



LESOTHO

GOVERNMENT OF LESOTHO

GUIDELINES
TO PREVENT
MOTHER TO CHILD
TRANSMISSION OF
HIV

JUNE 2004



Preamble

The impact of HIV/AIDS on child survival in Lesotho is devastating. Every year average of 7 000 babies are infected during pregnancy, labour and delivery and breastfeeding. Preventing MTCT of HIV has become a major public health priority in Lesotho. In addressing this, Government has integrated interventions to prevent MTCT into maternity health services. This document provides guidelines on prevention of MTCT and is aimed at everyone within the country but with special focus to some of the following health personnel

- Obstetrician/ Gynaecologists
- Midwives/Registered Nurses
- Paediatricians
- General medical doctors
- Nutritionists/Dietician
- Pharmacists
- Laboratory Technologists
- Mothers/ partners
- Corps (community own resource persons e.g. CBD's, TBA's CHW's
- Media

Clinical care guidelines should be developed for use by health professionals/ health institutions and a simplified version for community health workers. This document is a guide for health workers to prevent MTCT of HIV infection in women during the antenatal period, labour and delivery and breastfeeding period. The interventions to be put into place during the various periods are:

- Improved quality of antenatal care
- Voluntary counselling and testing
- counselling on safe infant feeding options
- Laboratory investigations
- Modifications of obstetric practices
- Treatment/ prophylaxis including provision of antiretrovirals
- Provision of psychosocial support

CHAPTER 1

1.1 BACKGROUND INFORMATION

Lesotho is a land locked country surrounded by South Africa on all borders and is about 31 000 kilometres square size. Based on the 1999 Lesotho population data sheet, the country's population was estimated at 2 099 625 of which 1 036 504 (49%) were males and 1 063 121 (51%) were females. The population of the 15 – 49 years was 1 007 535, which constitute 48% of the total population, broken down into 491 398 (49%) males and 516 137 (51%) females. The population of childbearing women constitutes 1.007535 (48%), adolescents (10-19 years) 25 % of the total population, and children from 0-9 years constitutes 26 % (1996 census).

1.2 HIV PREVALENCE ESTIMATES IN LESOTHO

General Population:

From the 1999 Lesotho hospital based survey, the adult HIV prevalence was estimated at 26.4% among the general population (Draft World Bank, Revised HIV prevalence estimate Oct – Nov 1999). This figure shows that the trend of HIV infection is increasing at an alarming rate in Lesotho. In 1998, the adult HIV prevalence rate was estimated at 9.8% (Disease Control Unit, Ministry of Health, Lesotho). UNAIDS/WHO estimates put the adult HIV prevalence at 23.57% among 15 to 49 years population in 1999, which is comparable to the World Bank figure. At the end of 1999, UNAIDS/ WHO estimates show that 240 000 people in Lesotho were living with HIV / AIDS by the end of 1999 of which 130 000 were women and 8 200 were children (UNAIDS/WHO Epi fact sheet, Lesotho 2 000 update).

1.3 HIV Prevalence among ANC Attendees:

Trends of HIV infection among ANC attendees are on the increase. Between 1991 and 2000, HIV infection rates increased in all five sites from a range of 0.7 – 5.5 % in 1991 to 18.98 -42.2% in 2000.

Table 1: HIV Prevalence among ANC Attendees:

SITES	AREA	1991	1992	1993	1994	1996	2000
Maseru	Urban	5.5%	5.1%	6.1%	31.3%	20.6%	42.2%
Mafeteng	Periurban	3.5%	5.0%	4.0%	10.8%	34.8%	18.98%
Leribe	Periurban	2.2%	1.8%	11.4%	8.7%	29.3%	26.03%
Outhing	Rural	0.7%	8.4%	3.4%	9.1%	15.8%	22.81%
Maluti	Rural	1.8%	1.4%	4.2%	5.0%	21.3%	19.04%
Mokhotlong	Rural						12.29%

The rates rose dramatically from 5.5% in 1991 at Queen Elizabeth II Hospital in Maseru, Capital City to 42.2% in 2000. For the other sites, Leribe, Maluti, Mafeteng and Quthing, HIV infection rates increased from 0.7 – 3.5% in 1991 to 18.98 – 26.03% in 2000. Mokhotlong is the new site for 2000 representing mountain area and it is started in 2000. The rate is 12.29% for 2000.

The transmission rate of HIV from mother-to-child can be estimated to vary between 25 – 48% throughout pregnancy and lactation in the absence of PMTCT services. (Wilkor et al: 1997). The timing of transmission is thought to be 5 to 10 % during pregnancy, 10 to 20 % during labour and delivery; and 10 to 20 % during breast feeding (de Cock et al 2000).

With the estimated number of births at 73,000 (1999) annually in Lesotho, it is extrapolated that average of 7000 babies will be infected with HIV during the last months of pregnancy, delivery and/or through breastmilk. Therefore, the Government of Lesotho has taken an initiative for the development of PMTCT guidelines, which will guide provision of service for the purpose of reducing HIV transmission.

TABLE 2: FACTORS AFFECTING MOTHER-TO-CHILD TRANSMISSION OF HIV

	STRONG EVIDENCE	LIMITED EVIDENCE
VIRAL	High viral load Viral genotype and phenotype.(clarify more)	Viral resistance (theoretical possibility)
MATERNAL	Advanced disease Immune deficiency HIV infection acquired during pregnancy or breastfeeding	Vitamin A deficiency Anaemia Sexually transmitted disease/ chorioamnionitis Smoking Substance use/abuse
OBSTETRICAL	Vaginal delivery (Compared To Elective Caesarean Selection) Rupture Of membranes For more than 4 Hrs. Exposure to maternal fluids	Episiotomy Intrapartum haemorrhage External Cephalic Version (ECV)
FETAL/INFANT	Prematurity	Genetic Lesions of skin and /or mucous

		membranes (e.g Oral thrush)
BREASTFEEDING	Duration Breast disease (mastitis/cracked nipple)	Exclusive breast feeding

1.4 INTERVENTIONS KNOWN TO REDUCE MTCT ARE:

a) Safer Methods of Delivery : *Before, during and after*

- o **Quality/comprehensive care during ante-natal**
- o **Male/couple and community participation**
- o **Safer sexual practices**
- o **Modification of obstetric care**
- o **Elective Caesarean section**
- o **Use of Antiretroviral**
- o **Safer Infant feeding options**

1.5 BENEFITS OF PREVENTING MOTHER TO CHILD TRANSMISSION OF HIV

AIDS related deaths are reversing gains made in child health and survival in Lesotho. Caring for HIV infected children carries heavy costs for families and health systems. The benefits of reducing MTCT of HIV infection include :

- Increase child health and survival.
- Decrease numbers of HIV infected orphans.
- Decrease load on health system
- Opportunity to improve and expand health services, as well as strengthen health infrastructure.
- Improve health of HIV infected mother

At national level it has the potential to increase understanding of the HIV and AIDS epidemic and acceptance of those living with HIV and AIDS. This is a consequence of counselling and testing and measures to combat stigmatisation. A healthy child is highly prized in a family and promotes quality of life to the mother.

