



Republic of Zambia
Ministry of Health

2010 National Protocol Guidelines



Integrated Prevention of Mother-to-Child Transmission of HIV

PMTCT
2010 National Protocol Guidelines

Foreword

Important new evidence has emerged on the use of antiretroviral (ARV) prophylaxis to prevent mother-to-child transmission (MTCT) of HIV during breastfeeding, on the optimal time for antiretroviral therapy (ART) initiation for individuals who need treatment and on guidance for feeding of HIV-exposed infants. This evidence compiled by the World Health Organisation (WHO) has formed the basis for the new recommendations which refer to lifelong ART for HIV positive women in need of treatment and ARV prophylaxis to prevent HIV transmission from mother to child during pregnancy, delivery and breastfeeding for HIV positive women not in need of treatment.

The implementation of these guidelines will aim to reduce the risk of transmission to less than 5 percent and work towards reaching our vision of an AIDS-free generation. This can only be achieved through increasing coverage and access to quality services using more efficacious ARV regimens and integration of the Prevention of Mother-to-Child Transmission of HIV (PMTCT) programme into Maternal, Neonatal and Child Health (MNCH) services.

This is an opportunity for Zambia to strengthen the PMTCT programme using the four-pronged approach that focuses on primary prevention of HIV, prevention of unintended pregnancies among HIV positive women, prevention of HIV transmission from infected mothers to their babies, and care and support to HIV infected families.

The Government of the Republic of Zambia has an obligation and is committed to providing the country with equitable access to cost effective and quality health care as close to the family as possible. It is against this background that the Ministry of Health is working with partners to improve PMTCT service delivery.

The 2010 revised guidelines are meant for use by national HIV and AIDS, MNCH, Sexual Reproductive Health (SRH) and Nutrition programme managers responsible for establishing policies, standards, designing and implementing PMTCT services. The guidelines are also meant for programme managers and health care providers to ensure quality services across the different levels of the health system.



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Abbreviations

3TC	Lamivudine
Ab	Antibody
ANC	Antenatal Care
ARV	Antiretrovirals
ART	Antiretroviral Therapy
AZT	Azidothymidine
BCG	Bacillus Calmette Guérin
BD	"Bis die" - Latin for 'twice a day'
CD4	T-lymphocyte bearing CD4+ receptor
CDC	Centers for Disease Control and Prevention
CHAZ	Churches Health Association of Zambia
CIDRZ	Center for Infectious Disease Research in Zambia
CIHDZ	Center for International Health and Development in Zambia
CHAI	Clinton Health Access Initiative
CMMB	Catholic Medical Mission Board
CRS	Catholic Relief Services
DBS	Dry Blood Spot
DHS	Demographic and Health Survey
DPT	Diphtheria, Pertussis and Tetanus
EGPAF	Elizabeth Glaser Pediatric AIDS Foundation
EFV	Efavirenz
ELISA	Enzyme-Linked Immunosorbent Assay
FP	Family Planning
FTC	Emtricitabine
GHE	Group Health Education
Hb	Haemoglobin
Hep	Hepatitis
Hib	Haemophilus influenzae type B
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
IPT	Intermittent Presumptive Treatment
IYCF	Infant and Young Child Feeding
MNCH	Maternal, Newborn and Child Health
MTCT	Mother-to-Child Transmission of HIV
NAC	National HIV/AIDS/STI/TB Council
NFNC	National Food and Nutrition Commission
NVP	Nevirapine
OI	Opportunistic Infection
OPV	Oral Polio Vaccine
PCP	<i>Pneumocystis Jirovecii</i> Pneumonia
PCR	Polymerase Chain Reaction
PEP	Post -Exposure Prophylaxis
PITC	Provider Initiated Testing and Counseling
PMTCT	Prevention of Mother-to-Child Transmission of HIV
RH	Reproductive Health
RPR	Rapid Plasma Reagin
Sd-NVP	Single Dose Nevirapine
STI	Sexually Transmitted Infections
TB	Tuberculosis
TDF	Tenofovir Disoproxil Fumarate
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
UTH	University Teaching Hospital
WHO	World Health Organisation
ZPCT II	Zambia Prevention, Care and Treatment Partnership II



Introduction

Zambia has in place the PMTCT programme which was initiated in 1999 to address the burden of vertical transmission of HIV. With a high antenatal HIV prevalence, estimated at 16.4 percent in 2008, approximately 80,000 infants born annually are at risk of acquiring HIV from their mothers. Integration of PMTCT into all maternal, newborn and child health services throughout the country will contribute to a significant reduction of transmission of HIV and subsequent child morbidity and mortality.

The 2010 guidelines emphasize the introduction of more efficacious regimens and extended nevirapine administration for the infant during the breastfeeding period as recommended by WHO.

In Zambia, more than 90 percent of women attending antenatal care services (ANC) are tested for HIV. In contrast, in the general adult population only 23.4 percent are tested. The percentage of adults expressing an accepting attitude towards people living with HIV is only 34 percent showing that stigma is still highly prevalent.

The plan to scale-up PMTCT services includes maintaining ANC utilization above 90 percent, increasing the percentage of women attending the first ANC by 14 weeks gestation, improving acceptance of testing to 100 percent, improving adherence to antiretroviral therapy (ART) by HIV positive women to 90 percent and increasing the proportion of women delivered by skilled health workers from 47 to 70 percent.

The three objectives of the next five year PMTCT Scale-Up Plan which is called “Virtual Elimination of MTCT of HIV and Provision of Care and Treatment for Paediatric HIV” are:

- To reduce the transmission of MTCT of HIV to less than 5 percent by 2015.
- To reduce the unmet need for family planning by 50 per cent from the current levels of 27 percent by 2015.
- To provide antiretroviral therapy to at least 95 percent of HIV-positive children in need of treatment by 2015.

Though an added advantage, formal training in PMTCT is not mandatory for health workers to be able to provide pregnant women and their families with information, care and support. Coupled with orientation and mentorship programmes, these guidelines can be used to equip programme managers and health care providers with knowledge and skills to ensure quality PMTCT service delivery.

Chapter One - Testing and Counseling

The entry point into the PMTCT programme for every pregnant woman and her partner is knowledge of their HIV status. The programme encourages a family-centred approach. HIV testing is part of the routine ANC services and results and post-test counseling are provided on the same day. Every pregnant woman attending ANC, who previously tested HIV negative before conceiving or whose status is unknown, is tested for HIV. The test is not done if the woman chooses to opt out. The test is also not done on pregnant women who have valid documentation of already being HIV positive and /or those already on ART. All ANC clients must be encouraged to test for HIV as a couple and disclose their HIV results to their partner.

Group Health Education

Group health education (GHE) is the main method of giving information, education and communication in the MNCH department. It is meant to be interactive to enable clients to ask questions and seek clarification on any issue related to MNCH including PMTCT. Group health education serves as a group pre-test counseling session after which routine ANC lab investigations such as syphilis, hemoglobin (Hb) level and HIV tests are done unless the client opts out. Clients who still seek further clarification or have declined to take the HIV test go through individual pre-test counseling sessions.

Group health education must include information on the following:

- Basics of HIV and how to prevent transmission
- HIV testing process
- HIV test results:
 - A negative result may mean that the pregnant woman is in the window period and will need to be retested after 3 months and information should be provided on HIV risk reduction.
 - A positive result means that the pregnant woman has HIV and there is a risk that she will transmit the virus to her baby either during pregnancy, labour, delivery and breastfeeding.
- Importance of couple testing and counseling
- Importance of disclosure of HIV test results to the partner
- Importance of the family-centred approach
- HIV testing for the HIV exposed baby
- The PMTCT and ART programme
- The importance of infant and young child feeding (IYCF)
- The importance of delivering in a health facility
- Family planning to prevent unintended pregnancies

A good GHE session will provide enough time to answer any questions the clients may have, provide answers to questions and clarify any information if necessary. Individual pre-test counseling may be reserved for those women who have further questions or are not clear about issues that have been discussed.

Couple Counseling

Couple counseling in MNCH should be encouraged and supported. Despite its many benefits, only 10 percent of couples in Zambia have tested for HIV together, according to Ministry of Health, PMTCT programme 2010 reports. The benefits of couple counseling include:

- Disclosure of HIV test results is made easier and is done in a supportive environment.
- Partners receive prevention messages together and can engage in decision-making for the future.
- Before knowing their HIV status, many discordant couples do not use condoms; however, couples counseling has been shown to increase condom use.
- Environment is safe for couples to discuss risk concerns as the presence of the counselor provides the opportunity to ease tension and diffuse blame.
- Counseling facilitates the communication and cooperation required for risk reduction.
- Treatment and care decisions for the couple and the children can be made together.

Disclosure of HIV Test Result to Sexual Partners

Disclosure is an important public health goal. First, it may motivate sexual partners to seek testing, change behaviour and ultimately decrease transmission of HIV. In addition, disclosure leads to increased opportunities for social support, improved adherence to necessary health care including ART, increased opportunities to discuss and implement HIV risk reduction with partners and increased opportunities to plan for the future.

