions or creams.*
- ◆ *Do not wear rings.*
- ◆ *Keep fingernails short (less than 3 mm beyond the fingertip).*
- ◆ *Store gloves where they are protected from extreme temperatures.*

Tips for careful handling of sharps

- ◆ *Always point the sharp end away from yourself and others.*
- ◆ *Pass scalpels and other sharps with the sharp end pointing away from staff. Whenever possible, place the sharp on a table or other flat surface (a tray) where it can then be picked up by the receiving person.*
- ◆ *Pick up sharps one at a time and never pass handfuls of sharp instruments or needles.*
- ◆ *Avoid recapping and performing other manipulations of needles by hand. If recapping is necessary, use the single-hand scoop technique.*
- ◆ *Collect used syringes and needles at the point of use in a sharps container that is puncture-proof and leak-proof and that can be sealed before completely full.*

Safe Decontamination of Equipment

Decontamination is the first step is to make equipment safe to handle. This important step kills both hepatitis B and HIV.

- ◆ *Decontamination requires a 10 minute soak in a 0.5% chlorine solution.*
- ◆ *After 10 minutes, remove the items from the chlorine solution and either rinse with water or clean immediately.*

Formula for making a dilute solution

<i>From a concentrated solution</i>	<i>Total Parts (TP) water = $\frac{\% \text{ Concentrate}}{\% \text{ Dilute}} - 1$</i>
<i>From a dry powder</i>	<i>Grams/litre = $\frac{\% \text{ Dilute}}{\% \text{ Concentrate}} \times 1000$</i>

Routine procedures for decontaminating equipment

- ◆ *Use heavy gloves.*
- ◆ *Dismantle all equipment before cleaning.*
- ◆ *Clean equipment with soap and hot water prior to disinfection or sterilisation.*
- ◆ *Wear additional protective clothing such as aprons, gowns, goggles, and masks when at risk for splashing with body fluids.*
- ◆ *Rinse thoroughly after chemical disinfection.*

Effective cleaning with soap and hot water is an important first step that removes a high proportion of microorganisms and is needed to successfully complete the decontamination process.

Risk Reduction in the Labour and Delivery Setting

The potential for exposure to blood and body fluids containing HIV is high during labour and delivery. Healthcare workers should provide appropriate and sensitive care to women with HIV infection while ensuring safety and reducing risk for themselves and others.

Tips for reducing the risk of occupational exposure in the obstetric setting:

- ◆ *Cover broken skin or open wounds with watertight dressings.*
- ◆ *Wear suitable gloves when exposure to blood or other body fluids is likely.*
- ◆ *Wear doubled surgical gloves during vaginal delivery.*
- ◆ *Wear boots, a waterproof plastic apron, masks and protective eyewear during delivery.*
- ◆ *Pass all sharp instruments onto a tray, rather than hand-to-hand, and use the “hands-free” technique.*
- ◆ *Cover the infant’s umbilical cord with a gloved hand or gauze before cutting.*
- ◆ *Use elbow-length or gauntlet gloves during manual removal of placenta.*
- ◆ *Use needle holders when suturing.*
- ◆ *When episiotomy is necessary, use an appropriate-size needle (21 gauge, 4 cm, curved) and needle holder during the repair.*
- ◆ *If blood splashes on skin, immediately wash the area with soap and water. If splashed in the eye, wash the eye with water only. If blood splashes on the floor, wash it away using chlorine.*
- ◆ *Dispose of solid waste (e.g., blood-soaked dressings and placentas) safely according to facility procedures.*

Steps in Post-Exposure Management

Step 1: Administer first aid (exposure site management)

- ◆ Possible occupational exposure to HIV requires immediate action
- ◆ Apply first aid to reduce contact time with blood or body fluids.
- ◆ Immediately wash areas of the skin exposed to potentially infectious fluids with soap and water. Avoid milking the site.
- ◆ For an exposure to the eye, flush with water or normal saline.
- ◆ For an exposure to the mouth, spit out the fluid immediately, rinse mouth using water or saline and spit out again. Repeat process.
- ◆ Do not use caustic agents such as disinfectants on exposed areas.

Step 2: Report the exposure

- ◆ Report the accident to the immediate supervisor and to the person in charge of PEP. Complete an injury report form.