CHAPTER 2

VOLUNTARY COUNSELLING AND TESTING

Counselling is confidential dialogue between a person and a care provider aimed at enabling the person to cope with stress and make personal informed decisions related to a problem such as HIV and AIDS. The counselling process includes an evaluation of personal risk of HIV transmission and facilitation of preventive behaviour.

Counselling aims to provide the client with information to enable her/him make informed choice. It must be voluntary, confidential and must emphasize help available. Information must be sensitive to the patients' needs. It aims to break the silence as well as destigmatise HIV and AIDS infection.

The elements in VCT include:

- a) Pre-testing Counselling
- b) HIV Test
- c) Post-test Counselling
 - session 1 – disclosure
 - session 2 - dealing with a patient at a personal level
 - session 3 - MTCT interventions
 - session 4 – infant feeding options
 - session 5 – Planning for the future
- d) HIV Positive Results
- e) HIV Negative Results
- f) On-going supportive counselling
- g) Group support

Counselling in the Maternity Setting should Target:

- Pregnant women coming for antenatal care who should be offered pre-test counselling.
- Pregnant women found to be HIV positive.
- pregnant women found to be HIV negative
- The pregnant woman's partner or family or friends

- Pregnant women of unknown status (who may have declined or postponed testing.)

a) **Issues to be considered in pre-test counselling/ information session:**

- The magnitude of HIV in Lesotho
- The magnitude of HIV among pregnant women
- How HIV is transmitted and not transmitted
- Natural history of HIV/ AIDS
- Mother-to-child transmission of HIV (MTCT): in utero, intrapartum and pos-natally through breastfeeding
- Benefits of the HIV test
- The interaction between STIs and HIV transmission
- Reduction of MTCT by the provision of antiretroviral therapy
- Client's perceived and actual risk
- Encourage consultation with significant other and partners before HIV testing
- Safer sex practices and where to access condoms
- Sharing test results with sexual partner and close family member
- Sharing discordant HIV results (30% of partners of HIV positive women are negative).
- Discussion on conflict resolution
- Available opportunities for HIV related care, social and emotional support
- Available opportunities for reducing MTCT of HIV viz:
 - Nutrition and self care
 - ARVs
 - Modification of obstetric care
 - Modification of Infant feeding

b) **HIV Test:**

i) **HIV antibody tests**

This tests for antibodies against HIV. It does not detect the HIV virus itself.

Antibodies against the HIV take from 1-3 months (window period) to develop after initial infection.

- HIV ELISA tests (enzyme-linked immuno absorbent assay).
This is the most efficient test for testing large numbers but requires laboratory facilities with expensive equipment, maintenance, staff and a reliable power supply.
- Simple/ rapid HIV tests:

These do not require special equipment or highly trained staff and are as accurate as ELISA test. Simple/ rapid test will usually give results in less than 10 minutes and are easy to perform.

- Saliva or urine tests: these are not yet widely available.
- Western Blot: this is usually used to confirm positive results or where two ELISA or simple/ rapid tests are discordant as it is very specific for HIV, but is costly and more difficult to perform.

SPECIAL SITUATIONS IN TESTING

• HIV TESTING IN LABOUR

The decision on whether to implement testing in labour will need to be made according to circumstances. Counselling and testing in labour should always be followed by further counselling post delivery.

• TESTING PREGNANT MINORS (ADOLESCENTS)

Although the policy states that minors can not give consent for testing, a pregnant minor should be able to make her own decisions about testing and benefit from the interventions. All efforts should be made to engage adult members of the family in providing continued support for HIV positive pregnant minors.

NB. Consenting for HIV test by Mentally ill/retarded

Protocol for rapid HIV test

Mothers and partners after consenting will have their blood tested using a rapid test kit. If the test is positive, another sample of blood will be taken and sent for Eliza for confirmation. In future depending on resources, an initial positive HIV test by rapid testing will be repeated using another rapid test kit. If the repeat is positive, it is confirmatory. If a repeat is negative, a repeat blood sample will be sent for Eliza.

If an initial rapid testing is negative, the result is giving explaining window period and need for repeat test according to guidelines.

c) Post-Test Counselling:

Check for understanding of the results (if not clear then repeat pre-test counselling and book for post-test counselling). This may occur on the same day of the test or later on an individual

basis, never in a group. It involves giving results simply and clearly, never by telephone, mail, or via a friend and preferably not before a weekend.

- Allow time for the meaning/ implications of the results to sink.
- Check for understanding.
- Discuss the meaning of the result (+ve or -ve) for the client.
- Discuss the personal, family and social implications including who, if any, to tell.
- Deal with immediate emotional reactions.
- Discuss a personal risk reduction plan (including safer sex and MTCT).
- Identify options and resources available.
- Check that adequate immediate support is available.
- Discuss immediate plans, intentions and actions.
- Discuss follow-up plans for emotional care and social support and make referrals where necessary.
- The possible link between smoking and increased risk of MTCT

d) HIV Positive Results

After the first test, if positive the Counsellor should not give results but explain the need for confirmation of test results. A second sample (with client's consent) should be taken after this session to confirm the results of the first test, and these results should be given as soon as possible only when the patient is prepared to receive the results. The counsellor should provide at least two counselling sessions after the second result.

