Operational Guidelines for Lifelong ART for all Pregnant Women Living with HIV for Prevention of Parent-to-Child Transmission (PPTCT) of HIV in India

Training Module for Labour Room Nurses

Participant’s Handouts

DRAFT

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National AIDS control Organisation
Ministry of Health & Family Welfare
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<tr>
<td>3TC</td>
<td>Lamivudine</td>
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<td>AIDS</td>
<td>Acquired Immuno Deficiency Syndrome</td>
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<td>ANC</td>
<td>Antenatal Care</td>
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<td>ANM</td>
<td>Auxiliary Nurse Midwife</td>
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<td>ARSH</td>
<td>Adolescent Reproductive and Sexual Health</td>
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<td>ART</td>
<td>Anti-retroviral Treatment</td>
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<td>ASHA</td>
<td>Accredited Social Health Activist</td>
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<td>CPT</td>
<td>Co-trimoxazole prophylaxis</td>
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<td>DBS</td>
<td>Dried Blood Spot</td>
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<td>DLN</td>
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<td>HIV Exposed Infant</td>
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<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<td>ICF</td>
<td>Intensive TB Case Finding</td>
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<td>ICTC</td>
<td>Integrated Counselling and Testing Centre</td>
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<td>Indian Public Health Standards</td>
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<td>IUD</td>
<td>Intra Uterine Device</td>
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<td>MCH</td>
<td>Maternal and Child Health care</td>
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<td>NVP</td>
<td>Nevirapine Prophylaxis</td>
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<td>People Living with HIV and AIDS</td>
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<td>PPTCT</td>
<td>Prevention of Parent-to-Child Transmission</td>
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<td>RCH</td>
<td>Reproductive and Child Health</td>
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<td>RNTCP</td>
<td>Revised National Tuberculosis Control Programme</td>
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<td>RTI</td>
<td>Reproductive Tract Infection</td>
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<td>SACEP</td>
<td>State AIDS Clinical Expert Panel</td>
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<td>SD-NVP</td>
<td>Single dose Nevirapine</td>
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<td>STI</td>
<td>Sexually Transmitted Infection</td>
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<td>TB</td>
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<td>TDF</td>
<td>Tenofovir</td>
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<td>TRG</td>
<td>Technical Resource Group</td>
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<td>WBS</td>
<td>Whole Blood Specimens</td>
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Roles and responsibilities of nurses in labour room

The three main responsibilities of labour room nurses for preventing mother-to-child transmission of HIV are:

a. Counselling and screening for HIV infection for direct-in-labour cases
b. Implementing guidelines for preventing mother-to-child transmission of HIV during labour and postnatal period
c. Providing stigma and discrimination free services

A. Counselling and screening for HIV infection in labour room

Counselling and screening for HIV infection is necessary only for women who have not been tested for HIV infection during routine antenatal care and reach a health facility for delivery while in labour.

What is counselling? Counselling is a process of assisting a person to explore their situations and difficulties, identify solutions and act upon them within the limitations of their environment. It is not giving advice, nor is it expecting or encouraging the person being counselled (client) to act in a specific way.

Why counselling? Counselling in HIV testing is done to prevent psychological, social and physical consequences on people by educating about facts of HIV and AIDS, and clarifying their myths and misconceptions before the test and educating about living healthy life despite HIV infection after a positive test result.

The Aims of counselling are to give information on HIV and AIDS, risk of mother to child transmission of HIV and PPTCT services including HIV screening test and options for preventing transmission of HIV to the baby.

The steps in counselling and HIV screening in labour room include:

1. Creating a conducive environment for counselling by ensuring privacy, talking softly, addressing doubts and concerns related to labour and childbirth, sharing information on the progress of labour and giving assurance of quality services to ensure mother and baby are safe and healthy
2. **Assuring confidentiality** about result of HIV screening test and dialogue between healthcare provider and the woman

3. **History taking and pre-test counselling:** Special emphasis to be given on history of previous HIV test and ART drugs (including single dose-Nevirapine in earlier pregnancies, if any). Pre-test counselling should include details about HIV and AIDS, HIV screening and confirmatory tests and the right to take the test or not

4. **Taking informed consent** orally after ascertaining that the woman has understood facts of HIV screening and confirmatory tests and risk of HIV transmission to the baby

5. **Performing the screening test** for HIV using whole blood sample from a finger prick and following the recommended guidelines for doing the test

6. **Doing post-test counselling**, this is most important if HIV screening test result is reactive. After disclosing the test result, prophylaxis for her and the newborn should be discussed. Anxiety, fear or any other similar reaction to the reactive test result should be managed

Pregnant women whose HIV screening test is reactive should avail ICTC services on the next working day for counselling and confirmatory tests for HIV. ICTC counsellor and lab technician will visit the women in the labour room and do the HIV confirmatory test.

**B. Implementing Guidelines for Preventing Mother to Child Transmission of HIV**

**Pregnant women on ART:** If a woman in labour has been taking ART during pregnancy, you need to ascertain that she has carried her ART drugs with her. If not, you will need to explore options for getting her the drugs that she has been taking. Your responsibility will be to ensure that she continues to take the medicines as per her schedule during and after labour.

**Women with reactive HIV screening test:** For direct-in-labour cases with reactive HIV screening test, you need to start ART immediately after getting a prescription from the medical officer and give first dose of Nevirapine prophylaxis to the newborn after birth.