Step 3: Establish eligibility for PEP

- ◆ The supervisor should conduct a risk assessment immediately, regardless of time of day. Risk assessment determines the severity of the exposure and whether any immediate action is required. If the risk is assessed as “low risk”, the HCW should complete an injury report form; no further action is required. See table below.

Post-exposure risk assessment questions

Location of exposure	
Percutaneous	<ul style="list-style-type: none"> ◆ How deep was the injury? ◆ What type of needle was used?
Mucosal	<ul style="list-style-type: none"> ◆ What was the estimated volume of blood or bodily fluid on the mucosal surface?
Nonintact skin	<ul style="list-style-type: none"> ◆ What is the condition of the skin?

(e.g., bruised skin)	<ul style="list-style-type: none"> ◆ How long was the skin in contact with the infected blood or bodily fluid?
Severity of exposure	
High-risk exposure	<ul style="list-style-type: none"> ◆ Large quantity of blood ◆ Device visibly contaminated with source person's blood ◆ Procedure involving needle placed directly into client's vein or artery ◆ Deep injury ◆ Injury with hollow-bore needle ◆ High viral load in source person ◆ Acute infection ◆ Advanced HIV disease (AIDS)
Low-risk exposure	<ul style="list-style-type: none"> ◆ Exposure to small volume of blood or blood contaminated with fluids from asymptomatic HIV-infected patient with low viral load ◆ Exposure following an injury with a solid or blunt needle ◆ Any superficial injury or mucocutaneous exposure
HIV status of source person	
The source person is HIV positive	<ul style="list-style-type: none"> ◆ Initiate (or continue) PEP
The source person is HIV negative	<ul style="list-style-type: none"> ◆ Stop the PEP regimen for the exposed person ◆ Perform follow-up HIV testing at 6 weeks and at 3 months for both the source and exposed person, as it is possible that the source person was in the window period when the exposure occurred
The source person is unable to be contacted, or does	<ul style="list-style-type: none"> ◆ If there is a possibility that the source could be HIV infected, and the injury is significant, PEP should be started in the absence of the source

<i>not consent to HIV testing</i>	<i>person's test results.</i>
<i>HIV status of healthcare worker</i>	
<i>Exposed HCW is HIV infected</i>	<ul style="list-style-type: none"> ◆ <i>There is no need to continue (or initiate) PEP because a positive result would indicate that the HCW was infected with HIV before the incident</i> ◆ <i>The HIV-infected HCW should be referred to a CTC for evaluation while ensuring that confidentiality is maintained</i>

Step 4: Prescribe and dispense PEP medications

- ◆ *If the exposure is assessed as “significant” and the HCW gives informed consent, the first dose of PEP with ARV medications should be given as soon as possible, in accordance with national or facility PEP guidelines.*
- ◆ *Conduct pregnancy test should on all female HCWs of reproductive age if their pregnancy status is unknown. If possible, this should be done before initiating PEP.*
- ◆ *Counsel on side effects of ARV medications including nausea, malaise, headache and/or anorexia.*
- ◆ *Ensure a full month's supply of ARV medications once PEP has been started.*

ARV medications should be taken as soon as possible and no later than 72 hours after an exposure.

Step 5: Provide follow-up care and HIV testing, monitor and manage ARV toxicity

- ◆ *Conduct repeat HIV testing at 6 weeks, 12 weeks and 6 months after the exposure. If the exposed HCW tests negative after 6 months, he or she is not infected with HIV.*

- ◆ Monitor for ARV drug toxicity. Full blood count, liver function tests and renal function tests should be repeated at 2 weeks.
- ◆ Counsel on safer sex practices following the exposure until HIV infection can be ruled out at 6 months. Anyone exposed to HIV should refrain from donating blood, plasma, organs, tissue or semen until infection can be ruled out.