Session 1: Disclosure:

Issues to be explored:

- Coping with feeling of loss
- Whom to tell

- Safer sex: Condom use to prevent re-infection
- Self care: hygiene and nutrition
- Infection prevention
- Screening and treating STIs
- Screening for TB and chemoprophylaxis
- Chemoprophylaxis with septrin for Pneumocystis Carinii Pneumonia (PCP)
- Prompt health seeking behaviour
- Initial exploration about MTCT and possible ways to prevent it
- Support systems at home/ or in the community
- Progression of HIV and AIDS

Issues to be explored at subsequent post-test counselling

Session 2: Dealing with the patient at a personal level

- More information about HIV and health implications of HIV
- Disclosure to partner, family and friends

Issues to be considered about disclosure of HIV results to a partner:

- Partner may or not be infected
- The Pregnant woman may not be willing to disclose her test results
- The support required for coping and adjusting
- Development of strategies for safer sex and infant feeding practices
- Future fertility intentions
- Follow up access to health care services and support groups that promote positive living

- Possible support systems include peer groups and people living with AIDS (PLWA)
- Re-capping information

Session 3: MTCT interventions

- Ways of reducing the risk of MTCT of HIV infection
- More information about HIV infection and safer sex practices

Session 4: Infant feeding options (refer to Infant and Young Child Feeding Guidelines in the context of HIV/AIDS)

- Issues about infant feeding
- More information about HIV infection and safer sex practices
- Re-capping information

Session 5: Planning for the future

- More information about HIV infection and safer sex practices
- Information about making decisions on future fertility
- Living with uncertainty
- Re-capping information
- Pre/post test HIV and AIDS support groups: Peer Educators/counsellors, Community care providers/counsellors

F) Support Groups:

The health care provider should be aware of the locally available expertise in the area of counselling for referral and subsequent effective management. Health institutions should collaborate with AIDS support groups and utilize their services including peer counselling on site. This is important for:

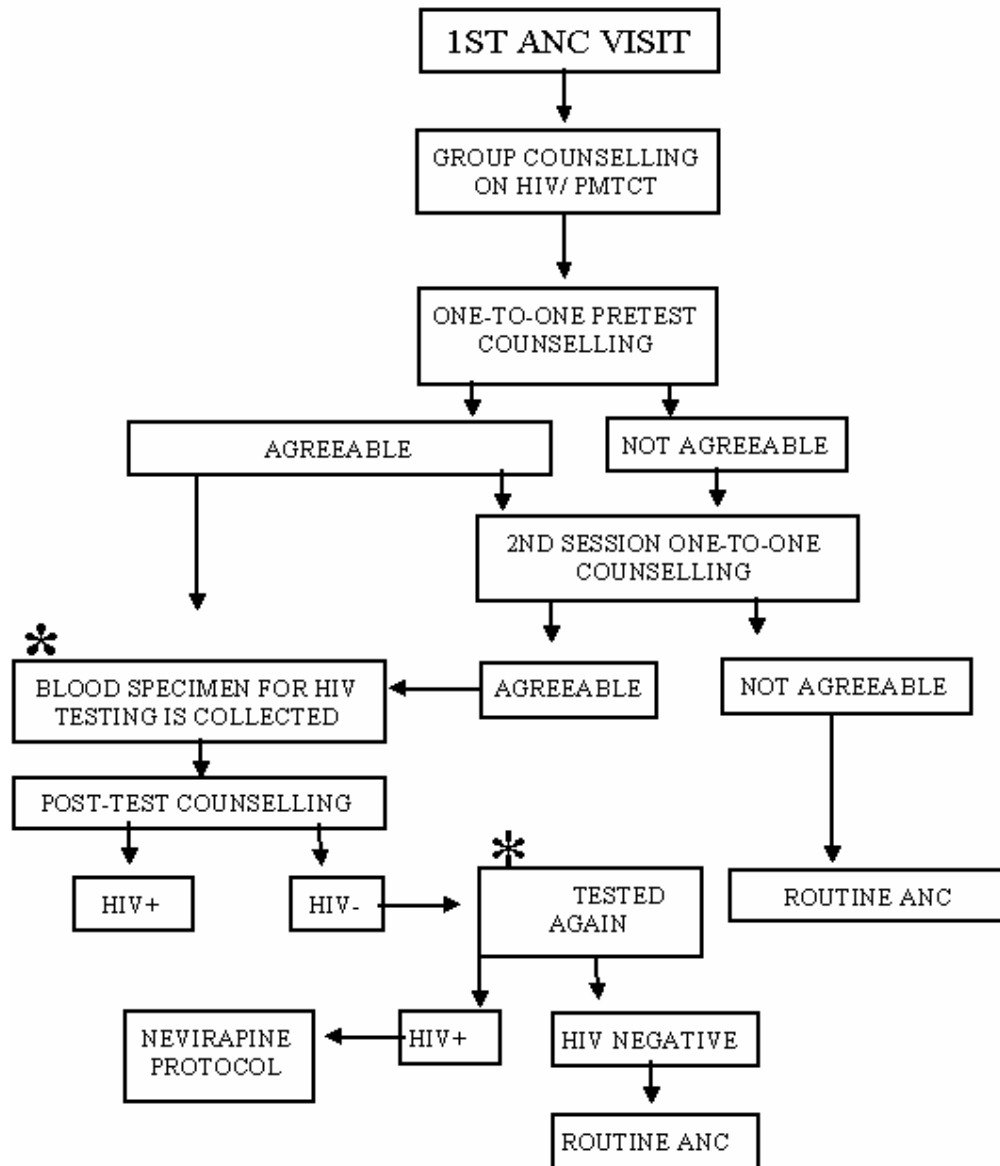
- Reducing fear, ignorance and stigma surrounding HIV
- Reducing the potential of domestic violence
- Stimulating a community response in those living positively with HIV/AIDS
- Contributing to an environment supportive of safer sexual behaviour
- Emphasize value of breastfeeding in HIV negative women.
- HIV positive women who cannot afford alternative feeding should exclusively breastfeed.

e) **HIV Negative Result:**

Women should be explained the meaning of a negative test including the window period. This should be used as an opportunity to counsel women about the importance of staying negative and providing information on how to do so. Those who wish to have a repeat test within 3 months should be given this opportunity. Should be advised to breastfeed to promote good health of the infant.

The Algorithm below describes the process of VCT in antenatal setting.

ALGORITHM



* Rapid test Kits shall be used in order to provide results on the same day.

NB Tested clients' cards shall be stamped and a mark put to indicate acceptance to Nevirapine prophylaxis.