Ideally, every pregnant woman and her partner must test as a couple before pregnancy or at the first ANC visit though only a few couples currently test together. Furthermore, only about half of the women who are HIV positive disclose their status to their partners. This poses a challenge, because an HIV positive pregnant woman who fails to disclose her status may put her child and herself at increased risk, as she may fail to take her medicines, or give them to her baby, for fear of discovery by the partner.

The most common barriers to disclosure include fear of abandonment, rejection, violence, upsetting family members and accusations of infidelity. The risks of disclosure include loss of economic support, blame, abandonment, physical and emotional abuse, discrimination and disruption of family

relationships. Although a few adverse events after disclosure have been reported, the greater majority of women have reported beneficial outcomes and support after disclosing to their partners. HIV status disclosure to partners in the context of PMTCT is now emphasized at every visit. Therefore, women need to be supported with strengthening communication skills through the use of role-plays, scenarios and other rehearsal techniques. In addition, counselors or trusted friends and family members identified by the clients themselves can be used to mediate the disclosure process, offering a potentially effective and culturally sensitive approach to supporting women. The extended duration of taking ARV's by both the mother and the infant is significantly different from the previously widespread use of a single dose of NVP, which most clients could easily adhere to without necessarily having to disclose to the male partner.

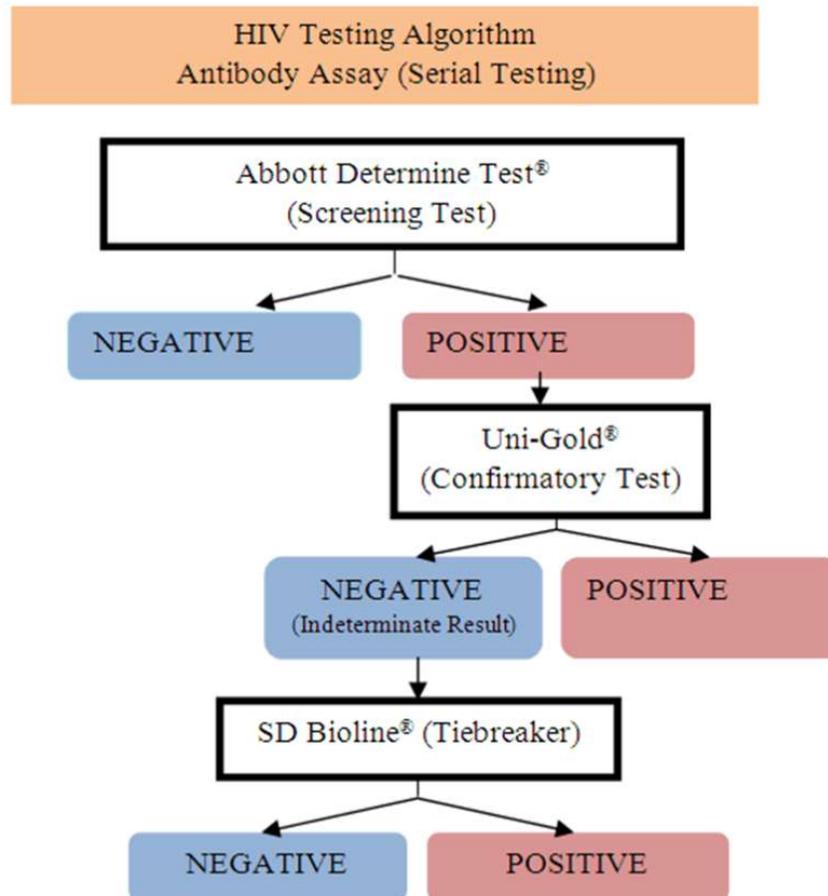
Ultimately, encouraging couples to undergo HIV testing and counseling together may help to bypass the many barriers associated with disclosure and may also facilitate sustained behavior change among couples.

HIV Testing

The HIV test is carried out using the rapid HIV testing kit. In Zambia, we use serial testing and the rapid tests used are Abbott Determine[®] for screening and Uni-Gold[®] as a confirmatory test. If the Abbott Determine[®] test is negative, the client is considered HIV negative and is advised to re-test after 3 months. If the Abbott Determine[®] test is positive, a confirmatory Uni-Gold[®] rapid test is carried out. If both tests are positive, the client is considered HIV positive (Figure 1.1).

If the Abbott Determine[®] is positive and Uni-Gold[®] is negative, the client is considered HIV indeterminate. In this case, a third test called SD Bioline[®] considered to be the tie breaker test is carried out. If the tie breaker test is positive, then the client is considered to be HIV positive, and if it is negative, the client is considered to be HIV negative but advised to re-test after 3 months. If the client's HIV status is indeterminate, and a tie breaker test is not available at the facility, then a blood sample must be sent to the nearest district laboratory for re-testing.

Figure 1.1 HIV Testing Algorithm



After the test has been performed, the service provider enters the results on the ANC card, in the PMTCT register and/or the Laboratory HIV Test Register. The register is kept confidential and always remains on site. Test results are given to the clients during the one-on-one post-test counseling sessions. The major benefit of the rapid test is that it can be done in a short space of time and therefore the clients should receive their HIV test results the same day. On a monthly basis, 10 percent of all blood samples tested for HIV should be sent to a district or other referral laboratory for quality control and quality assurance.

Re-testing for HIV

In order to identify women who may have sero-converted or become infected with HIV in the course of their pregnancy, those who tested HIV negative early in their pregnancy must be re-tested three months later in their pregnancy or soon after delivery. Apart from receiving counseling on risk reduction, women who test HIV negative and are breastfeeding will be advised to test for HIV every 3 months during the breastfeeding period.

HIV Post-test Counseling

1. All women and their partners, regardless of their HIV status must receive post-test counseling.
2. If a woman or her partner tests HIV negative, they should receive post-test counseling and guidance on how to maintain their HIV negative status. This session will focus on health, safer sexual practices, and the high risk of transmission posed to the baby should the woman seroconvert during pregnancy or breastfeeding. Re-testing after 3 months and towards the end of pregnancy or soon after delivery should be emphasized. Condom use during pregnancy should be encouraged.
3. If a woman tests HIV positive, she should be counseled and offered PMTCT services including CD4 count assessment, preferably on the same day. Determining eligibility for ART or prophylaxis is set out in Table 1.1.
4. A discordant couple should be counseled on the risk of transmission of HIV during sexual intercourse. Condoms or abstinence should be encouraged. If the woman tests negative, but her partner tests positive, they should be counseled on condom use to avoid the woman getting infected as this would put the unborn baby at high risk of HIV infection.
5. All clients are encouraged and supported to disclose their HIV status to their partner.

During post-test counseling and over the next visits, the newly diagnosed HIV positive woman should also be provided with:

1. Ongoing counseling which includes: emotional support, assessment of coping, information about existing peer-support groups, appropriate referrals for support and information on positive living.
2. Information on HIV, potential health problems and the importance of obtaining clinical care for all ailments.
3. Information on the ART programme and the importance of adherence.
4. Information on the PMTCT Programme and medicines that are offered including side effects.
5. Information on infant and young child feeding.
6. Information on couple counseling, disclosure, shared confidentiality, stigma and discrimination.
7. Information about the importance of facility delivery and that should she deliver at home the baby must be given NVP soon after birth and the mother and baby come to a health facility within 48 hours.

All test results and counseling should be recorded in the ANC card and PMTCT Register.

Eligibility Criteria

In Zambia, the criteria in Table 1.1 is used when determining eligibility for ART or ARV prophylaxis for HIV positive women according to the WHO clinical staging criteria (see Annex I) or CD4 count.

Table 1.1 Eligibility Criteria for Initiating Antiretroviral Treatment (ART) or Prophylaxis in HIV Positive Pregnant Women Based on CD4 Cell Count and WHO Clinical Stage.

Clinical Stage	CD4 cell count		
	CD4 cell count not available	CD4 cell count available	
		CD4 ≤ 350 cells/mm ³	CD4 > 350 cells/mm ³
WHO Clinical Stage 1	ARV prophylaxis	ART	ARV prophylaxis
WHO Clinical Stage 2	ARV prophylaxis	ART	ARV prophylaxis
WHO Clinical Stage 3	ART	ART	ART
WHO Clinical Stage 4	ART	ART	ART

Points to note:

1. Assessment for ART eligibility for HIV positive pregnant women should be initiated in the MNCH department before referral for enrolment into care.
2. Where CD4 cell count is not available, HIV positive women must be staged clinically according to WHO criteria. (*see Annex I*)
3. For women in WHO stage 1 or 2 or whose CD4 count is above 350 cell/mm³, ARV prophylaxis with twice-daily AZT 300mg must be started from as early as 14 weeks of gestation (or as soon as possible thereafter) and continued throughout pregnancy. Remember to check Hb.
4. HIV positive women in WHO stage 3 or 4 or CD4 count below 350 cell/mm³ must be started on ART for their own health regardless of gestational age.