Recommended PEP ARV regimen according to risk category

<i>Risk category</i>	<i>ARV prophylaxis</i>	<i>Duration</i>
<i>Low risk</i>	<i>AZT 300 mg twice a day and 3TC 150 mg twice a day (Use fixed-dose combinations of the above medications when possible*)</i>	<i>28 days</i>
<i>High risk</i>	<i>AZT 300 mg twice a day and 3TC 150 mg twice a day* and EFV 600 mg once nightly on an empty stomach For pregnant women, replace EFV with LPV/r 133.33/33.3mg (3 capsules BD)</i>	<i>28 days</i>

**Fixed-dose combinations include Combivir or Duovir, 1 tablet twice a day.*

PMTCT Programme Management

There are four levels of management in the overall national health system and likewise in the PMTCT programme:

- ◆ *National*
- ◆ *Regional*
- ◆ *District and*
- ◆ *Facility level*

The National PMTCT Coordinator (at the RCH), heads the PMTCT program and the Regional/District Reproductive and Child health coordinators (RRCHCO and DRCHCO) are responsible in assisting the Regional and District Medical Officers in coordinating the implementation of the PMTCT programme.

Coordination between regional, district and national levels is very important within this decentralised approach to PMTCT programme planning and implementation.

Organisation of the PMTCT Programme

The PMTCT team at the facility level

A successful PMTCT programme requires the support and cooperation of the entire health team in the facility. Team members include:

- ◆ *Doctors*
- ◆ *Nurses*
- ◆ *Laboratory personnel*
- ◆ *Pharmacists*
- ◆ *Records personnel*
- ◆ *Administrative staff*
- ◆ *Social workers and nutritionists where available*

Management at the facility level

The facility management team comprises the Facility In-charge, Antenatal Care In-charge, Labour Ward In-charge, Laboratory In-charge, Pharmacy In-charge, Records In-charge and Community Contact Person.

The facility team responsibilities are:

- ◆ *On-site supervision;*
- ◆ *Promotion of the Baby Friendly Hospital Initiative;*
- ◆ *Ordering of supplies, testing kits, and ARVs from the main store;*
- ◆ *Collection of data, preparation, analysis and discussion of monthly PMTCT reports;*
- ◆ *Submission of PMTCT reports to the District Medical Officer's (DMO) office;*
- ◆ *Facilitation of community-based activities;*
- ◆ *Collaboration and partnership with other actors in PMTCT and HIV*

and AIDS; and

- ◆ Referral of clients to care and treatment centres (CTC) and other services, e.g. family planning or tuberculosis clinics.

PMTCT commodities management

Commodities management ensure that healthcare workers have the supplies and equipment they need to provide PMTCT services.

The purpose of a logistics system is to fulfil the six “rights”:

1. The right **PRODUCTS**
2. The right **QUANTITY**
3. The right **QUALITY**
4. Delivered to the right **PLACE**
5. At the right **TIME**
6. At the right **COST**

Ordering of PMTCT commodities depends on whether the facility is offering CTC and PMTCT services or PMTCT services only:

- ◆ Facilities offering CTC and PMTCT services order through ARV logistic system
- ◆ Facilities offering only PMTCT services order through the integrated logistics system.

The facility's order must be submitted to the district during the first week of the month of the ordering cycle.

Records

In order to facilitate efficient administration and management of PMTCT commodities, all information regarding commodity usage should be recorded in dedicated register books

SN	Type of record	Tool to be used
1	Record of ARV drugs dispensed at PMTCT sites	A1. Daily dispensing register for ARVs (see appendix 9-L)
2	Record of HIV test kits and DBS used	FOMU YA MATUMIZI NA UHAKIKI UBORA WA VITENDANISHI VYA UPIMAJI VVU

Equipment, supplies and medications needed for PMTCT services

Antiretroviral medicines (ARVs) for Option B+

- ◆ Nevirapine suspension
- ◆ ZDV/3TC Tablets
- ◆ TDF/3TC/EFV Tablets
- ◆ Efavirenz Tablet
- ◆ Nevirapine Tablets
- ◆ Second line ARVs

Medicines for prevention and treatment of opportunistic and common infections

- ◆ Clotrimazole vaginal pessaries (doses), pack of 6
- ◆ Clotrimazole cream
- ◆ Cotrimoxazole syrup (for children)
- ◆ Cotrimoxazole tablets
- ◆ Ferrous sulphate
- ◆ Folic acid tabs
- ◆ Nevirapinesuspension
- ◆ Fluconazole tabs
- ◆ Multivitamin tablets
- ◆ Multivitamin syrup
- ◆ Nystatin oral suspension
- ◆ Nystatin cream
- ◆ Daktarin oral jelly
- ◆ Betamethasone cream
- ◆ Efavirenz Tablet