If the woman in labour **has never taken ART** or single dose drug Nevirapine to prevent transmission of HIV to the child in previous pregnancies (if any), the **recommended ART regimen** is Tenofovir (TDF) 300 mg + Lamivudine (3TC) 300 mg + Efavirenz (EFV) 600 mg. You can start this regimen only after getting written prescription from the Medical Officer.
Lopinavir (LPV) /Ritonavir(r) 200 mg/50 mg twice a day as two tablets.

**Referral to ICTC services:** Direct-in-labour cases with reactive HIV screening test should avail ICTC services for confirmation of HIV status. The ICTC counsellor and lab technician will need to visit the woman in the labour room or postnatal ward (depending on where she is).

The counsellor will assign a Patient Identification Number (PID) and do pre-test counselling before the laboratory technician collects blood sample for confirmatory tests. If the **confirmatory tests are negative**, the ART drug for the mother and ARV for the newborn are stopped. In case the **confirmatory test is positive**, both ART for mother and ARV for newborn are continued, and will be linked to ART center for continuation of treatment.

The counsellor will also **link the pregnant woman to the ART centre** for a CD4 test and continuation of ART. The mother will need to be educated about importance of compliance for preventing HIV transmission to the baby, and for her own health. She should also be educated about side effects of ART drugs, continuing the drugs despite the side effects that usually subside shortly and side effects for which she needs to consult with ART Medical Officer immediately.

**ARV Prophylaxis for newborns and infants:** ARV prophylaxis is required for all infants born to HIV positive mothers to further reduce the risk of HIV infection after birth. The additional protection is especially important if mother started ART late in pregnancy, she did not adhere to the ART regimen as recommended, and her viral load continues to be high.

ARV prophylaxis for infants whose mothers have received ART is, **Nevirapine (NVP) syrup once a day for six weeks** and should be given irrespective of whether the baby is exclusively breastfed or has received exclusive replacement feeding. The dose of NVP syrup depends on birth weight. Babies weighing less than 2 kg should receive 0.2 ml/kg/day. Babies weighing 2 to 2.5 kg should receive 1 ml/day and those with birth weight more than 2.5 kg should receive 1.5 ml/day.

**In case the mother had not taken ART regularly for at least 24 weeks before delivery, (or mother is not initiated on ART in the first trimester) and if she is breastfeeding the baby, NVP syrup should be continued for the baby for another six weeks.**

**Labour and delivery of HIV positive pregnant women:** As labour room nurse, you will need to record the woman’s HIV status in the maternity register as per PPTCT guidelines, document details of the ART drugs taken during pregnancy (if any), give the same ART
drugs that a pregnant woman on life-long ART has been taking during labour and delivery as per her usual schedule (dose and time) and start ART for women who were screened for HIV during labour. You will also need to counsel the woman on benefits of exclusive breastfeeding if she has not yet decided on exclusive breastfeeding.

If caesarean section is required due to obstetric indications, ART (TDF+3TC+EFV) should be given prior to the operation for HIV positive women who come direct-in-labour. Regular ART regimen should be continued for women on lifelong ART.

Safer delivery techniques: The risk of mother-to-child transmission of HIV increases due to prolonged rupture of membranes, repeated per vaginal examinations, assisted instrumental delivery (such as vacuum or forceps), invasive foetal monitoring procedures (such as scalp or foetal blood monitoring), episiotomy, and prematurity.

The risk of HIV transmission during delivery can be reduced by observing the following:

- Practicing standard (universal) precautions recommended for delivery
- Minimising vaginal examination, and using aseptic techniques during vaginal examination
- Not rupturing membranes artificially unless there is foetal distress or delay in progress of labour
- Avoiding invasive procedures such as foetal blood sampling, foetal scalp electrodes
- Avoiding instrumental delivery as far as possible unless there is foetal distress or there is a need to shorten the duration of labour. If instrumental delivery is indicated, low-cavity outlet forceps is preferable to ventouse
- Avoiding routine episiotomy, as far as possible
- Avoiding suctioning the newborn with nasogastric tube unless there is meconium staining in the liquor

Care during the post-partum period: Newborn care for HIV exposed infants is the same as for all other newborns. In addition, they require NVP syrup immediately after birth and no later than six hours. Breastfeeding should be initiated within one hour of birth.

The mother should be trained to administer NVP prophylaxis to the infant using a syringe and to wash the equipment with clean boiled water after every use.

During the postpartum period, the HIV positive mother should receive counselling and education on ART, Early infant diagnosis (EID), care and support services available and guidance for living healthy with HIV infection. The husband/partner should also be tested during this period if he is available and the woman is willing to disclose the status
to her husband. If she is willing, the husband and the family members should also be counselled and education on HIV related services for mother and baby.

C. Providing stigma and discrimination free services

Stigma and discrimination of people living with HIV and AIDS (PLHIV) has grave adverse impacts on an individual, the affected family and the community at large. Impacts that have direct influence on HIV epidemic are reduced HIV testing in the community, unwillingness to disclose HIV status and thereby adopt safer behaviours and unwillingness to accept HIV related services.