Chapter Two - Antenatal Care

Antenatal care aims at making pregnancy and delivery a safe experience for the mother. It is also intended to build the foundation for the delivery of a healthy baby. All pregnant women are encouraged to attend the first antenatal visit by 14 weeks or soon after. They should attend at least four ‘focused’ visits, and more as required, to cover the following:

1. Clinical screening and examination, monitoring of blood pressure, urinalysis, and weight measurement at each visit.
2. Active detection and effective treatment of Sexually Transmitted Infections (STIs). The Rapid Plasma Reagin (RPR) test kit is used for syphilis screening, and if positive benzathine penicillin 2.4 million units once only is used as treatment. If RPR is found negative in the first trimester, the test must be repeated at 36 weeks.
3. Prevention, detection and treatment of anaemia in line with Safe Motherhood guidelines:
 - All pregnant women must be given daily supplements of ferrous sulphate and folic acid to prevent anaemia.
 - Screening for anaemia preferably includes laboratory monitoring of Hb levels but can be done by clinical assessment if this is not available. Any sign and particularly any clinically significant anaemia, should be routinely treated as part of ANC.
 - Pregnant or breastfeeding women eligible for ART who have clinically significant or severe anaemia should be started on a non-AZT containing regimen (AZT replaced by TDF) while the anaemia is being corrected.
 - For women not eligible for ART who have clinically significant or severe anaemia (Hb<8g/dl) a non-AZT containing regimen should also be considered e.g. TDF+3TC (or FTC) +EFV. Alternatively, AZT-based prophylaxis could be initiated after the severe anaemia has been corrected.
 - Systematic de-worming with mebendazole should also be provided to all pregnant women.
4. Nutrient balance for the prevention of low birth weight to all antenatal attendees.
5. Counseling on infant and young child feeding options including the health benefits and challenges of each option so that women can make an informed choice.
6. HIV testing. As soon as possible after confirming the mother is HIV positive, the woman should be engaged in comprehensive, integrated HIV care. She should be enrolled into continuous counseling activities that include adherence, infant and young child feeding, couples counseling (disclosure, partner testing, family planning), other aspects of the continuum of care such as early infant diagnosis, testing for all family members and HIV care and treatment.

7. Co-trimoxazole prophylaxis: Co-trimoxazole is recommended for all HIV positive pregnant women after the first trimester. The dose of co-trimoxazole for pregnant women is one double strength tablet or two single strength tablets once daily (total daily dose of 800mg sulfamethoxazole and 160mg trimethoprim).
8. Intermittent Presumptive Treatment (IPT) with sulphadoxine-pyremethamine (Fansidar®) for malaria prophylaxis. A dose of 3 tablets should be given starting in the second trimester . The IPT should be administered at least after every 4 weeks to ensure that a woman has at least three treatments before delivery. HIV Positive pregnant women receiving daily co-trimoxazole should not be given sulphadoxine - pyrimethamine for malaria prophylaxis. Co-trimoxazole has been proven to have prophylactic effect on malaria as well as other opportunistic infections and is sufficient in this case. All pregnant mothers must sleep under an insecticide treated mosquito net every night.

Sulphadoxine-pyrimethamine and co-trimoxazole are not given in the first trimester because both drugs have anti-folate properties that may cause fetal malformations.

9. Tuberculosis (TB) clinical screening in HIV infected mothers with history taking, examination and sputum smear if indicated. If diagnosed positive, refer for appropriate TB care.
10. Promoting and supporting couples counseling, partner disclosure and male involvement in ANC.
11. If indicated continuous, comprehensive HIV care should be provided at a minimum of every four weeks during the antenatal period, or sooner e.g. if ART has just been initiated, if there are signs of illness or medication toxicity and if there are adherence or other psychosocial issues that need closer follow up. This should include, but is not limited to, the following:
 - Repeat clinical assessment, including assessment of fetal well-being
 - Follow up of lab results and repeat monitoring if clinically indicated
 - Continued counseling services

At these visits the woman should be assessed for the presence of anaemia (clinically or by Hb estimation if necessary), assess adherence and other issues such as disclosure and side effects of drugs. Messages such as infant and young child feeding, family planning, early infant HIV testing, HIV care and treatment and other aspects of continuum of care can also be emphasized.
12. Towards the end of pregnancy, pregnant women who live far from delivery centres should be encouraged to utilize waiting homes / mothers shelters where available.
13. Delivery options should be discussed with the woman. Elective caesarean section in combination with other PMTCT strategies is of value in reducing the risk of transmission. Where feasible and appropriate (e.g. viral load > 1000 copies/ul; woman has been on ART for > 8weeks; chooses not to breastfeed) it must not be denied to her.

Points to note:

1. All pregnant women eligible for ART should be started on treatment as soon as possible regardless of gestational age.
2. Those on ART prior to pregnancy should continue throughout pregnancy.
3. If the ART regimen contains efavirenz (EFV), discuss with the mother the possibility of exchanging this drug as it has been associated with teratogenicity in the first trimester of pregnancy. If she presents after the first trimester she can continue with the same regimen.
4. The woman should be advised to deliver in a health facility. Where that is not possible the woman should be advised to take the ARVs prescribed but even then the health provider should check the woman's Hb, adherence, and offer IYCF counseling.
5. Prophylactic ARVs should be dispensed within the MNCH department. Facilities are also encouraged to provide and initiate ART within MNCH departments, with supportive back-up from the ART programme.
6. A plan for every mother, including frequency of visits should be made.

*Table 2.1 Summary of ANC and Labour Ward Services for HIV Positive and Negative Pregnant Women**

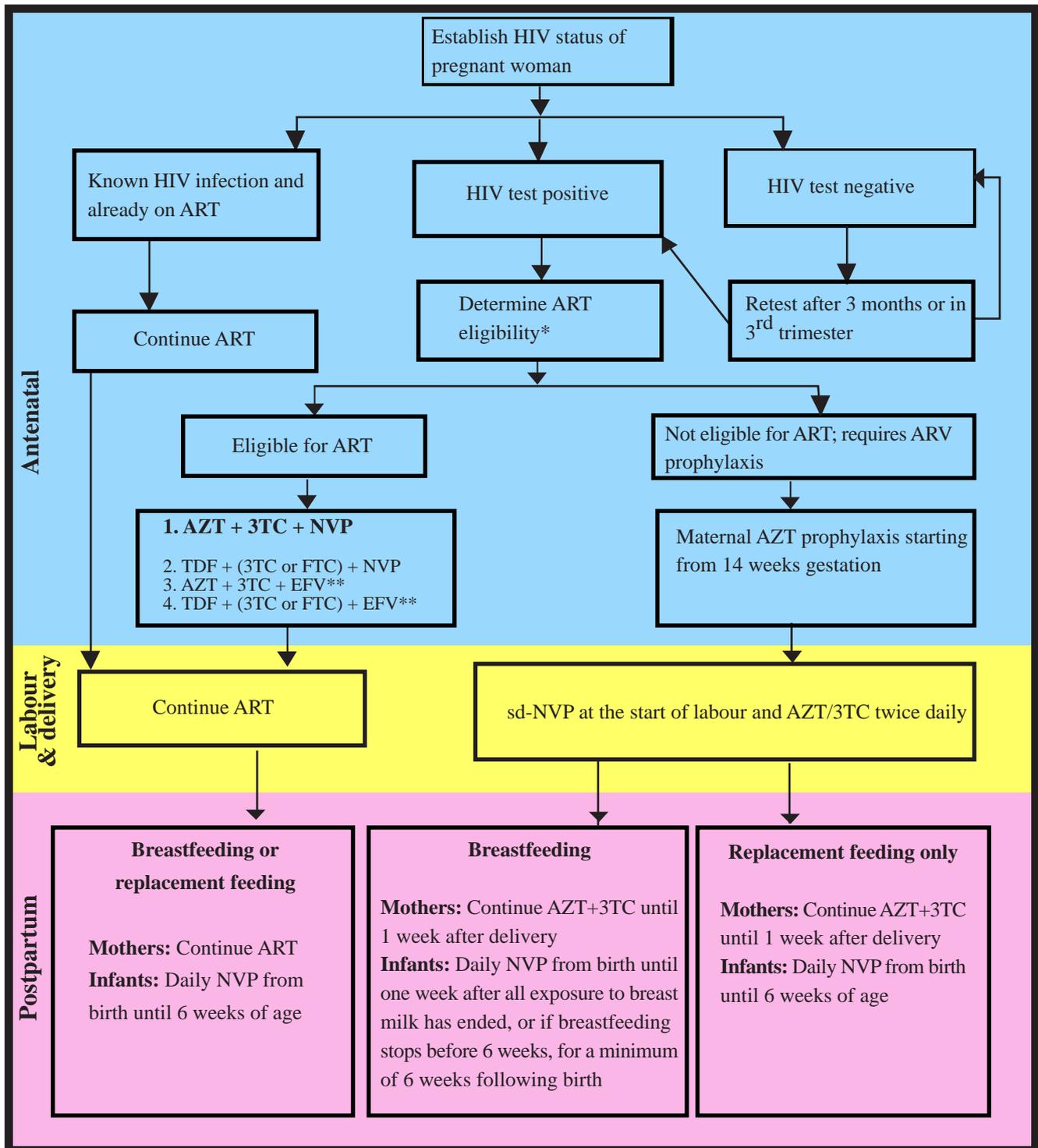
VISIT	ANC and Labour ward services	
	HIV positive	HIV negative at 1 st visit
1 st ANC contact (preferably by 14 weeks or soon after)	<ol style="list-style-type: none"> 1. RPR, Hb**, urinalysis, & CD4 tests. 2. Liver and renal function assessment. 3. Hepatitis B where available. 4. Screen and do clinical assessment for opportunistic infections (OIs) including TB. 5. Determine ART or ARV prophylaxis eligibility. <ul style="list-style-type: none"> • WHO stage 1 or 2 and CD4 >350: eligible for ARV prophylaxis. • WHO clinical stage 3 or 4 OR CD4 <350: eligible for ART. 6. Counselling on ARVs 7. Counseling on IYCF. 8. Check and support disclosure. 9. Encourage couple counselling. 10. If eligible for ARV prophylaxis, or if ART eligibility cannot be definitively determined at first visit, dispense ARV prophylaxis and co-trimoxazole for the next 2 weeks. 11. If eligible for ART, begin treatment preparation and co-trimoxazole. 12. Dispense sd-NVP 200mg to all women to take home and remind to take at onset of labour. 13. Dispense supplements – (folic acid, ferrous sulphate) and mebendazole. 14. Provide other outstanding elements of focused ANC 	<ol style="list-style-type: none"> 1. RPR, Hb, urinalysis. 2. Hepatitis B where available. 3. Do clinical assessment and screen for TB. 4. Encourage couple counselling. 5. Check and support disclosure if HIV status is known. 6. Remind her about re-testing after window period. 7. Dispense supplements – (folic acid, ferrous sulphate) and mebendazole. 8. Counseling on IYCF. 9. Provide other outstanding elements of focused ANC
2nd ANC Visit (within 2 weeks after 1 st ANC visit)	<ol style="list-style-type: none"> 1. Follow up of CD4 count results and other relevant labs. 2. Repeat clinical assessment to evaluate for potential OIs, other illnesses, and medication toxicities; and assessment of fetal well-being. 3. Determination of eligibility for ART or ARV prophylaxis. 4. Initiation of ART for those eligible and ready to begin treatment. 5. Continuation of ARV prophylaxis for those who are not eligible for ART. 6. Continuation of ART for those already on ART. 7. Dispense co-trimoxazole for the next 4 weeks. 8. Check adherence to ARVs and remind to take sd-NVP 200mg at onset of labour. 9. Check and support disclosure. 10. Dispense supplements – (folic acid, ferrous sulphate) and mebendazole. 11. Counseling on IYCF. 12. Provide other outstanding elements of focused ANC. 	<ol style="list-style-type: none"> 1. Encourage couple counselling. 2. Check and support disclosure if HIV status is known. 3. Dispense supplements – (folic acid, ferrous sulphate) and mebendazole. 4. HIV and RPR retesting if necessary. 5. Counseling on IYCF. 6. Provide other outstanding elements of focused ANC