NB. To be reviewed to include : Confirmation for +ve and for -ve test again after three months.

CHAPTER 3

MANAGEMENT OF HIV POSITIVE PREGNANT WOMEN IN ANC

HIV positive pregnant women require specialized care in the antenatal period to ensure optimum health benefits to the mother and the baby as well as minimising risk of transmission of HIV infection to the unborn baby. Areas of specialised care include:

- a) Care during antenatal period
- b) Investigations
- c) Obstetric evaluation and care
- d) Nutritional support
- e) Lifestyle and behaviour change
- f) Medical treatment

a) **Antenatal Care**

A pregnant woman identified to be HIV positive should have a full physical examination. In particular this should focus on HIV related symptoms and illnesses and signs of opportunistic infection (especially tuberculosis). Special attention should be paid to infections:

- Persistent diarrhea
- Respiratory infections: TB is a common opportunistic infection and bacterial respiratory infection are common in HIV –positive women
- Oral and vaginal candidoses
- Lymphadenopathy
- Herpes zoster (current and re-current) is a common presenting sign of HIV infection, occurring early in the disease, often before there is much immune suppression
- Other skin conditions are also common among HIV infected persons
- Other sexually transmitted infections
- Weight gain or loss should be monitored. Severe weight loss in pregnancy is a poor prognostic signs. Table 3 below summarises the care of a pregnant woman identified to be HIV positive.

TABLE 3: ANC MANAGEMENT OF HIV IN PREGNANCY

Category	Disease	Treatment
HIV Seropositive	*Well and Asymptomatic	*Usual ANC *MTCT and counselling *Treatment of STI
Opportunistic Infections	* Pneumonia *Skin infections *Acute diarrhoea *TB	*Usual ANC, MTCT & counselling *Treatment of STI *Specific treatment of opportunistic infections
Immuno-supression	* Weight loss > 10% * Persistent recurrent diarrhoea more than 14 days mantoux test) * Fungal infection (vaginal & oral), * Chronic genital ulcer disease, *Anaemia *CNS manifestation *Miliary TB *Recurrent chest infections (PCP)	* Usual ANC, MTCT and counselling * Treatment of STI * Screen for TB (Sputum culture, *Cotrimoxazole prophylaxis (two tables daily or three times weekly), * Multivitamin *Vitamin A *Nutrition *No breastfeeding (discuss with nutritionist) *Flagyl

- **Investigations**

All pregnant women should have syphilis testing and haemoglobin estimation.

If resources permit, other investigations may be valuable, such as:

- Full blood count (FBC)
- Test for sexually transmitted infections: if available, simple diagnostic tests for gonorrhoea and Chlamydia can be used or laboratory tests requested

- **Obstetric Evaluation and Care:**

The obstetric care for the antenatal HIV-positive women is essentially the same as for HIV negative women.

- Additional visits will not be required for obstetric reasons, although she may need to attend for further counselling sessions.
- Avoid invasive procedures such as chorionic villus sampling, amniocentesis or cordocentesis.
- External cephalic version (ECV) may carry a risk of HIV transmission to the fetus.

d) Nutritional Support

HIV positive women will need advice on a healthy diet and may need nutritional support during pregnancy. (For further details refer to food based dietary guidelines for people living with HIV and AIDS.

- Weight loss is a poor prognostic sign: monitor weight at antenatal visits and consider nutritional substitutes if required.
- Low Vitamin levels have been associated with higher rates of MTCT and with higher levels of virus in breastmilk. All pregnant women should be given multivitamins supplementation.

Food intake for pregnant women should include both macro and micronutrients as listed below. For further management of dietary related conditions refer to the Lesotho Food Based Dietary Guidelines for people living with HIV and AIDS.

List of macro and micro nutrients,

Macronutrients

Nutrient	Sources	Functions
Protein	Pork, fish, beans, milk, yoghurt, cheese, egg	Provide necessary materials for building and repairing worn out tissues Maintain the body tissues. Develop the immune system and resistance to infections
Carbohydrates	Papa, samp, bread, rice, potatoes	Provide energy to the body. Fibre content in carbohydrates prevents constipation, coronary heart disease and diabetes Soluble fibre is used in diarrhoea treatment.
Fats	Cooking oil, butter and animal fats	Provides energy and heat. Important for weight gain. aid in the absorption and transportation of fats and fat soluble vitamins.

Micronutrients

Nutrient	Sources	Function
Vitamin A	Carrots, spinach, pumpkin, <i>tenane</i> , <i>sepaile</i> , milk, liver, fish, oils.	Good for white blood cells, vision, healthy skin, bone development. Anti-oxidant needed for immune function and resistance to infection.
Vitamin B1 (thiamine)	Milk, eggs, liver, fish, <i>Likhobe tsa poone</i> , <i>tsa mabele</i> , <i>tsa koro</i> , pork	Used in energy production. Support appetite and central nervous system.
Vitamin B2 (riboflavin)	Milk, eggs, <i>nama ea khoko</i> , fish, <i>likhobe</i>	Energy production, healthy skin
Vitamin B3 (niacin)	Milk, eggs, poultry, <i>likhobe</i>	Energy production, healthy skin
Vitamin B6	<i>Likhobe</i> , potatoes, green leafy vegetables, poultry, liver, fish, pears, watermelon.	Breaks down protein and fat, production of antibodies, red blood cells and nerve transmitters
Vitamin B12	Fish, liver, kidneys, sardines, yoghurt, egg, cheese, poultry	Formation of red and white blood cells, maintain nerve and digestive tissues.