Healthcare providers can play an important role in helping HIV positive people live a healthy and longer life if they provide the same quality of care of services that they provide to HIV negative people, demonstrate empathy and respect and helping HIV positive people overcome their fears, anxiety and hopelessness about living with HIV. You, as labour room nurse, can help reduce stigma and discrimination by being a role model in quality care, providing information on care and support services, giving examples of HIV positive role models and encouraging participation of husband/partner and family.

Management of occupational exposure

An exposure is defined as an injury to skin (such as needle-stick injury), contact of potentially infectious body fluids with mucous membrane and non-intact skin or prolonged contact with intact skin. Potentially infectious body fluids include among others, blood, semen, vaginal secretions, cerebrospinal fluid, amniotic fluid, and other body fluids contaminated with visible blood.

First aid for skin that is broken due to needle-stick injury or sharp instrument includes washing the wound and surrounding skin immediately with soap and water. The don'ts include not scrubbing the area, not squeezing the injury area and not using antiseptics. First aid for exposure to the eye includes irrigating the eye immediately with water or normal saline and first aid for exposure to the mouth includes spitting the fluid out immediately and rinsing the mouth using water and saline and spitting it several times.

You need to report to the Medical Officer response for post-exposure prophylaxis (PEP) immediately after exposure. A decision on starting PEP is taken based on assessment of nature of exposure and risk of transmission, HIV status of the source of exposure and the exposed individual. After counselling, a baseline HIV test is done to rule out pre-existing HIV infection.
Depending on the severity of exposure and HIV status of the source of exposure, a two or three drug ART is recommended for 28 days. It is desirable to start PEP within two hours of exposure but can also be taken within 72 days.

Follow-up including repeat HIV test and counselling is an important part of management of occupational exposure. Special leave can be taken while a healthcare provider is on PEP.
Section 1
Role of Labour Room Nurses in PPTCT Programme
Estimates in India during 2011 indicated that 27 people out of every 10,000 are living with HIV, which is about one-third less than the estimates made ten years earlier. The decrease in number of people living with HIV is because new HIV infections among adults are estimated to have reduced by about 57%. However, new infections among babies are estimated to have come down by only 35% during the same period\(^1\). This indicates that transmission of HIV from infected mothers to their babies is continuing to be high. It is estimated that each year, there are about 14,000 new infections among infants. Mother-to-child transmission is the main route of transmission of HIV to children. This transmission can occur during pregnancy, delivery and breast-feeding. The risk of HIV transmission from mother to child can be as high as 20-45% if no preventive measures are taken. Estimates from various parts of the world have indicated that starting anti-retroviral treatment (ART) for pregnant women early in pregnancy and giving anti-retroviral prophylaxis (ARV) to the newborn can reduce the risk of HIV transmission from mother to child to less than 5%.

The Government of India is committed to work towards achieving the global target of eliminating new HIV infections among children by 2015. In 2002, the National AIDS Control Programme (NACP) had started a programme called Prevention of Parent to Child Transmission of HIV (PPTCT) through which HIV testing services were offered to all pregnant women getting antenatal care (ANC). If the woman was found HIV positive, she was given a single dose of Nevirapine (SD-NVP) tablet at the time of delivery and the newborn was given single dose of Nevirapine syrup. These services were scaled up all over the country during 2007-2012. The programme was implemented successfully in states and districts with high prevalence of HIV but its reach in other parts of the country was limited. During this time, the guidelines from World Health Organisation (WHO) were changed based on evidence on mother to child transmission of HIV from around the world. Based on these recommendations, a multi-drug PPTCT regimen was started in Andhra Pradesh, Karnataka and Tamil Nadu. The WHO guidelines were further modified in June 2013, based on which the National Technical Resource Group (TRG) recommended lifelong three-drug ART regimen to all pregnant women, and to give Nevirapine prophylaxis (NVP) from birth to at least 6 weeks to HIV exposed infants (HEI), the term used for babies born to HIV positive mothers (Box 1). The National AIDS Control Organisation (NACO) has accepted the

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\(^1\) National Strategic Plan: Multi-drug ARV for Prevention of Parent to Child Transmission of HIV (PPTCT) under National AIDS Control Programme in India, Updated December 2013
recommendation of TRG and plans to quickly scale up the PPTCT services across the country and replace the currently available SD-NVP prophylaxis with newer regimen.

**Box 1: National Technical Resource Group (TRG) recommendation on PPTCT**

a. All positive pregnant women including those presenting in labour and breast feeding women with HIV should be initiated on a triple ART irrespective of CD4 and clinical stage for preventing Mother-to-Child Transmission risk and should continue lifelong ART.

b. The duration of NVP to infant be minimum 6 weeks but more if ART to mother was started in late pregnancy, during or after delivery and has not been on adequate period of ART as to be effective to achieve optimal viral suppression (which is at least 24 weeks), then the infant NVP should be increased to 12 weeks. This recommendation on extended NVP duration applies to infants of breast feeding women only and not those on exclusive replacement feeding

The first step towards HIV prevention among newborns and infants is identifying HIV infection in pregnant women and then ensuring that positive women access preventive services. This is why the government health services have made HIV counselling and testing services an integral and essential part of antenatal care. This will allow women to get the services close to their homes or a nearby facility that they can easily reach. The government, through its National Health Mission, is strengthening antenatal care to ensure that pregnant women register for antenatal care as early as possible, and access all ANC services.