<p>3rd ANC (2-4 weeks after 2nd ANC visit)</p>	<ol style="list-style-type: none"> 1. Repeat clinical assessment, including assessment of fetal well-being 2. Dispense ARVs and co-trimoxazole for the next 4 weeks, and remind to take sd-NVP 200mg at onset of labour. 3. Check Hb, if no CD4 count, do CD4. 4. Check adherence to ARVs. 5. Check and support disclosure. 6. Remind to take sd-NVP 200mg at onset of labour and continuation of ARV prophylaxis for those who are not eligible for ART. 7. For women on ART continue ART. 8. Dispense supplements – (folic acid, ferrous sulphate) and mebendazole. 9. Counseling on IYCF. 10. Provide other outstanding elements of focused ANC. 	<ol style="list-style-type: none"> 1. Encourage couple counselling. 2. Check and support disclosure 3. Give supplements – (folic acid, ferrous sulphate) and mebendazole. 4. Counseling on IYCF. 5. HIV and RPR retesting if necessary. 6. Provide other outstanding elements of focused ANC
<p>4th and following ANC visits (or from 3rd trimester)</p>	<ol style="list-style-type: none"> 1. Remind to take sd-NVP 200mg at onset of labour. 2. For women on ART continue ART. 3. Repeat RPR if necessary. 4. Repeat clinical assessment, including assessment of fetal well-being. 5. Check adherence to ARVs 6. Dispense supplements – (folic acid, ferrous sulphate) and mebendazole. 7. ARVs. 8. Check and support disclosure. 9. IYCF counseling 10. Provide other outstanding elements of focused ANC 	<ol style="list-style-type: none"> 1. HIV re-testing if 3 months have passed since last test. 2. Encourage couple counselling. 3. Check and support disclosure 4. Repeat RPR if necessary. 5. IYCF counseling 6. Dispense supplements – (folic acid, ferrous sulphate) and mebendazole 7. Provide other outstanding elements of focused ANC
<p>Onset of labour</p>	<ol style="list-style-type: none"> 1. If not taken at home, give sd-NVP 200mg and AZT+3TC during delivery. For women on ART, continue ART. 	<p>HIV re-testing if necessary</p>
<p>At birth</p>	<ol style="list-style-type: none"> 1. Give first dose of NVP to the infant at birth or as soon as possible after, and dispense daily NVP for the infant for 6 weeks. 2. Ensure counseling on extended NVP. 3. For women receiving ARV prophylaxis dispense 1 week of AZT/3TC BD. 4. For women on ART, continue ART. 5. IYCF counseling 6. FP counseling 	<ol style="list-style-type: none"> 1. HIV testing if necessary 2. Check and support disclosure 3. Encourage couple counselling 4. IYCF counseling 5. FP counseling

**Where status is unknown, test and counsel for HIV*

***In absence of Hb estimation, anaemia must be determined clinically*

Figure 2.1 Algorithm for Care of the HIV Positive Pregnant Woman Based on 2010 WHO Recommendations



* start ARV prophylaxis while waiting to determine ART eligibility

** avoid use of EFV in first trimester and use NVP instead

Table 2.2 Antiretroviral Prophylaxis Regimens to Prevent Mother-to-Child Transmission Of HIV

	HIV Positive Women			All Exposed Infants
	Antenatal	Intrapartum	Postnatal	
For HIV positive women from 14 weeks of pregnancy	AZT 300mg twice daily	NVP 200mg single dose at onset of labour. 3TC 150mg and AZT 300mg stat dose at onset of labour and thereafter repeat every 12 hours until delivery.	3TC 150mg and AZT 300mg twice daily for 7 days.	<p>Breastfeeding infant:</p> <ul style="list-style-type: none"> i. NVP at birth and daily until one week after all exposure to breast milk. ii. Start co-trimoxazole from 6 weeks until a week after all exposure to breast milk has ended and HIV status confirmed negative. <p>Non-breastfeeding infant:</p> <ul style="list-style-type: none"> i. Commercial milk formula. ii. NVP at birth and for 6 weeks. iii. Start co-trimoxazole from 6 weeks until HIV status confirmed negative.
For HIV positive women presenting in 3rd trimester	AZT 300mg twice daily.	NVP 200mg single dose at onset of labour. 3TC 150mg and AZT 300mg stat dose at onset of labour and thereafter repeat every 12 hours until delivery.	3TC 150mg and AZT 300mg twice daily for 7 days.	
For HIV positive women who have not received prophylaxis antenatally		NVP 200mg single dose at onset of labour. 3TC 150mg and AZT 300mg stat dose at onset of labour and thereafter repeat every 12 hours until delivery.	3TC 150mg and AZT 300mg twice daily for 7 days.	
HIV positive women who are on ART or eligible for ART	Continue ART or if eligible start ART	Continue ART	Continue ART	

Chapter Three - Intrapartum Care

When a woman presents in labour, routine labour ward procedures should be performed and the following must be checked:

- HIV status: If status is unknown and the woman presents in early labour, testing and counseling must be offered and appropriate care given
- Compliance to ARVs
- Infant and young child feeding choice
- Disclosure status

The following obstetric practices should be followed to reduce the risk of HIV transmission to the infant during the intrapartum period:

- Avoiding episiotomy or instrumental deliveries unless absolutely necessary
- Avoiding routine rupture of membranes unless medically indicated
- Keep vaginal examinations to a minimum

If the woman is found to be in labour or to have ruptured membranes but did not take any ARVs at home, she should be given NVP 200mg, 3TC 150mg and AZT 300mg immediately.

In the case of wrong diagnosis of labour and the woman is evaluated before she takes NVP, she should be instructed to continue with AZT and to take her NVP with the onset of stronger and more regular contractions, or upon rupture of membranes. If the woman is evaluated after she has taken her NVP and the AZT and membranes are intact, she should not be given another dose of NVP, however AZT must be given after 12 hrs, and continued with the twice a day regimen. When labour starts, 3TC and AZT stat dose must be given and then continued every 12 hours until delivery. If membranes have ruptured and the woman has a fever, give antibiotics and refer if necessary.