Folic acid	Apples, peaches, apricots, <i>tenana</i> , <i>leshoabe</i> , <i>theepe</i> , spinach, tomatoes, potatoes	For healthy teeth, gums and bones, fights infection. Helps iron absorption, anti-oxidant.
Vitamin E	Sunflower oil, <i>likhobe</i> , beans, peas, lentils, cabbage, <i>tenane</i> , <i>leshoabe</i> , eggs.	Increase disease resistance, increase libido, prevents ageing, treats scar tissue, anti-oxidant.
Folate	Liver, beans, peas, vegetables, fish.	Builds new cells, especially red blood cells.
Calcium	Milk, <i>mafi</i> , yoghurt, spinach, cabbage, <i>sepaile</i> , beans, peas, lentils.	Build strong bones and teeth, normal muscle function, blood clotting and blood pressure.
Iodine	Fish, iodized salt, <i>meroho ea sesotho</i> <i>eg theepe</i> , <i>tenane</i> , <i>leshoabe</i> , <i>seruoe</i>	Development and proper function, important for normal growth and development.
Zinc	<i>Theepe</i> , <i>sepaile</i> , pumpkin, <i>likhobe</i> , pop corn, milk, liver, egg yolk, garlic, chicken, fish, meat, cheese.	Protects immune system, needed for digestive and immune system, enzymes, wound healing, vitamin A metabolism. Anti-oxidant.
Selenium	<i>Likhobe</i> , onion, garlic, egg yolk, milk, meat, fish	Prevents oxidation and breakdown of fat and other cells, anti-oxidant.
Magnesium	Beans, peas, lentils, <i>likhobe</i> , spinach, <i>sepaile</i> .	Muscle and nerve function, release of energy from fats, proteins and carbohydrates. For strong bones and teeth.
Iron	Meat, liver, eggs, fish, kidney, green vegetables, beans, peas, lentils, <i>mangangajare</i> .	Needed for oxygen exchange in blood, needed by enzymes. Vitamin C is important for the absorption of iron, energy production.

e) Lifestyle and Behaviour Change

Behaviour change should be encouraged to reduce risk of transmission to the child.

- Smoking, alcohol and drug use should be discouraged
- Unprotected sex during pregnancy and breastfeeding may be associated with an increased risk of HIV transmission to the baby. Women should be encouraged to use condoms.
- Women should be counselled on how to deal with stress and on a healthy lifestyle.

f) Medical Treatment

- HIV –positive women may have other sexually transmitted infections that will require treatment, including syphilis
- Urinary tract infection and respiratory infections are more common in HIV positive women and may require antibiotic therapy

- Vaginal candidiasis may be recurrent and should be treated with local antifungal compounds.

Prophylactic Treatment

Prophylaxis in HIV positive include:

- PCP prophylaxis: for women with CD4 counts below 200 per mm³, PCP prophylaxis should be considered (Co-trimoxazole DS 1 every three days)
- INH Prophylaxis if PPD (Purified Protein Derivative – Mantoux test) is reactive (induration 5mm) – 300mg/day for 1 year.

Treatment of HIV Related Illnesses and Opportunistic Infections

Tuberculosis is the most common opportunistic infection and should be treated as per TB treatment protocols in Lesotho.

CHAPTER 4 INTRAPARTUM CARE

MODIFICATION OF OBSTETRICAL PRACTICES DURING LABOUR AND DELIVERY

- Artificial Rupture of Membranes (ARM)
- Vaginal Cleansing
- Routine Episiotomy
- Use of the Partogram
- Isolation

3.2 SPECIFIC MANAGEMENT DURING LABOUR AND DELIVERY

- Mode of delivery
- Support during labour
- Induction of labour
- Indications for elective caesarean section
- Management of labour and delivery

3.3 MODIFICATION OF OBSTETRICAL PRACTICES DURING LABOUR AND DELIVERY

Some practices may increase the risk of HIV transmission to the baby while having little or no proven obstetric value. Routine management should be modified for all women whether known to be infected or not.

a) Artificial Rupture of Membranes (ARM)

No need for routine artificial rupture of membranes. ARM however can be performed for specific obstetrical indications eg fetal distress, abnormal progress of labour or if cervix is dilated at 7 cm or more .

b) Vaginal cleansing:

Vaginal cleansing with Hibitane (chlorhexidine 0.25%) solution or normal saline reduces the risk of puerperal and neonatal sepsis. It may also have some effect on HIV transmission, where membranes are ruptured for more than 4 hours. After every vaginal examination, the birth canal is wiped with gauze or cotton wool, soaked in Hibitane solution. The number of vaginal examinations should be kept to a minimum required.

c) Routine episiotomy

Routine episiotomy has been shown to have no benefit. The procedure should be used only for specific obstetric indications.

d) Use of the partogram:

Proper and consistent use of the partogram in the monitoring of the progress of labour will improve the management and reduce the risk of prolonged Labour in all women.

e) Isolation

Women with HIV should not be isolated or treated differently from other women in labour. Universal precautions should be used by health workers on all women in labour irrespective of their HIV status.

Table 4 summarises factors associated with MTCT during labour and delivery.

TABLE 4: FACTORS ASSOCIATED WITH INTRAPARTUM MTCT

Most (about 60%) transmission of HIV from mother to child is thought to occur around the time of labour and delivery. Several factors have associated with an increased risk of MTCT intrapartum.

These include:

Mode of delivery

Vaginal delivery has a higher risk of transmission than elective caesarean section delivery

*** Prolonged rupture of membranes**

Rupture of membranes for longer than 4 hours has been associated with an increased risk of transmission.

*** Episiotomy**

Episiotomy may increase the risk of MTCT

*** Intrapartum Haemorrhage**

Intrapartum Haemorrhage has been associated with increased transmission in some studies.

*** Invasive foetal monitoring procedures:**

Invasive procedure such as penetrating scalp electrodes and foetal blood sampling may be associated with increased foetal transmission risk.

*** Instrumental delivery – vacuum extraction, forceps**

*** Twin delivery:**

First twins have higher risk of transmission than second born twins

3.4 SPECIFIC MANAGEMENT OF HIV INFECTED PREGNANT WOMEN DURING LABOUR AND DELIVERY

a) Mode of delivery:

Elective caesarean section (CS) reduces the risk of transmission by 50% as compared to vaginal delivery but will not be available in many settings in developing countries. Where CS is performed (elective or emergency) in HIV positive women, they should receive prophylactic antibiotics. If CS is performed after prolonged labour or prolonged rupture of membranes longer courses of antibiotics should be considered.

b) Support during labour

Emotional support during labour is important for all women, and may be even more necessary for an HIV positive woman who is concerned about her condition and the risk of transmission to the child.

This may be made worse by her fear of stigmatisation and discrimination by medical staff, or because she has not disclosed her status to her partner or family members.