The current guidelines describe steps in management of HIV infection in pregnant and lactating women for prevention of mother to child transmission in five situations: (a) positive women on ART become pregnant, (b) positive women registered for pre- ART become pregnant, (c) HIV infection detected during pregnancy, (d) HIV infection detected during labour and (e) HIV infection detected during postnatal period (Figure 1).

Even though efforts are made to register all pregnant women in the early stage of pregnancy and motivate them to access antenatal care, many women go to a health facility only at the time of the delivery. Labour room nurses therefore play an important role in HIV screening of unregistered pregnant women who come directly-in-labour. This manual is meant as a learning document for labour room nurses who receive training on their roles and responsibilities for prevention of mother-to-child HIV transmission.
Figure 1: Management of HIV infection during pregnancy

1. **HIV detected during routine ANC**
   - Ensure immediate linkage to ART Centre
   - Initiate ART irrespective of CD4 count
   - Ensure institutional delivery and follow-up

2. **HIV positive pregnant women registered for Pre-ART care**
   - Collect blood for CD4 count
   - Initiate ART irrespective of CD4 count
   - Ensure institutional delivery and follow-up

3. **HIV positive pregnant women on ART**
   - Check CD4 as per guidelines
   - Continue current ART regimen. Change, if necessary
   - Ensure institutional delivery and follow-up

4. **HIV infection detected in women who come directly-in-labour**
   - Initiate ART irrespective of CD4 count based on Medical officers prescription
   - Do confirmatory HIV test. Collect blood for CD4
   - Ensure linkage to ART centre immediately in post partum period

5. **HIV infection detected post-partum**
   - Collect blood for CD4 count
   - Ensure immediate linkage to ART Centre
   - Initiate ART irrespective of CD4 count if woman is breastfeeding

**Role of Labour room nurses**

**Linkage to ART Centre**

**Initialize ART**

**CD4 count**

**Delivery services**
1.1 Roles and responsibilities of nurses in labour room

As a labour room or ward nurse, you have three main responsibilities for preventing mother-to-child transmission of HIV:

1. Counselling and screening for HIV infection for direct-in-labour cases. Tasks include:

   a. Pre-screening counselling, which includes history taking, providing information on HIV and AIDS and taking informed consent for HIV screening
   b. Conducting HIV screening using whole blood finger prick test
   c. Providing post-screening counselling
   d. Maintaining confidentiality

2. Implementing guidelines for preventing mother-to-child transmission of HIV during labour and postnatal period. Tasks include:

   a. Initiating first line of ART regimen for direct-in-labour cases with reactive HIV screening test
   b. Ensure HIV positive pregnant women already on ART continue to take ART as per their schedule during labour
   c. Practicing safer delivery techniques recommended for HIV positive women
   d. Initiating ARV prophylaxis for the newborn
   e. Making sure women with reactive HIV screening test obtains Integrated Counselling and Testing Centre (ICTC) services for confirmation of HIV infection on the next working day, where a counsellor and lab technician visits women in the labour room and does HIV confirmation test
   f. Motivating the mother to opt for exclusive breastfeeding for six months and initiating early breastfeeding (within an post delivery). Despite motivation, if the mother refuses to breastfeed, training her for safe replacement feeding
   g. Educating the mother and the family to access HIV related treatment, and care and support services with special emphasis on ART, EID (early infant diagnosis) and CPT (co-trimoxazole prophylaxis)

3. Providing stigma and discrimination free services by:

   a. Providing the same quality care of services that you provide to HIV negative women
   b. Demonstrating empathy and respect
   c. By helping HIV positive women overcome their fears, anxiety and hopelessness about living with HIV
d. Committing to the HIV positive mother that the hospital staff will provide total support during her stay in the health facility, and if necessary, for referral in future.

In addition to the above three core responsibilities, you also need to document details about HIV screening and referrals, and practice recommended guidelines for infection control, which are the same as those for HIV negative women.

The following chapters give detailed technical information related to the three core responsibilities, outcomes and impact of stigma and discrimination in health facilities and management of accidental exposure to potentially infectious fluids. Additional information on basic facts of HIV and AIDS, and the PPTCT programme are included in Section 2 of this manual.
Counselling and screening for HIV infection in labour room

Information provided in this chapter is relevant only for counselling and HIV screening for direct-in-labour cases who do not know their HIV status.

In this chapter you will learn about:

a. Steps in pre-and post-test counselling of direct-in-labour women who do not know their HIV status
b. Technical information on HIV and AIDS that needs to be included in pre- and post-test counselling
c. Process of doing an HIV screening test, and
d. Information related to managing anxiety, denial and other similar reactions to a reactive HIV screening test

The knowledge, skills and attitude that you require for discharging your responsibility of counselling and doing HIV screening test for direct-in-labour cases are described in Box 2 on page 15. It is recommended that you refer to this Box at periodic intervals for self-assessment of your competency in counselling and screening for HIV infection.

2.1 What is counselling?

Counselling is a process of assisting a person to explore their situations and difficulties, identify solutions and act upon them within the limitations of their environment. The situations and problems can be personal, social and psychological. Counselling can also be done with couples, families and small groups of people with similar issues or circumstances.