- ◆ ZDV/3TC Tablets
- ◆ Nevirapine Tablets
- ◆ TDF/3TC/EFV Tablets
- ◆ Second line ARVs

HIV test kits, reagents and supplies

- ◆ Determine[®] HIV 1 /HIV 2, kit of 100 tests
- ◆ Vacutainer needles (pack of 100)
- ◆ UNIGOLD, kit of 20tests
- ◆ DBS Kits of 20 tests
- ◆ Vacutainer tubes (pack of 100)
- ◆ PCR reagents

Routine equipment and supplies to support PMTCT

- ◆ Small refrigerator
- ◆ Goggles/ Eyeglass shield
- ◆ Timer
- ◆ Apron
- ◆ Cotton wool rolls
- ◆ Boots
- ◆ Antiseptic, e.g. soaps
- ◆ Dried Blood Spot (DBS) pack
- ◆ Chlorhexidine 0.25%
- ◆ Syringes
- ◆ Disinfectant / Lysol, 5 litre can
- ◆ Lancets
- ◆ Iodine solution, 250ml – 10%
- ◆ Band aids
- ◆ Gloves (latex), non-sterile disposable
- ◆ Methylated spirit
- ◆ Gloves, surgical sterile size 7.5 and 8
- ◆ Sodium hypochlorite (e.g. JIK)
- ◆ Gloves, long-sleeved, surgical sterile size 8
- ◆ Suction tubes
- ◆ Hb machines

PMTCT programme monitoring and evaluation

PMTCT programme monitoring tracks actual performance against previously determined objectives. Evaluation provides feedback on how programme interventions are working and recommends corrective measures.

The PMTCT Programme Monitoring and Evaluation system collects and analyses data and provides information on the performance of PMTCT program components, including inputs, service availability, coverage, uptake and impact. It includes all activities aimed at providing the minimum package of services, such as:

- ◆ *HIV testing and counselling for pregnant women and their families*
- ◆ *ARV for treatment of HIV positive pregnant and breastfeeding women*
- ◆ *ARV prophylaxis of HIV exposed Infants*
- ◆ *Follow up of HIV Positive Mothers and their exposed/infected children*
- ◆ *Counselling and support for safe infant-feeding practices*
- ◆ *Family planning counselling and referral services*

Roles and responsibilities for monitoring and evaluation

Healthcare workers will use the tools available at the facility to record PMTCT service provision.

Stand-alone PMTCT health facilities (without CTC) complete the following:

- ◆ *CTC1*
- ◆ *CTC2*
- ◆ *RCH1 card*
- ◆ *RCH4 card*
- ◆ *ART register*
- ◆ *HMIS register*
- ◆ *PMTCT Mother and Child Follow-Up Register*

Facilities with both PMTCT and CTC services complete the following:

- ◆ CTC1 card
- ◆ CTC2
- ◆ RCH1
- ◆ RCH4
- ◆ HMIS Register
- ◆ PMTCT Mother and Child Follow-Up Register

PMTCT monitoring indicators

PMTCT indicators are measures chosen to represent progress in the delivery of PMTCT services. They are key statistics that provide information about the scope, quality and impact of PMTCT activities. Most indicators used in Tanzania measure the delivery of key PMTCT service interventions by healthcare facilities (coverage) and client's acceptance of each of these interventions (uptake). The indicators are calculated using the PMTCT information recorded by HCWs in HMIS, ART and PMTCT Mother Child Follow up registers and monthly/quarterly summary forms and data from the National Bureau of Statistics.

The PMTCT indicators include but are not limited to:

- ◆ Percentage of pregnant women who know their HIV serostatus
- ◆ Percentage of HIV-infected pregnant women who receive ARVs to reduce risk of MTCT
- ◆ Percentage of HIV-exposed infants receiving any HIV test by age of 18 months
- ◆ Percentage of HIV-exposed infants who received ARV prophylaxis
- ◆ Percentage of HIV-exposed infants receiving Cotrimoxazole by 2 months of age
- ◆ Percentage of HIV-exposed children tested with DNA PCR by four to six weeks of age
- ◆ Percentage of HIV-infected women receiving infant feeding counselling/support at the first infant follow-up visit

- ◆ *Percentage of postpartum HIV-infected women who receive family planning services*
- ◆ *Percentage of male partners of pregnant women who know their HIV status*

PMTCT programme monitoring data should be collected daily and recorded accurately and consistently in a way that protects client's confidentiality.