When ever possible, during labour, ward staff must be sensitive to the fears and concerns of the HIV positive mother about her infection, and how much she had told any of her companions.

c) Induction of labour

Labour is often induced by one or a combination of the following: Oil and enema, ARM, Oxytocin therapy, and prostaglandins. As prolonged rupture of membrane is associated with increased risk of transmission, this procedure may be dangerous in HIV positive women. Careful assessment of the need for, and the desirability of induction rather than CS is necessary. Where induction of labour is chosen, membranes should be left intact for as long as possible. Syntocinon should not be used with intact membranes.

d) Indications for elective C/S

Although elective CS will not be readily available in most health facilities in Lesotho as a routine for HIV positive women, there may be some cases that merit consideration for CS. This includes pregnancies where labour is expected to be prolonged or where other obstetric complications may be associated with increased risk of transmission (e.g. abruptio placenta, placenta praevia, pre-term rupture of membranes). Depending on the situation the above may apply to women with previous CS or breech presentation.

e) Management of labour and delivery

Delivery should be conducted using standard practice avoiding unnecessary trauma or prolongation of the second stage.

- * Perform vaginal cleansing with Hibitane (chlorhexidine 0.25%)
- * Avoid episiotomy unless absolutely necessary
- * If assisted delivery is required it should involve as little trauma as possible e.g. use of plastic cup vacuum extractor at low pressure. Episiotomy may not be required for all forceps deliveries or vacuum extraction.
- * Wipe baby's mouth and nostrils with gauze at delivery of head.
- * Clamp cord immediately after baby is delivered and avoid milking the cord.
- * Cut cord under cover of a lightly wrapped gauze swab to avoid blood spurting.

- * All babies, regardless of HIV status of mother should be handled with gloves until maternal blood and secretions are washed off.
- * Immediately after birth, baby should be washed with warm 0.24% chlorhexidine solution or wiped dry with a towel or surgical cloth to remove maternal body fluids.
- * There should be no suction of the newborn with a suction tube unless there is meconium stained liquor. Where suctioning is required, it is better to use a mechanical suction unit (at a pressure below 100 mmHg) or bulb suction, if possible, rather than mouth operated suction.
- * If the mother has decided not to breastfeed, place the baby on the mother's body for skin to skin contact.
- * Vitamin K should be administered, *ensuring injection safety*.
- * BCG should be given
- * Infant should receive 1% tetracycline eye ointment or 1% silver nitrate eye ointment as prophylaxis against ophthalmia neonatorum.
- * Avoid putting the baby to the mother's breast unless the decision to breastfeed was made before hand.

ROLE OF TRADITIONAL BIRTH ATTENDANTS (TBA'S)

- A large proportion of women in Lesotho are delivered outside the health systems by TBAs.
- TBAs need to be educated about risks of MTCT and ways of prevention
- They need to understand their own risk of infection and how to protect themselves
- They should be encouraged to refer known HIV infected women for care in health facilities
- TBAs can play a role in HIV education of the community and providing emotional support.

ANTIRETROVIRAL REGIMENS TO PREVENT MOTHER TO CHILD TRANSMISSION OF HIV

There are several antiretroviral regimens which are effective in reducing MTCT. At present single dose Nevirapine to mother and baby is the recommended regimen for Lesotho. All HIV positive women who give consent to take Nevirapine 200 mg tablet should be provided at ANC at 32 weeks gestation to take home.

1. Nevirapine Regimen

Standard Nevirapine Regimen

Give one tablet 200 mg of Nevirapine to mother at onset of labour.

Give baby syrup NVP 2 mg/kg (0.2mls /kg) within 48-72 hours or earlier if discharge before 48-72 hours.

Nevirapine for the mother

- Give mother one tablet (200 mg) of Nevirapine to take orally at onset of active labour
- To improve efficacy Nevirapine should be taken at least 2 hours before delivery
- **If vomits** within one hour, repeat dose of nevirapine
- **If false labour**, repeat dose when labour is established
- If after second dose, no active labour, refer to the medical officer.
- **Home delivery**: Instruct mother to take it when goes into labour or when membranes rupture. Advise to take baby to the clinic within 48-72 hours for baby dose
- **If no antenatal care**: provide VCT and if positive give Nevirapine
- **Elective caesarian section** : Give nevirapine at least 3 hours before surgery
- **Emergency caesarian section** : Nevirapine should have been administered during labour

Nevirapine for the baby – one dose

- give one dose at 48-72 hours (or at discharge if earlier)
- **if baby vomits < 1 hour**, repeat dose
- **if mother is discharged < 24 hours**, give baby dose at discharge even as early as 5-6 hours from birth

Nevirapine for the baby – two doses

- In early delivery where mum delivers less than two hours after taking Nevirapine, give baby immediately at birth and repeat 48-72 hours from birth or at discharge.
- If mother did not take Nevirapine during labour, give baby immediately at birth and repeat 48-72 hours from birth or at discharge

Dose of Nevirapine

- If weight 2 kg or less, give 2 mg per kg (same as 0.2 mls per kg)
- If wt > 2 kg, give 0.6 mg (or 0.6mls)

2 Regimen for Zidovudine Short Course

- Initiate oral ZDV 300 mg BD at 36 weeks gestation until labour
- In labour give oral ZDV 300 mg 3 hourly until delivery
- Give baby ZDV 4mg/kg orally BD for 4 weeks

3. Combination of Short Course Zidovudine and Nevirapine

Studies have shown that combination of Zidovudine and Nevirapine is more effective in reducing MTCT compared to either alone. Where resources are available Zidovudine short course (as above) should be combined with the Nevirapine regimen for both the mother and the baby.

Highly Active Antiretroviral Therapy (HAART)

If a woman is on HAART and she becomes pregnant, her drug combination should be continued. If Zidovudine is not in the combination, it should be added. The baby should receive ZDV 4mg /kg BD for 4 weeks.

CHAPTER 5 POST PARTUM CARE

- **This is the care provided to the mother and child immediately after delivery which includes ;**
- routine care
- examination of breasts
- examination of the uterus
- examination of the perineum/lochia
- encourage the women to pass urine
- good hygiene to prevent infection
- check for anaemia
- check for fever and raised pulse rate
- supportive care
- reduce infection to baby
- promote good hygiene
- perineal/pelvic floor muscle exercises

during this period both mother and child are assessed and monitored with regards to their health status.