Counselling is not giving advice. It is also not expecting or encouraging the person being counselled (client) to act in a way a counsellor may have behaved or would like to behave in similar situation. And, it is definitely NOT judging the client or his/her situation or attempting to “solve” his/her problems or difficulties.
Box 2: Knowledge, skills and attitudes of labour room nurses required for counselling and HIV screening in women in labour

Knowledge:

a. Facts about HIV infection including detailed knowledge about mother to child transmission, natural progression of HIV infection in adults and children, guidelines for testing, difference between HIV and AIDS, and current treatment guidelines for positive pregnant and lactating mothers, and children
b. Details of PPTCT programme including its services, especially during labour and postpartum stage
c. Steps in counselling pregnant women in labour for HIV screening test
d. Social and ethical issues related to HIV screening, especially in pregnant women
e. Dos and don’ts of counselling pregnant women regarding HIV screening test
f. Process of doing the screening test for HIV
g. Interpretation of screening test result – both reactive and non-reactive

Skills:

a. Creating a conducive environment for counselling pregnant woman in labour room
b. Following guidelines for counselling direct-in-labour cases for HIV screening test
c. Clarifying pregnant women’s doubts and misconception related to HIV and AIDS, and the screening test
d. Conducting whole blood finger prick test for HIV screening and interpreting its result
e. Explaining the result of the HIV screening test to the pregnant women
f. Managing adverse emotional reactions to a positive result of HIV screening test such as anxiety, fear of stigma and discrimination, fear of strained personal relationships, fear of death, and subsequent future of the child, etc.

Attitudes:

a. I need to help pregnant women take well-thought out decisions regarding screening for HIV in order to prevent HIV infection in the newborns
b. By demonstrating an empathetic and non-judgemental behaviour during counselling and screening for HIV, I help positive pregnant women become stronger and more competent in taking steps to prevent HIV infection in their babies
c. The pregnant woman is the best person to disclose her HIV status to others, and at a time she feels is best for her and her baby
2.2 Importance of counselling in HIV testing

HIV infection is a lifelong illness. It adversely affects the quality of life and total lifespan of a person. It is also associated with stigma and discrimination in the family, community, workplace and health facilities. This is why a positive HIV test result can have several psychological, social and physical consequences on people. The two effective ways to reduce such adverse effects of knowing one’s HIV status are:

a. Educating about facts of HIV and AIDS, and clarifying their myths and misconceptions before the test, and
b. Educating about living healthy life despite HIV infection after a positive test result. Educating women about how their life can be almost normal, how life expectancy can be prolonged by giving options for healthier lifestyle and options for preventing HIV infection in the baby and raising a healthier child

The National Policy of the Government of India has made counselling both before and after HIV test as mandatory. The Policy also requires that the counselling dialogue between a healthcare provider and the client, and the test result remain confidential. Counselling for HIV testing is meant to improve a client’s understanding of HIV and help the client take a decision on taking the test, adopt behaviours to prevent HIV transmission and seek relevant and timely treatment in case the client is diagnosed with HIV infection.

2.3 Aims of counselling for HIV screening in labour room

In the context of HIV and AIDS, counselling in a labour room means the dialogue that you have with a pregnant woman about HIV infection, the HIV screening test and its result. Such counselling has six main aims:

1. Educating the pregnant woman on HIV and AIDS, including clarifying her doubts and misconceptions
2. Helping the pregnant woman understand the possibilities of transmitting HIV to her baby if she has HIV infection
3. Helping the pregnant woman understand the importance of her decision about HIV screening test, its impact on her and her baby’s health; and supporting her to take the decision
4. Informing the pregnant woman about PPTCT services, with special emphasis on prevention of HIV transmission to her baby
5. Helping the pregnant woman understand the result of HIV screening test and to make concrete plans based on its result, when required, and
6. Extending her the emotional support, as required
Please remember that a woman in labour is more likely to be preoccupied with labour pains and childbirth. She may therefore not be as receptive to counselling as any other pregnant woman who is not in labour. It is desirable that you remain sensitive about her discomfort and anxiety about the process and outcome of childbirth while counselling. Counselling is more likely to be useful if you talk to her in between her contractions, especially if she is in first stage of labour.

2.4 Steps in counselling and HIV screening in labour room

There are six steps in counselling for HIV screening in labour room:

1. Creating a conducive environment for counselling
2. Assuring confidentiality
3. History taking and pre-test counselling
4. Taking informed consent
5. Performing the screening test for HIV
6. Doing post-test counselling

2.4.1 Creating a conducive environment for counselling

HIV counselling requires that the client’s interests and wellbeing are taken care of, irrespective of where the counselling takes place. Therefore, counselling in labour room should also focus on the pregnant woman’s comfort in receiving counselling. You can create a comfortable and conducive counselling environment in a labour room by:

a. Ensuring privacy: If a woman is in early stages of labour, try to counsel in a separate room or space that has privacy or any other place in the labour room where others are not likely to overhear your conversation. In case a woman is in active labour, you can create privacy by draping a curtain between her and other women in the labour room.

b. Talking softly: At all times, you need to talk softly so that others cannot hear your conversation, such as during history taking, clinical examination, discussing progress of labour, or counselling for HIV screening. You are likely to arouse suspicion in others’ mind if you talk softly only for counselling.

c. Addressing doubts and concerns related to labour and childbirth: Ask questions to the pregnant woman if she has any doubts or concerns about labour or childbirth. Clarify
her doubts and misconceptions, if any. Give her reassurance about the delivery process in case she is very anxious, especially if it is her first delivery.

d. Sharing information on the progress of labour: A woman going through labour pains is likely to believe that the urgency and need of the moment is for ensuring a quick, early and safe delivery. She may not understand why you think it is important to talk about HIV screening, especially if she does not know about it, or does not consider herself at risk of HIV infection. By telling her about the progress of labour and an estimated time of delivery, there is a greater probability of her being able to focus on counselling.

e. Assuring her of quality care and services: People have varied expectations from health care providers. This is true even for pregnant women. Assure them that you and other staff in the labour room will provide her quality services to ensure that she and the baby are safe and healthy.