- ◆ *For the purpose of confidentiality clients should not be identified by name but by their unique numbers.*
- ◆ *Registers should be kept in locations away from public viewing.*
- ◆ *Registers should be accessible only to healthcare workers who need to work with them.*

Adult Dosing Information

First-line antiretroviral treatment (ART) dosing (adults)

Tenofovir (TDF) 300 mg + Lamivudine (3TC) 300 mg + Efavirenz (EFV) 600 mg taken once daily in a fixed-dose combination tablet

Cotrimoxazole preventive therapy (CPT) dosing (adults)

960 mg daily =

1 double strength tablet (160 mg TMP/800mg SMX)

or

2 single strength tablets (80mg TMP/400mg SMX) daily

Isoniazid preventive therapy (IPT) dosage (adults)

Isoniazid (INH) 300 mg daily for 6 months

Paediatric Dosing Information

Infant nevirapine (NVP) dosing recommendations*	
Infant age	NVP daily dosing
Birth to 6 weeks*	
<ul style="list-style-type: none"> ◆ Birth weight 2000–2499 g ◆ Birth weight \geq 2500 g 	<ul style="list-style-type: none"> ◆ 1 ml (10 mg) once daily ◆ 1.5 ml (15 mg) once daily

*Low birth weight infants should receive mg/kg dosing, suggested starting dose is 2 mg/kg once daily.

Infant cotrimoxazole preventive therapy (CPT) dosing				
Recommended daily dosage	Suspension	Paediatric tablet	SS adult tablet	DS adult tablet
<6 months 100 mg SMX /20 mg TMP	2.5ml	1 tablet	$\frac{1}{4}$ tablet	----
6 months – 5 years 200mg SMX /40 mg TMP	5 ml	1 tablets	$\frac{1}{2}$ tablet	----
>6 – 14 years 400 mg SMX /80 mg TMP	10 ml	4 tablets	1 tablet	$\frac{1}{2}$ tablet
>14 years 800 mg SMX/ 160 mg TMP	----	----	2 tablets	1 tablet
Frequency: once a day Suspension: 5 ml syrup 200 mg/40 mg. Paediatric tablet: 100 mg/20 mg. Single-strength adult tablet: 400 mg/80 mg. Double-strength adult tablet: 800 mg/160 mg				

<i>Infant Vitamin A dosing</i>		
<i>Age</i>	<i>Dose: Breastfed infants</i>	<i>Dose: Replacement fed infants</i>
<i>Before 6 of age months</i>	<i>None</i>	<i>50,000 IU</i>
<i>At 9-12* months</i>	<i>100,000 IU</i>	<i>100,000 IU</i>
<i>At 15-18 months</i>	<i>200,000 IU</i>	<i>200,000 IU</i>
<i>At 21-24 months</i>	<i>200,000 IU</i>	<i>200,000 IU</i>

**Timing should correspond with measles vaccination.*



PMTCT—TANZANIA

Announcing the PMTCT website and national resource center for health workers, policy makers, program managers and other stakeholders involved in services for the prevention of mother-to-child transmission of HIV activities in Tanzania.

See our website at <http://pmtct.or.tz>

Health workers, policy makers, program managers and other stakeholders will find useful and up-to-date news, information and resources for PMTCT and paediatric HIV services on this website.

The goals of this web site are to:

- ▶ Disseminate news, information and updated guidelines, policies, training materials, job aids published by the Tanzania Ministry of Health and Social Welfare (MOHSW) as well as information on HIV early infant diagnosis (HEID), infant and young child feeding, male partner involvement in PMTCT and other related topics.
- ▶ Disseminate news, reports and state-of-the-art clinical information, and materials from sources other than the MOHSW.
- ▶ Provide linkages and contact information for the various partners and stakeholders involved in implementing and scaling up services for PMTCT in Tanzania.
- ▶ Provide a forum for sharing information, ideas and best practices in PMTCT service delivery.