Women can be given NVP at any time during the first or second stage of labour. A woman on ART should continue the ART regimen and should not be dispensed other ARVs for PMTCT prophylaxis.

Chapter Four - Immediate Postnatal and Neonatal Care

The package of services for immediate postnatal and neonatal care should be provided to the mother and the infant before they leave the health facility (6 to 48 hours after delivery).

The following checklist can serve as a guide to the health care provider:

- Check danger signs that the mother should look out for (e.g. prolonged heavy bleeding, fever)
- Check Hb or clinically assess for anaemia
- Look out for opportunistic infections
- Provide immunisations (BCG and OPV 0) for the newborn

The following must also be done before discharge:

- Ensure the woman is provided with co-trimoxazole and ARVs for the postnatal period
- Ensure the mother is provided with NVP for the infant
- Give a date of next scheduled visit
- Check for disclosure
- Family planning counseling
- Counsel on infant and young child feeding

Antiretroviral Prophylaxis for the Newborn

Breastfeeding infant: All HIV exposed breastfeeding infants whose mothers were on ARV prophylaxis must be started on NVP prophylaxis from birth and continued throughout the breastfeeding duration. NVP should be stopped one week after complete cessation of breastfeeding. All HIV exposed breastfeeding infants whose mothers are on ART, must be started on NVP prophylaxis from birth until 6 weeks of age.

Non-breastfeeding infant: All HIV exposed non-breastfeeding infants whose mothers were on ARV prophylaxis or are on ART must be started on NVP prophylaxis from birth until 6 weeks.

Note that NVP is given to the baby immediately after delivery or soon thereafter. If the baby vomits the NVP drugs within one hour of taking it, a second dose should be administered and the baby be observed for another one hour. A third dose should not be given.

If a baby of an HIV positive mother is born at home or outside the health facility, and presents to the clinic, the first dose of NVP must be given immediately regardless of the time of birth.

*Table 4.1: Extended Simplified Infant NVP Dosing Recommendations**

Infant age	NVP 10mg/ml daily dosing	Quantity in ml
Birth - 6 weeks		
Birth weight 2,000 - 2,499 grams	10 mg once daily	1 ml once daily
Birth weight >2,500 grams	15 mg once daily	1.5 ml once daily
6 weeks to 6 months	20 mg once daily	2 ml once daily
>6 to 9 months	30 mg once daily	3 ml once daily
>9 months to end of breastfeeding	40 mg once daily	4 ml once daily

*Low birth weight infants should receive weight-specific dosing, suggested starting dose is 2 mg/kg once daily. Therapeutic drug monitoring is recommended. * Adapted from: Mirochnick M. et. al. [2006].*

All information on the HIV status and ARVs dispensed as well as follow up should be recorded in relevant Registers and Under 5 Card.

Chapter Five - Infant and Young Child Feeding

The health care system aims to protect, promote and support breastfeeding as a child survival strategy. It supports mothers and caretakers to optimally feed their infants by promoting recommended infant feeding practices through the implementation of the 10 steps to successful breastfeeding (See Annex II on the 10 steps of breastfeeding). All women must be given information on available infant feeding options and counseled on the benefits and challenges of each option so that they can make an informed choice. Mothers should be counseled appropriately in line with the new recommendations below relating to whether the mother is HIV positive, negative or of unknown status and whether the infant is HIV positive or negative.

Infant Feeding Options for a Mother who is HIV Positive and whose infants are HIV negative or of unknown HIV status.

Exclusive breastfeeding is recommended for HIV positive women for the first six months of life unless exclusive replacement feeding is acceptable, feasible, affordable, sustainable and safe (AFASS). After 6 months, appropriate complementary food should be introduced and breastfeeding continued for the first 12 months of life. Breastfeeding should then only stop once a nutritionally adequate and safe diet without breast milk can be provided. When HIV positive mothers decide to stop breastfeeding (at any time) they should do so gradually within one month.

1. All HIV exposed breastfeeding infants whose mothers were on ARV prophylaxis must be started on NVP prophylaxis from birth and continued throughout the breastfeeding duration.
2. All HIV exposed breastfeeding infants whose mothers did not receive any prophylaxis antenatally must be started on NVP prophylaxis from birth and continued throughout the breastfeeding duration.

NVP should be stopped one week after complete cessation of breastfeeding.

3. All HIV exposed breastfeeding infants whose mothers are on ART, must be started on NVP prophylaxis from birth until 6 weeks of age.
4. All HIV exposed non-breastfeeding infants must be started on NVP prophylaxis from birth until 6 weeks of age regardless of whether their mothers were on prophylaxis or not.

Feeding 0-6 months

1. *Exclusive breastfeeding* – This means giving a baby only breast milk, and no other liquids or solids, not even water unless medically indicated.
The national programme recommends the public health approach of exclusive breastfeeding with ARV prophylaxis to the baby.
2. *Exclusive replacement feeding*- A mother who opts not to breast feed must give her baby exclusive commercial milk formula. Information and counseling on the risks of commercial formula feeding should be given.
3. *Wet Nursing* - In special situations, such as in the case of an orphaned infant, wet nursing may be considered. The wet nurse should be tested for HIV every three months, and counseled on what precautions to take in order to protect herself from HIV infection. The baby should also be tested for HIV using the national algorithm.

Feeding after 6 months

At 6 completed months, appropriate complementary feeding must be introduced. Mothers must be supported to continue breastfeeding and give daily ARV prophylaxis to their infants until one week after stopping breastfeeding (See Annex III, Amounts of Foods to Offer for Complementary Feeding). In case of illness, sick children need to eat small frequent meals to enhance recovery. Breastfed infants should continue breastfeeding during the period of sickness.

Infant Feeding Options for a Mother who is HIV positive and whose infants are known to be already HIV positive.

Mothers who are HIV positive and whose babies are also HIV positive are strongly encouraged to exclusively breastfeed for the first 6 months of life and continue breastfeeding up to 2 years of age.

Infant Feeding Options for a Mother who is HIV negative or whose HIV status is unknown.

Mothers who are known to be HIV negative or whose status is unknown should be counseled to exclusively breastfeed their infants for the first six months of life and then introduce complementary foods while continuing breastfeeding for 24 months. Mothers whose status is unknown must be offered HIV testing.

Mothers who are HIV negative should be counseled about ways to prevent HIV infection and about the services that are available, such as family planning.

Chapter Six - Postnatal Care

The purpose of postnatal checks is to ascertain the health status of the mother and the baby. The postnatal check-ups should be conducted regularly at the following times and any other points when necessary:

Table 6.1 Postnatal Care

Stage	Mother	Baby
6 hours	<ul style="list-style-type: none"> · Family planning counselling. · Start co-trimoxazole after assessment. · Provide nutrition/ IYCF counselling, both for the mother and child. · Vitamin A (200,000IU). · Inform the mother about baby's danger signs, hygiene for the umbilical stump and vaccinations. 	<ul style="list-style-type: none"> · Immunisation: OPV0 & BCG. · Start NVP prophylaxis.
6 days	<ul style="list-style-type: none"> · Family planning counseling and condom promotion. · Check for obstetric complications. · Provide nutrition/ IYCF counselling, both for the mother and child. · Check adherence if on ARVs and co-trimoxazole. · Check and support disclosure. · Check and support couple counselling. · Check breast conditions and treat appropriately. 	<ul style="list-style-type: none"> · Check danger signs, umbilical stump, jaundice and pallor. · Check vaccination status. · Check NVP dosing and administration. · Check for adverse drug reaction. · Check infant feeding practices.
6 weeks	<ul style="list-style-type: none"> · Family planning counselling and condom promotion. · Assess for ART eligibility (WHO clinical staging and/ or CD4). · Check adherence if on ART and co-trimoxazole. · Check for obstetric complications. · Provide nutrition/ IYCF counselling, both for the mother and child. · Check and support disclosure. · Check and support couple counselling. · Check breast conditions and treat appropriately. 	<ul style="list-style-type: none"> · PCR test · Immunisation: OPV1, DPT-Hib-Hep1 (2nd and 3rd dose given at 10weeks and 14weeks). · Check danger signs, umbilical stump, jaundice and pallor. · Check vaccination status. · Check NVP dosing and administration. · Check for adverse drug reaction. · Initiate co-trimoxazole. · Growth and health monitoring and promotion. · Check infant feeding practices. · If HIV positive start ART