2.4.2 Assuring confidentiality

It is your responsibility to maintain confidentiality while offering counselling for HIV screening. This means that you will consider any information that the pregnant woman shares with you as private and will not disclose it to anyone else without her consent. Confidentiality is also for the test result, irrespective of whether it is reactive or non-reactive.

Assuring the pregnant woman of confidentiality will help build and maintain trust and make her more accepting of the messages that you will give her. You need to assure confidentiality by assuring her of the following four:

a. You will not share her personal information with anyone else
b. You will not disclose the test result to her family and friends
c. If you think that sharing the test result with others in the hospital is necessary in order to ensure appropriate medical care, you will first take her permission before sharing
d. Any hospital staff who is not involved directly in providing her medical services will not have access to her medical records.

2.4.3 History taking and pre-test counselling

History taking is important in every interaction between health service provider and a patient/client. Three important issues to be discussed during history taking are:

a. Previous HIV test and ART drugs: Ask the woman if she has ever been tested for HIV infection. If yes, when was she tested and what was the result? Find out if she has ever
taken ART earlier. If yes, when, for how long, and what drugs did she take? What were the reasons for discontinuing ART drugs? In case this is not her first delivery and she is HIV positive, ask her if she has taken single-dose Nevirapine (SD-NVP) to prevent mother to child transmission in earlier pregnancy

b. **Symptoms suggestive of STIs**: Ask if she and/or her husband/partner ever been treated for infections of the genital organs? If yes, when was the treatment taken? Inquire about the type of and the treatment taken. Special emphasis in history taking should be given to genital ulcers and abnormal genital discharge

c. **High risk behaviours**: Ask the woman about the nature of her husband’s work. Does he live away from the family for extended periods of time? Ask also if either of them ever used injecting drugs. Practice of injecting drugs is more common only in some groups of people. Some women may be offended if you were to ask her directly if she has ever used drugs. It is therefore desirable that you find out about drug use history in woman or her husband/partner sensitively

History of previous HIV tests and ART should be informed to the Medical Officer so that appropriate ART drugs can be given to reduce risk of vertical transmission. Previous history of STIs and/or high risk behaviour indicates the need for testing the woman again after three months (to rule out infection in window period).

Pre-test counselling is given to ensure that pregnant women know at least the following **five** aspects of HIV and AIDS and its screening test:

a. What is HIV infection, the risk of its transmission to the baby, and services available to prevent such transmission
b. A woman can take steps to protect her baby from HIV infection only if she knows her HIV status
c. There is a rapid screening test for HIV that will give the result in 20 to 30 minutes. It is a screening test, and not confirmation of HIV infection. Confirmation of HIV infection is done through additional tests by ICTC in case of reactive HIV screening test. A decision to take steps to prevent HIV infection in the newborn is taken on the basis of the screening test result
d. You, as the labour room nurse, will clarify all their doubts about HIV infection, and
e. They have an option of refusing the test. However, by refusing, they take the risk of transmitting the infection to their babies, if they have HIV infection

Detailed below is the ideal information to be shared during pre-test counselling. In case the woman is in advanced labour, you can give her the minimum information related to preventing mother to child transmission of HIV.
Basic facts of HIV and AIDS:
- HIV is a virus that can affect anyone
- Babies born to mothers who have HIV infection can acquire the infection from the mother during pregnancy, delivery and breastfeeding
- HIV gradually destroys a person’s immunity, which is the ability to fight diseases
- Window period is the duration between HIV infection and its first detection through HIV antibody tests. Its normal duration is about 3 months but can rarely extend to 6 months. During window period, the HIV test will be negative. The risk of transmission of HIV to the baby or anyone else is very high during window period as the number of HIV viruses in the blood stream is very high
- AIDS is an advanced stage of HIV infection where a person’s immunity is completely destroyed and therefore a wide range of diseases (opportunistic infections - OIs) affect the body
- HIV infection does not have any symptoms for up to 8 to 10 years. During this time, it continues to destroy the immunity. It can also be transmitted to other people through four main routes: sexual transmission, needles and syringes, blood transfusion and from mother to child
- Adults can acquire HIV infection by engaging in unprotected sexual intercourse, sharing needles and syringes for intravenous use and receiving blood transfusion without the blood being tested for HIV infection