5.0 For the mother, specific assessment on the following is required;

- a) Breasts
- b) Uterine involution
- c) Lochia
- d) Caesarian Section Scar
- e) Maternal follow-up

5.1 CONTRACEPTION

- a) Non-breastfeeding mothers
- b) Hormonal contraceptive
- c) Intra-uterine contraceptive device
- d) Barrier methods
- e) Spermicides
- f) Emergency contraception
- g) Surgical contraception
- h) Counselling

5.2 BABY CARE (for the first 24 hours)

- a) Breast-feeding options
- b) Feeding alternatives for babies of HIV infected mothers
- c) Infant follow-up

a) Breasts

1. A Woman who is not breastfeeding

Should wear a good supporting brassiere. Where milk secretion is excessive, ask the mother to express enough milk to comfortable level (not emptying breast). Give analgesics for pain. **Bromocriptine** should be used when available.

2. Breastfeeding

Cracked nipples, mastitis and breast abscess increase the risk of breast-milk transmission of HIV. Cracked nipples are often caused by poor attachment of the baby on the breast, candida infection, frequent washing of the nipples, and application of abrasive creams and lotions.

Prevention of cracked nipples includes:

- * Making sure that there is good breastfeeding technique with the baby latching on the areolar
- * Maternal vaginal thrush, and/ or infant oral thrush should be treated promptly. If the baby has oral thrush treats mother's nipples at the same time to avoid the reinfection.
- * Women should wash their breasts once a day and avoid use of creams and lotions on the nipples.

A mother should be shown how to put a finger on the angle of the baby's mouth to break the suck before removing the baby from the breasts without traumatizing her nipples. She should also be instructed to smear her nipples with breastmilk after feeds and air dries her breasts. Women should be encouraged to seek health care promptly if they have nipple discomfort when they are breastfeeding.

Baby should not be fed on a breast with mastitis or breast abscess. The mother should be advised to express the milk and boiled in very clean utensils specifically reserved for the child, before feeding the infant from cup and spoon .

- b) Uterine involution – check if uterus is residing or reducing in size.
- c) Lochia:

- * Emphasize on good perineal hygiene and proper handling of body fluids
- * Avoid contaminating the baby with body fluids or beddings soiled with lochia.
- * Bed sharing by mothers in hospital should be discouraged.
- * Sitz baths: In own homes where separate baths is possible; it should be avoided in hospital to prevent cross infection.

c) Caesarian Section

Only caesarean section before onset of labour prevents MTCT of HIV.

Broad-spectrum antibiotics should be used routinely after caesarean section. There is a higher prevalence of post-operative complications in HIV infected women. The decision to undertake caesarian section delivery to prevent MTCT should be balanced against the immediate and long term risks to the mother.

d) Maternal follow-up

- * Close monitoring for breast and pelvic infection
- * Education on prompt health seeking behaviour.
- * Health education on hygiene, lochia, breast care.
- * Advice against unprotected early penetrative sex after delivery. This may lead to endometritis.
- * HIV positive women should have a cervical smear.
- * For every sexual activity the couple should use condoms.

5.4 CONTRACEPTION

a) Non-Breastfeeding Mothers

HIV infected women should initiate a reliable contraceptive method by 2-4 weeks postpartum. All modern methods of contraception can be used by HIV seropositive women.

b) Hormonal Contraceptive

Drugs that induce hepatic micro-enzymes reduce the effectiveness of hormonal contraceptives. The drugs include antibiotics such as rifampicin, erythromycin, and anticonvulsants such as phenobarbitone.

A barrier method such as the condom should be used during these periods of reduced protection.

c) Intra-uterine Contraceptive Device

Intra—uterine contraceptive device is not contra-indicated in HIV positive women as long there are no other risk factors. However, in immuno-suppressed women an IUD may be associated with increased risk of infection.

d) Barrier Methods:

Female and Male condoms will provide protection against STDs and reduce the risk of HIV transmission. The HIV virus is constantly evolving into a more virulent form. The rate of the evolution varies from person to person. HIV infected couples should be encouraged to use condoms to protect them against re-infection with additional HIV strains from their partners.

e) Spermicides:

Used in conjunction with barrier methods will provide additional contraceptive protection.

f) Emergency Contraception

HIV positive women should be informed about emergency contraception, where it is available and should how to obtain it.

g) Surgical Contraception

Surgical contraception should be offered to HIV positive women and their partners.

h) Counselling : individual/family

Counselling should continue to support the HIV infected woman even in the postnatal period. There is need for involvement of responsible adults in the care of HIV positive adolescent mothers.

CHAPTER 6

CARE OF CHILDREN BORN TO HIV POSITIVE MOTHERS

1. CARE OF THE NEW BORN

a) **First 24 Hours:**

Routine Care When Not Resuscitating:-

- Avoid naso-pharyngeal suction unless there is meconium staining of liquor.
- Avoid breaking/bruising the baby's skin.
- Wipe baby dry with particular attention to the face. Wiping should be done carefully to avoid trauma to the skin. The pre-term infant's skin bruises more easily.

The umbilical cord requires good hygiene. The mother should be instructed on how to clean with methylated spirit.

BREAST FEEDING TRANSMISSION OF HIV

Four out of every 10 children born to an HIV infected woman acquire HIV infection; fifty percent of these infants acquire infection through milk. It is therefore critical that all mothers practice exclusive breastfeeding for six months or less and both mothers and health personnel should be trained in breastfeeding management and lactation.

BABY FRIENDLY HOSPITAL

The Government of Lesotho is committed to the baby Friendly Hospital Initiative that consists of Ten Steps to successful Breastfeeding and Government also adheres to all the articles of international code on Breast Milk Substitute (BMS).

INFANT FEEDING OPTIONS

Women should be counselled about the different possible infant feeding alternatives and mother's choice of feeding should be respected.

The standard in infant feeding is breast milk. Babies born to HIV Positive mothers should be exclusively breastfed for the first 6 or less months of life. There is evidence that mixed feeding increases the risk of HIV transmission through breast-milk. Health worker should avoid Putting the baby to the mother's breast unless the decision to breast feed was made.

For more information refer to the Lesotho Infant and Young Child Feeding guidelines in the context of HIV.

INFANT FEEDING OPTIONS

- Breast Milk Options
 - exclusive breast feeding with early cessation
 - expressed and heat- treated breast milk
- Replacement feeding
 - commercial infant formula
 - home-prepared formula

1. BREAST FED INFANTS

- Put the baby on the breast immediately after birth
- Exclusive breast feeding for up to 6 or less months followed by rapid cessation (3days –3weeks) of breast feeding.
- For working mothers exclusive breast feeding can be supported by expressed breast milk.
- Expressed and heat- treated breast milk
- For feeding beyond six months refer to Infant and young Feeding Guidelines in the context of HIV and AIDS.