6 months	<ul style="list-style-type: none"> · Family planning counselling and condom promotion. · Assess for ART eligibility (CD4 and /or WHO clinical staging). · Check adherence if on ART and cotrimoxazole. · Check and support disclosure. · Check and support couple counselling. · Retesting if HIV negative at previous test. · Provide IYCF counselling on complementary feeding. · Check breast conditions and treat appropriately. 	<ul style="list-style-type: none"> · PCR test. · Check NVP dosing and administration. · Check co-trimoxazole dosing and adherence. · Growth and health monitoring and promotion. · Vitamin A supplementation 100,000iu · If HIV positive start ART
9 months	<ul style="list-style-type: none"> · Family planning counselling and condom promotion. · Assess for ART eligibility (CD4 and /or WHO clinical staging) · Check adherence if on ART and cotrimoxazole. · Check and support disclosure. · Check and support couple counselling. · Retesting if HIV negative at previous test. · Provide IYCF counselling on complementary feeding. · Check breast conditions and treat appropriately. 	<ul style="list-style-type: none"> · Immunisation: measles. · Check immunisation status. · Check NVP dosing and administration. · Check co-trimoxazole dosing and adherence. · Growth and health monitoring and promotion. · If HIV positive start ART
12 months	<ul style="list-style-type: none"> · Family planning counselling and condom promotion. · Assess for ART eligibility (CD4 and /or WHO clinical staging). · Check adherence if on ART and cotrimoxazole. · Check and support disclosure. · Check and support couple counseling. · Retesting if HIV negative at previous test. · Provide counseling on IYCF and recommend cessation of breastfeeding. · Check breast conditions and treat appropriately. 	<ul style="list-style-type: none"> · HIV antibody test. · Check NVP dosing and administration. · Check co-trimoxazole dosing and adherence. · Growth monitoring and health monitoring · De-worming using mebendazole every six months starting at one year of age. · Vitamin A supplementation · If HIV positive start ART
18 months or after six week of cessation of breastfeeding	<ul style="list-style-type: none"> · Family planning counseling and condom promotion. · Assess for ART eligibility (CD4 and /or WHO clinical staging). · Check adherence if on ART and cotrimoxazole. · Check and support disclosure. · Check and support couple counseling. · Retesting if HIV negative at previous test. · Provide counseling on IYCF 	<ul style="list-style-type: none"> · Final HIV antibody test. · Growth monitoring and health monitoring · De-worming using mebendazole every six months starting at one year of age. · Vitamin A supplementation · If HIV positive start ART

Points to note:

1. Once the HIV positive breastfeeding mother is found eligible and started on ART, and the child has received more than 6 weeks of NVP prophylaxis, the daily NVP given to the infant should be stopped.
2. If early infant diagnosis is done and the infant is found to be infected with HIV, infant ART must be commenced immediately and once started, the daily NVP given to the infant must be stopped.

Chapter Seven - Care and Support

A comprehensive package of care and support should be provided to HIV positive women and their families.

Health care workers must do the following:

1. Apply family - centred approach to HIV testing, care and treatment which encourages the partner and other children to test as well and seek treatment together if necessary
2. Promote adherence to extended NVP and co-trimoxazole prophylaxis.
3. Provide information and counseling on PMTCT, FP, appropriate and adequate nutrition for the mother, IYCF, and prevention of STIs as well as promotion of safer sex practices.
4. Refer for ART where women, and their family if necessary, can access routine HIV care and monthly CD4 count monitoring.
5. Encourage and support couples counseling, disclosure, and male involvement.
6. Provide information on the prevention of gender based violence (GBV) and support for safe disclosure of HIV status.
7. Prompt screening, treatment and management of opportunistic infection.

HIV Testing for the Infant

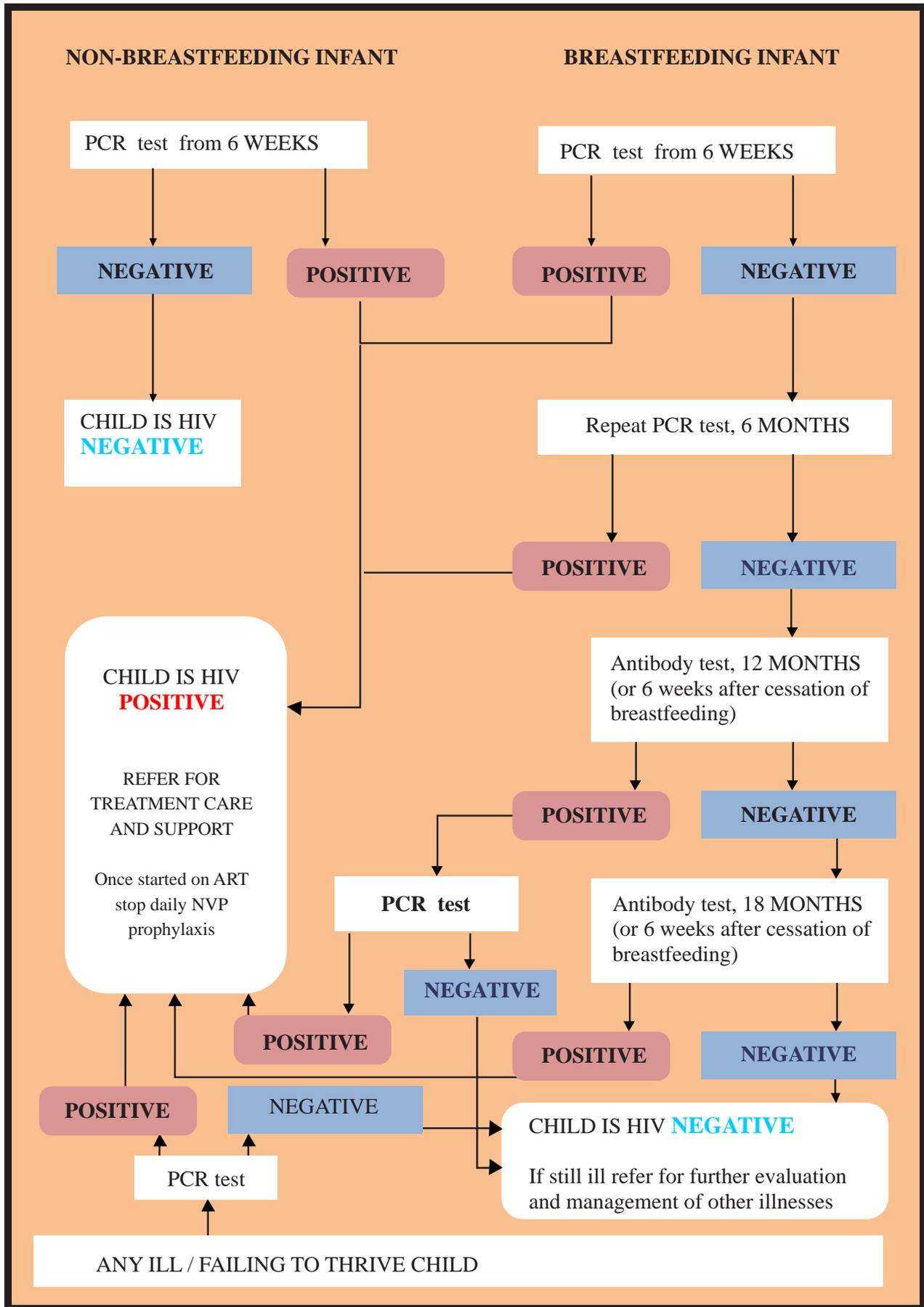
All HIV exposed infants receiving extended NVP prophylaxis should have an HIV Polymerase Chain Reaction (PCR) test done at 6 weeks and at 6 months. An HIV antibody test must be done at 12 months and 18 months or after cessation of breastfeeding. It should be noted that for as long as the baby continues to breast feed he/she remains at risk of contracting HIV infection, although the chance is small. If a health worker identifies a sick child or one who is failing to thrive, an HIV test must be done - this is called Provider Initiated Testing & Counseling (PITC).

PCR using Dried Blood Spots (DBS) is performed from age 6 weeks, or soon after, to allow decisions related to ARV treatment and care. A PCR test may be done, regardless of breastfeeding, if the child presents with symptoms of HIV at less than 18 months of age.

Early Infant Diagnosis of HIV reduces infant mortality through early treatment and supports more appropriate counseling and support for families.

All test results should be recorded in the Mother-Baby follow-up register and Under 5 cards.

Figure 7.1 HIV Diagnosis in Exposed Infants Less Than 18 Months



HIV Test Counseling Procedures

Pre-test information to be given to the parents/caregiver before conducting PCR on the infant

- Inform the mother/caregiver of the importance of the test (and of knowing the child's status as soon as possible).
- The test is done on all babies under 18 months who test positive on the rapid test.
- It is possible that the child may be infected even if the mother took ARV prophylaxis or ART and if the child is on extended NVP prophylaxis.
- Inform the parents/caregiver that free ongoing care and ARV therapy are now available for all infants with HIV.
- Prepare them for the possible outcomes of the PCR test by reviewing all the possibilities (positive or negative).
- Tell the parents/caregiver when test results will be available.
- In most cases, counseling messages on infant feeding will not change based on the early PCR result.

Post-test Counseling after Conducting PCR on the Infants.

As with all HIV testing, post-test counseling following PCR is extremely important. Post-test counseling should be thorough, supportive and accurate.