Prevention of mother to child transmission:
- Medicines are available to reduce the risk of HIV transmission from mother to child
- A pregnant woman who takes anti-retroviral therapy (ART) every day during the pregnancy and breastfeeding can help prevent HIV transmission to her baby
- The baby can be further protected by giving daily Nevirapine (NVP) syrup for at least six weeks
- Even if a pregnant woman has not taken ART during pregnancy, she can reduce the risk of transmission of HIV to her baby by taking ART before the delivery and continuing thereafter
- A woman who is taking ART protects her baby from risk of HIV infection through breastfeeding. She thereby allows the baby to benefit from mother’s milk. Top feeding is not as beneficial to the baby as mother’s milk is
- ART needs to be taken for life. They help a woman control her HIV infection, and postpones progression of HIV infection to AIDS

Testing for HIV infection:
- The test that will be performed in the labour room is only for screening purposes
- The result of the screening test is available within 20 to 30 minutes
- Blood for screening for HIV is taken from a single needle prick on the middle or ring finger. There may be slight pain during the needle prick
Steps are taken to prevent HIV transmission to the baby if the screening test is reactive.

If the screening test is reactive, the pregnant woman is referred to the ICTC for further counselling and confirmatory tests on the first working day after delivery. Counselling and collection of blood sample for HIV confirmatory tests will be done in the labour room/postnatal ward by the ICTC Counsellor and lab technician respectively.

ICTC will also maintain confidentiality of the HIV test result.

The baby born to HIV positive woman is first tested for HIV at six weeks. Tests are repeated at fixed intervals till the age of 18 months, when HIV status is confirmed.

HIV test for the spouse:

- In case a woman tests positive for HIV, she is advised to get her husband/partner for HIV testing.
- The husband/partner is tested for HIV after counselling and taking informed consent.
- It is possible that only one of the couple has HIV infection. This is because it is not necessary that HIV transmits to the spouse as soon as a person gets infected. Several factors influence HIV transmission between couple engaging in sexual intercourse.

Treatment, care and support for the positive pregnant woman, baby, spouse and the family:

- In case a woman tests positive of HIV, she and her husband (if he also has HIV infection) will be referred to the ART centre by the ICTC Counsellor.
- The ICTC Counsellor will be available to counsel positive women, their spouses, and their families as and when required.
- Some NGOs and District Level Networks (DLN) of positive people also provide emotional, social and psychological support to people who have HIV infection and their families.
- The counsellor at the ICTC will refer the positive people to such care and support services.

In cases where direct-in-labour cases are in advanced stages of labour, you can limit pre-test counselling to (a) ascertaining that she has heard of HIV and AIDS, (b) explaining that risk of HIV transmission to the baby, (c) ways of preventing transmission to the baby, (d) HIV screening test, and (e) right to refuse the test, and likely consequences of refusing the test.

2.4.4 Taking informed consent

Informed consent is the process during which a pregnant woman receives clear and accurate information about HIV and its testing process and takes a decision on whether or
not to take the test on her own, without any force or compulsion from the service provider. By taking informed consent, you ensure that the woman has understood the purpose of the screening test and its benefits. You can assess if the pregnant woman has understood the messages on HIV that you have given her by asking questions such as:

- What is the purpose of screening for HIV infection during labour?
- What does the screening test indicate?
- What steps can be taken to prevent HIV transmission from mother to baby?
- How long will the screening test result take?
- How is HIV transmitted from mother to baby?
- How does HIV infection affect the body?
- How is HIV infection confirmed?

Once you are convinced that the pregnant woman has understood the information on HIV infection, and the screening test, you can take an oral consent by asking her if she is willing to get tested or not? If yes, is she willing to get tested immediately?

2.4.5 Perform the screening test for HIV

You will do HIV screening test by using a rapid HIV detection test kit. It includes all the reagents and does not need any specialised equipment. You will get the test result within 20 to 30 minutes, which you will interpret visually. Instructions on the test kit will inform you the actual time needed for you to interpret the results. Screening test for HIV is done in four steps:

1. Preparing for the screening test
2. Collecting whole blood sample from a finger prick
3. Performing the screening test, and
4. Interpreting the result

1. Preparing for the screening test:

There are four steps for preparing for the screening test:

a. Bring the test kit to room temperature
b. Lay out the test strips on a white paper towel on a clean surface
c. Take the test device out of the protective wrapper, and
d. Label the device with the name and other details of the pregnant woman to be tested

2. Collecting the whole blood sample from a finger prick:
You need to wear gloves and use only sterilised or disposable lancets or needles for collecting the blood sample. The nine steps for collecting the blood sample are as follows:

1. Make the pregnant woman to sit comfortably and lower the arm from which the sample is to be taken. Ensure that the fingers are lower than the elbow of the same arm.
2. Choose the fingertips of the middle or ring finger.

✓ Recommended sites of finger puncture

Selecting the site to be pricked

3. Clean fingertip with alcohol. Work from the middle out to reduce contamination. Allow the area to air dry. Do not touch the area.
Clean the fingertip with alcohol. Work from the middle out to reduce contamination. Allow the area to dry.

4. Gently squeeze and release the area to be pricked until it is red.

5. Position the hand palm side up. Place the lancet or needle away from centre on the fingertip. Firmly press the lancet or needle against the skin and puncture the skin. Dispose of the lancet or needle in a safe way into the sharps discard jar recommended in your health facility.

Prick the finger as shown

6. Wipe away the first drop of blood with a sterile gauze pad and then discard it as per waste disposal guidelines.

7. Hold the finger lower than the elbow, apply gentle intermittent pressure to the base of the punctured finger a few times.