2. THE INFANT WHO IS NOT BREAST FED

- Health workers should discuss with the mother of the risks associated with replacement feeding.
- Mothers should avoid mixed feeding
- Mothers should be made aware of stigma attached to not breast feeding.

We need to respect the mother's choice of feeding. Encourage couple decision- making. There is good evidence that the decisions made by the couple are better up-held. Mothers may choose

TABLE 6: Breast-milk Substitutes:

Suitable	Unsuitable
Whole animal milk (cow, goat, sheep). Soya based formula Specialized/Infant formula	Skimmed Milk - Fresh - Powdered - Liquid sweetened coffee/ tea creamers Flavoured milk drinks - Coconut milk - Juices - Water - Teas - Sugar drink - Cereals - Porridge

Replacement feeding should be acceptable, feasible, affordable, sustainable and safe. A baby receiving replacement feeding is already placed at a greater risk of illness by not breast feeding. It is critical that adequate amount of feeds are provided.

- Preparation of replacement feeds should be under stringent hygienic conditions
- Use cup and spoon
- The growth of babies should be carefully monitored.

FOLLOW UP OF INFANTS

- Routine immunization should be implemented as per the MOHSW guidelines.
- Give Vitamin A supplementation to the infant according to the MOHSW guidelines.

- HIV infected children will have frequent infections and need continuous follow up and care.
- Cotrimoxazole prophylaxis: Babies of HIV positive women should be given cotrimoxazole 120 mg (2.5 mls or ¼ of standard 480 mg tablet) once a day from 6 weeks until at least 6-12 months of age unless HIV is ruled out earlier. Thereafter continuation of cotrimoxazole should be guided by clinical symptoms. Dose at 6-12 months is 240 mg once daily and over one year 480 mg once daily.
- Health workers are encouraged to use the Integrated Management of Childhood Illnesses (IMCI) guidelines which have been shown to improve diagnosis and reduce morbidity and mortality.
- These infants should be followed up to 5 years with close growth monitoring according to MOHSW guidelines.

DETERMINING THE HIV STATUS OF THE BABY

Laboratory diagnosis

The HIV status of the baby can be determined by HIV antibody testing using either Eliza or rapid test kits or by HIV antigen test, PCR .

HIV antibody test

- A positive test before 12-15 months could be due to maternal transplacental antibodies. If test is positive, repeat at 18 months or 3 months after mother stops breast-feeding if breast feeding is beyond 15 months.

PCR

- The advantage of PCR is that diagnosis can be made as early as 6 weeks or earlier if not breast feeding.
- It is an expensive test and not easily available
- **Positive status:** PCR positive on two samples taken on different occasions, at any age.
- **Negative status** in non breast-feeding infants: PCR negative on two samples both taken after 3 months of age.

6.0 STANDARD PRECAUTIONS

All staff in maternity services should know how to deal with the exposure to blood and other body fluids, which is common in obstetric practice. Standard precautions should be used at all times and appropriate equipment should be supplied.

Important precautions in obstetrics include

1. Reducing needle stick injuries by handling used needles as little as possible, using a needle holder during episiotomy, avoiding recapping disposable needles and taking great care in recapping sampling barrel system needles or non disposable syringes, placing needles and other sharps in the appropriate containers.
2. Washing hands immediately after contact with blood or body fluids.
3. Wearing suitable gloves when handling exposure to blood or body fluids
4. Covering broken skin or open wounds with waterproof dressings.
5. Wearing an impermeable plastic apron for delivery.
6. Wearing an eye shield for operating or assisting at Caesarean Section, and for suturing episiotomies.
7. Wearing double gloves, if possible, for all operations, this reduces considerably the amount of blood carried though if the glove is punctured.
8. Decontaminate linen, beds and surfaces using freshly prepared 10% Sodium Hypochlorite or sterilize linen by autoclaving.
9. Cover all mattresses in labour room/theatre /wards/examination couches with Fresh mackintosh with every new patient lying on those surfaces
10. Avoid patient sharing of beds /equipment/linen at all costs.
11. Using long cuffed gloves for manual removal of a placenta.
12. Wherever possible, avoiding the need for suction of newborns and using mechanical or bulb suction when required.
13. Disposing of solid waste such as blood soaked dressings or placentas safely, according to the local procedures.

7.0 MANAGEMENT OF OCCUPATIONAL EXPOSURE

The use of antiretroviral drugs after occupational exposure to HIV can reduce the risk of transmission to the health worker by almost 80%. Therefore there is need to develop a national policy. Each Health Service Area should put in place mechanisms to protect health workers against occupational exposure. .

8.0 SPECIAL CONSIDERATIONS:

Successful implementation of prevention of MTCT programme will depend on the provision of voluntary counselling and testing for HIV infection in pregnancy and related services which in turn requires:

- Training and capacity building of professional
- Adequate Staffing
- Counselling on a full time basis
- Provision of antiretroviral drugs.
- Provision of Psychosocial Support services to families of HIV positive
- Recognise burn out in health workers and provide access to counselling services.
- Extra funding
- IEC materials.
- Constant monitoring and evaluation
- Effective referral, networking and outreach programmes

9. Monitoring Indicators

Monitoring indicators for PMTCT should be incorporated in the national data collection system.

A minimum set of indicators are :

- Number of antenatal women tested for HIV
- Number of women who are positive
- Number of mothers who received Nevirapine or any other ARV
- Number of female new-born babies who received Nevirapine or any other ARV
- Number of male new-born babies who received Nevirapine or any other ARV

10. IDENTIFICATION OF WOMEN WHO HAVE BEEN TESTED

Coding system – will consist of a set of colours that should be entered on page 13 of the Lesotho obstetric book. Nevirapine is recorded on the same page.

- **Blue** – signifies mother who has been tested, is negative and has been post test counselled (mothers tested early in pregnancy are advised to repeat test at 32 weeks)
- **Red** - tested positive and was post test counselled
- **Black** - Unknown Status (women who were not tested or women who were tested but did not collect their results)
- A tick is used to select appropriate colour

- A baby of HIV positive mother who has received Nevirapine is identified by writing NVP on baby's card (yellow Bukana).