For children who are breastfeeding:

- If a PCR test is positive, the child is considered HIV positive
- If a PCR test is negative, the child is considered HIV negative. However, because of continued exposure to breast milk, repeat test at 6 months, and antibody test at 12 months of age (6 weeks after all exposure to breast milk)

For children who are NOT breastfeeding (exclusive replacement feeding):

- If a PCR test is positive, the child is HIV positive
- If a PCR is negative, the child is HIV negative

Post-test Counseling for a Positive PCR Result

Inform the parents/caregiver of the following:

- The baby has HIV but early treatment for the baby is available and can be life-saving
- The baby will continue to take co-trimoxazole
- If the mother is breastfeeding, encourage her to continue breastfeeding
- Stop extended NVP prophylaxis and refer for paediatric ART (regimen should be protease inhibitor based)

Post-test Counseling for a Negative PCR Result

Inform the parents/caregiver of the following:

- Baby is HIV negative
- If breastfeeding, baby is still at risk of contracting HIV. The risk is low as long as the baby continues extended infant NVP prophylaxis.
- The importance of breastfeeding exclusively up to 6 months.
- Mixed feeding at less than 6 months of age may increase the infant's chance of becoming infected with HIV.
- Repeat HIV test needs to be done at 12 months and 18 months of age (6 weeks after complete cessation of breastfeeding).

Nevirapine for HIV Prophylaxis

All HIV exposed breastfeeding infants whose mothers were on ARV prophylaxis must be started on NVP prophylaxis from birth and continued throughout the breastfeeding duration. NVP should be stopped one week after complete cessation of breastfeeding.

All HIV exposed breastfeeding infants whose mothers are on ART, must be started on NVP prophylaxis from birth until 6 weeks of age.

All HIV exposed non-breastfeeding infants whose mothers were on ARV prophylaxis or are on ART must be started on NVP prophylaxis from birth until 6 weeks of age.

Mothers on ART or ARV prophylaxis for MTCT are much less likely to transmit HIV to their infants. (The risk of transmission goes down from 1 out of 3 to less than 1 out of 20). The infant should be observed for NVP sensitivity which may present as a generalised skin rash. If a baby is receiving NVP and tests HIV positive by PCR, stop NVP prophylaxis and immediately refer for paediatric ART services.

Co-trimoxazole for *Pneumocystis Jirovecii* Pneumonia (PCP) Prophylaxis

PCP is the leading cause of death in HIV positive babies. Primary prophylaxis against PCP should therefore be provided through the use of oral co-trimoxazole suspension for at least the first year of life.

- It is administered to all HIV exposed babies starting at six weeks of life.
- It can be stopped if the baby tests HIV negative and is not breastfeeding.
- It is continued to 5 years of age if the child is HIV positive.
- If given for treatment of PCP, it should be given as prophylaxis for life.
- It is dosed by weight and given daily.

Table 7.1 Co-trimoxazole Administration in HIV Exposed Infants

Weight	Daily Dose		(100ml) Bottles needed per month
	Suspension (5mls of syrup 200 mg sulfamethoxazole/ 40mg trimethoprim)	Child tablet (100 mg sulfamethoxazole / 20mg trimethoprim)	
<6 months or < 5kg	2.5 ml	One tablet mixed with feed or small amount of milk or water	1
6 months – 5 years or 5-15 kg	5 ml	Two tablets	2
Frequency – once a day			

Source: WHO guidelines on cotrimoxazole prophylaxis for HIV related infections among children, adolescents and adults 2009.

The following are points to note with co-trimoxazole and NVP administration:

- Allergic reactions are rare but can present as generalized body rashes. If a rash occurs, refer baby the same day to an experienced HIV clinician for evaluation and possible switching to dapsone (2 mg/kg daily).
- A blistering rash involving skin, mouth, red eyes (if scabies or impetigo are ruled-out), is a medical emergency. Co-trimoxazole is stopped and the baby should immediately be referred to a district or tertiary hospital.
- Medicine is kept in a cool place and refrigerated if possible. Mothers are asked to bring the baby’s medicine bottles to each clinic visit so adherence can be assessed.
- Dispensing of co-trimoxazole and NVP to mothers should be made as easy as possible with consideration being given to fast-tracking the distribution in a well coordinated manner with routine immunization visits, starting at six weeks.

Table 7.2 Summary of Recommendations for Discontinuing Primary Co-trimoxazole Prophylaxis

Target population	Recommendations
HIV Exposed children	Discontinue co-trimoxazole after HIV infection is excluded
Infants and children living with HIV	Maintain on co-trimoxazole until the age of five years irrespective of clinical and immune response

Source: WHO guidelines on co-trimoxazole prophylaxis for HIV related infections among children, adolescents and adults 2009.

Co-trimoxazole and NVP administration is documented in the Under-five register and Under-five card.

Clinical Evaluation and Follow-Up of Babies

Emphasis should be placed on parents and community education for prompt referral and treatment for common childhood illnesses (e.g. pneumonia and diarrhoea) as specified in the IMCI guidelines. Follow-up of HIV-exposed babies should be done on a monthly basis. Health workers should educate mothers and other care-givers on the importance of the following:

- Prompt screening and seeking treatment and management of opportunistic infections.
- Adequate basic hygiene, both personal and environmental.
- Follow-up on nutrition education.
- Promotion of the use of insecticide treated mosquito-nets for children under-5
- Immunization at weeks: 6, 10 and 14 (also at 9 months for measles).
- Growth monitoring: every month up to 24 months.

Adherence to growth monitoring and promotion should be emphasized, in addition to early referral for any growth faltering children born to HIV infected women. Growth faltering is one of the earliest signs of HIV/AIDS infection or tuberculosis and if noted the baby should be tested for HIV and appropriate care given. At each visit, the health worker should ask and assess the following:

- Inter-current illnesses
- Diarrhoea and coughs
- TB contacts
- Growth faltering
- Oral thrush or sores and nappy rash
- Fever
- Allergic reaction to NVP or co-trimoxazole
- Failure to feed
- Adherence to infant feeding option chosen
- Adherence to co-trimoxazole and NVP
- Adherence to national immunization schedule

Chapter Eight - Infection Prevention and Post-Exposure Prophylaxis for Health Providers

Risk of HIV infection to health providers can be significantly lowered through adherence to universal precautions. These include routine use of gloves and other protective equipment to prevent occupational exposures and safe disposal of needles and other sharp instruments and biological waste. Administration of a four-week prophylactic course of antiretroviral drugs in the event of accidental occupational exposure can significantly reduce the risk of an established infection.

The following should be considered for workers who deal with HIV positive clients:

- Create a supportive environment for HIV prevention, care and support among staff.
- Training in infection control practices to ensure ready access to protective equipment and post-exposure prophylaxis and implementation of infection control practices
- All staff to review the MoH workplace policy on HIV and AIDS.
- Use of protective equipment and clothing (sharps boxes, gloves, aprons and other protective equipment).
- Encourage all health workers to go for regular HIV testing.

Post-Exposure Prophylaxis (PEP)

In case of accidental occupational exposure to infected blood and body fluids, the following must be done:

- Immediately wash with soap and running water any wound or skin site in contact with infected blood or fluid.
- Irrigate with sterile physiological saline or mild disinfectant.
- Rinse eyes or exposed mucous membrane thoroughly with clear water or saline.
- Report immediately to the person in-charge of PEP and follow National PEP protocol.

Chapter Nine - The Role of the Community in PMTCT

Community Healthcare Providers

Community volunteers such as Traditional Birth Attendants (TBAs), Safe Motherhood Action Groups (SMAGS), Home Based Care Givers and Community Lay Counselors can play an important role in the delivery of quality PMTCT. District Health Offices (DHOs) should therefore organize PMTCT training for these cadres to equip them with basic knowledge and skills related to HIV, AIDS and PMTCT using the revised Community Lay Counselor Training Programme. Trained community volunteers are expected to help with the following:

- Encourage pregnant women in their community to go for early antenatal booking by 14 weeks
- Encourage women to deliver in facilities
- Encouraging couple counseling and testing for HIV
- Encourage and support disclosure of HIV test results
- Perform group education, testing and counseling
- On-going psychosocial counseling
- Reducing stigma and discrimination associated with HIV and AIDS.
- Supporting adherence to treatment (ARVs and co-trimoxazole)
- Sensitization of community to the importance of HIV care
- Male involvement in PMTCT
- In the event of a home delivery, ensure that the mother and newborn baby are taken to the health facility for medical assessment, timely administration of ARVs and immunizations.
- Support breastfeeding and extended NVP prophylaxis
- Promotion of retention of mother-baby pairs in the programme
- Encourage and support women to come back for postnatal checkups and services
- Record keeping and data entry at both facility and community level

HIV positive women must be given contact information or referred to appropriate community-based groups such as People Living With HIV (PLHIV), peer support groups, post-test clubs, legal services, faith-based organisations, legal counselors and organisations which promote Income Generating Activities (IGA's).

Community Leaders

Orienting leaders such as traditional leaders, religious leaders and other influential leaders on Safe Motherhood, HIV and PMTCT can be highly beneficial as they can influence their community to follow positive health seeking behaviors which will benefit the individual and the community as a whole.

Chapter Ten - Monitoring and Evaluation

Monthly PMTCT reports will be prepared from health facilities through the PMTCT/VCT data management system which is sent to the DHO. The DHO in turn submits consolidated PMTCT district reports monthly to the Provincial Health Office Data Management Specialist who in turn submits provincial reports to the Ministry of Health. Data Management Specialists and Clinical Care Specialists should provide supportive supervision to health facilities implementing PMTCT. It is important for facilities, districts and provinces to regularly review their PMTCT programme data, so that they understand their current programme and use their data to improve their performance.

PMTCT information is entered in mothers' antenatal cards, Integrated PMTCT and VCT registers, PMTCT Delivery registers; Under 5 cards, Under 5 registers and Mother/ Baby follow up registers; Pre-ART and ART registers. The current minimum standard indicators to be monitored on a monthly basis are listed below.

Area	Indicators
Safe motherhood	Antenatal 1st visit before 14 weeks Antenatal 1st visit 14 weeks or later Antenatal 1st visit before 20 weeks Antenatal 1st visit 20 weeks or later Antenatal 1st visits total Antenatal follow-up visits
PMTCT Counselling & Testing	Antenatal client tested at 1st antenatal visit Antenatal client tested at follow-up antenatal visit Antenatal client with known HIV positive status Antenatal client HIV positive new case Antenatal client collecting HIV test results Antenatal client male partner counseled Antenatal client male partner tested for HIV Antenatal male client HIV positive new case
Post-test Services for HIV positive pregnant women and Partners	Pregnant women assessed for eligibility for ART Antenatal male partner referred for pre-ART from PMTCT Opting for 6 months exclusive breastfeeding at 1st visit Initiation of breastfeeding within one hour.

Infant and Young Child Feeding	<p>Initiation of breastfeeding within 24 hours.</p> <p>Exclusive breast feeding up to 6 months</p> <p>Timely introduction of complementary foods.</p>
PMTCT Deliveries	<p>Live Births HIV exposed</p>
Prophylaxis	<p>ARV prophylaxis using extended AZT and AZT/3TC/ NVP intrapartum combination to woman</p> <p>ART to woman</p> <p>Co-trimoxazole prophylaxis for mother</p> <p>Extended NVP prophylaxis to baby</p> <p>Co-trimoxazole started by baby within two months</p>
Follow up	<p>HIV PCR test to HIV-exposed baby at 6 weeks and 6 months</p> <p>HIV Ab test to HIV-exposed baby at 12 months</p> <p>HIV Ab test to HIV-exposed baby at 18 months</p> <p>HIV PCR test positive at 6 weeks new case</p> <p>HIV PCR test positive at 6 months new case</p> <p>HIV Ab test positive at 12 months new case</p>

Annexes

Annex I: WHO Clinical Staging of HIV/AIDS

Clinical Stage 1
Asymptomatic Persistent generalized lymphadenopathy
Clinical Stage 2
Unexplained moderate weight loss (<10% of presumed or measured body weight) Recurrent respiratory tract infections (sinusitis, tonsillitis, otitis media and pharyngitis) Herpes zoster Angular cheilitis Recurrent oral ulceration Papular pruritic eruptions Seborrhoeic dermatitis Fungal nail infections
Clinical Stage 3
Unexplained severe weight loss (>10% of presumed or measured body weight). Unexplained chronic diarrhea for longer than one month. Unexplained persistent fever (above 37.5°C intermittent or constant, for longer than one month) Persistent oral candidiasis Oral hairy leukoplakia Pulmonary tuberculosis Severe bacterial infections Acute necrotizing ulcerative stomatitis, gingivitis or periodontitis Unexplained anaemia (<8.g/dl), neutropaenia (<0.5 x 10 ⁹ per liter) and/or chronic thrombocytopenia (<50 x 10 ⁹ per liter)
Clinical Stage 4
HIV wasting syndrome Pneumocystis pneumonia Recurrent severe bacterial pneumonia Chronic herpes simplex infection Oesophageal candidiasis (or candidiasis of trachea, bronchi or lungs) Extrapulmonary tuberculosis Kaposi's sarcoma Cytomegalovirus infection (retinitis or infection of other organs)

Central nervous system toxoplasmosis

HIV encephalopathy

Extrapulmonary cryptococcosis including meningitis

Disseminated non-tuberculous mycobacterial infection

Progressive multifocal leukoencephalopathy

Chronic cryptosporidiosis

Chronic isosporiasis

Disseminated mycosis (extrapulmonary histoplasmosis or coccidiomycosis)

Recurrent septicaemia (including 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

- a) Assessment of body weight in pregnant woman needs to consider the expected weight gain of pregnancy.
- b) Unexplained refers to where the condition is not explained by other causes.

Annex II: Ten Steps to Successful Breastfeeding

STEP 1. Have a written infant feeding policy that is routinely communicated to all health care staff.

A written policy provides guidance for staff performing duties on how to support mothers to successfully breast feed their children. All members of staff or community members working at the health facility should be oriented in the promotion, protection and support of breast feeding.

STEP 2. Train all health care staff in skills necessary to implement this policy.

Health workers are required to have the necessary knowledge and skills to assist mothers to successfully breastfeed. All members of staff and community workers working at the health facility or in the community should be trained in skills to promote, protect and support breastfeeding.

STEP 3. Inform all pregnant women about the benefits and management of breastfeeding.

All pregnant and lactating mothers attended to at the health facility or in the community should be taught on the benefits and management of breastfeeding.

Information on management of breastfeeding such as what to do when a mother thinks she does not have enough milk will go a long way in helping mothers successfully breast feed.

STEP 4. Help mothers initiate breastfeeding within one hour of birth.

Assist all mothers to initiate breastfeeding within the first hour of delivery

Initiating breastfeeding early helps establish breastfeeding and also helps baby to benefit from the first milk which is rich in antibodies and nutrients.

STEP 5. Show mothers how to breastfeed and how to maintain lactation, even if they are separated from their infants.

Demonstrate to mothers on how to breastfeed and maintain lactation even when mother and baby are separated. The skills that mothers learn such as expression of breast milk are very useful in maintaining the milk flow.

STEP 6. Give newborn infants no food or drink other than breast milk, unless *medically* indicated.

All newly born babies should only be breastfed unless medically indicated. This means that NO other FOOD nor DRINK shall be fed to the baby for the first six months of life APART FROM BREASTMILK. Giving babies aged 0-6 months other foods or drinks interferes with the success of maintaining the milk flow, it also puts the baby at risk of other infections that may result in diarrhea.

STEP 7. Practice “rooming in”

Allowing all mothers to stay with their newborn babies at all times even when the mother is sick unless medically indicated

STEP 8. Encourage breastfeeding on demand.

All lactating mothers should breastfeed on demand i.e., as much as the baby wants. In addition, where babies sleep for too long, mothers should wake them up and breastfeed. Demand feeding helps increase and maintain the milk flow.

STEP 9. Give no pacifiers or artificial nipples to breastfeeding infants.

No baby shall be given any artificial teats or pacifiers.
Artificial teats interfere with breastfeeding and are possible sources of infections such as diarrhea

STEP 10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or health center.

Form breastfeeding support groups and strengthen their operations by referring mothers to them. Breastfeeding support groups provide assistance and support to mothers in the community.

Additional Areas

1. Comply with the marketing of breast milk substitutes legislation and the international Code.

All health facilities should comply with the law that regulates the marketing of breastmilk substitutes. This will protect mothers and caretakers from undue pressure imposed by manufacturers and agents of baby foods.

2. Encourage all pregnant women to the test for HIV and provide them with appropriate support on infant feeding.

All pregnant and lactating women shall be encouraged to test for HIV so that appropriate support is given to both the mother and the baby and family at large.

3. Promote Mother friendly care practices.

All mothers shall be assisted to have labour and delivery practices that will enhance their own health and also their infants good start in life, including breastfeeding.

Annex III: Recommended Complementary Feeding Practices 6-24 Months

Age	Recommendations			
	Frequency (per day)	Average amount of food/meal (in addition to breast milk)	Texture (thickness/consistency)	Variety (examples)
6-8 months	2-3 meals per day plus frequent breastfeeds 1-2 snacks may be offered	Start with 2-3 tablespoons per feeds Increase gradually to ½ of a 250 ml cup	Start with thick porridge and gradually introduce mashed family food	Staples (porridge enriched with oil) + Legumes (Mashed beans & pounded groundnuts) + Green leafy vegetables & orange/yellow vegetables/fruits + Animal food (kapenta, fish or caterpillars)
	9-11 months	3-4 meals per day plus breastfeeds 1-2 snacks may be offered	½ of a 250 ml cup/bowl	
12-23 months	3-4 meals per day plus breastfeeds 1-2 snacks may be offered	¾ to 1 of a 250 cup/bowl	Family foods, chopped or mashed if necessary	
If baby is not breastfed, give in addition: 1-2 cups of milk per day and 1-2 extra meals per day				



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