8. Draw up the required amount of whole blood specimen from the fingertip using the disposable pipettes supplied with the kit. Do not use any other pipette and do not reuse the pipette.

9. Once the required amount of specimen has been collected, apply pressure gently at the puncture site with gauze to ensure that there is no further bleeding from the site. You can also ask the woman to continue pressing with the gauze until the bleeding stops.
It is important to correctly follow the steps for drawing blood because painful or repeated attempts can cause discomfort and result in collection of sample that is not of proper quality or quantity. It can also reduce the pregnant woman’s confidence in your skills.

Don’ts of Finger Puncture

- Do not puncture the side or the tip of the finger
- Do not puncture parallel to the grooves of the fingerprint
- Do not puncture the index finger
- Do not puncture the little finger
- Do not puncture the fingers of child less than 12 months (Any blood sample from babies less than 12 months or weighing less than 10 kg is collected through a heel prick)

3. Performing the screening test

Ensure you have the following eight materials before you start the process of performing the HIV screening test:

1. Test kit in cold chain that has not expired
2. Alcohol swabs
3. Pair of gloves
4. Soap to wash hands
5. Puncture proof discarding bottle or screw capped jar to discard used lancets, used alcohol swabs, gauze pad and pipettes
6. Lancet
7. Biohazard bags
8. First aid kit

There are six steps for performing the screening test after you have collected the required amount of whole blood from the fingertip:

1. Hold the pipette vertically over the sample pad and add the amount of specimen recommended in the test kit carefully. Allow the specimen to be fully absorbed. Take care to ensure that no air bubbles enter the sample port
2. Discard the pipette into a discard jar after dropping the required amount of specimen on the rapid card
3. Complete the next steps of adding any more reagents (if required) as described in the kit insert of the rapid card
4. Set timer for the time as indicated in the kit insert. Allow the specified time for the reaction to occur.

5. Read the test results immediately after the time specified in the kit insert.

6. If a dot or band appears, record test result as reactive. If no dot or band is observed, record result as non-reactive.

4. Interpreting the test result

There can be only three possible outcomes of the HIV screening tests through rapid antibody card test:

a. **Reactive or Positive:** In this case, there will be band in both the test area and the control area.

b. **Non-reactive or Negative:** In this case there will be no band in the test area and a band will be seen in control area.

c. **Invalid:** In this case there will be no band in the control area. A band may be present in the test area but the test is considered invalid as there is no band in the control area.

In case of an invalid test result, you need to repeat the test with a new card. Suppose the test result is invalid again and again, you can assume that there is a problem with either the procedure or the test kit. Please inform your supervisor and seek help to take corrective measures. Some illustrative examples of HIV screening test kits with results are shown below:

Reactive  
2 lines of any intensity appear in both the control and patient areas.

Non-reactive  
1 line appears in the control area and no line seen in the patient area.

**Figure 2: Reactive and non-reactive test results – Example 1**
In case of HIV 1 and HIV 2 co-infection, three dots in the test pad would be visible.

Dos and don’ts of rapid HIV screening test

*Do’s*
- Do store kit in refrigerator or cool packs at all times at temperature between 2 – 8 degrees Centigrade
- Do follow package insert instructions
- Do consider any results potentially positive until confirmatory tests have done
- Do use a new disposable pipette and device for each specimen tested
- Do use supplied pipette to drop the blood from the finger stick onto the device
- Do use control specimen at least once before taking the kit from ICTC centre
- Do run the test immediately after removing the test cassette from foil pouch
- Do bring all reagents to room temperature before testing
- Do perform the test at room temperature
- Do follow the instructions while interpreting the test results. The reading may show positive result if the sample is checked or read after 30 minutes

After reading, confirming and recording the test result, discard the used material including the used HIV test card into the discard jar.

Please remember that the whole blood from finger stick must be used immediately after collection.
**Don’ts**
- Don’t use the kit or any kit components after the expiry date
- Don’t freeze the kit
- Don’t use the same disposable pipette and device for multiple samples
- Don’t pipette by mouth
- Don’t use any device if the pouches have been perforated
- Don’t mix reagents from different kits
- Don’t drop blood droplets directly from fingertip onto device of the kit insert. A disposable pipette must be used to transfer the specimen from the fingertip to the specimen pad on the rapid card device

2.4.6 Doing post-test counselling

You need to do post-test counselling for every woman who has taken the HIV screening test, irrespective of the test result. It should be done immediately as soon as you have the test result. Post-test counselling helps women to understand the test results and to take decisions for next steps, if required. The content of post-test counselling depends on whether the test result is reactive or non-reactive.

**Post-test counselling for non-reactive result:**
If the screening test is non-reactive, inform the pregnant woman that the test did not indicate that she has HIV infection. Clarify her doubts or provide additional information, if necessary.

**Post-test counselling for positive result:**
A positive HIV screening test means that the pregnant woman tested is likely to have HIV infection. It is essential that you are empathetic and supportive while counselling such women. You can play a very important role in helping such women understand and cope with the result. Different women can have different reactions to the positive result to the screening test and your support will depend on the nature of such reaction. However, it is important that at least the following is discussed during post-test counselling:

- **Assess if the woman is ready to receive the test result:** You can do this by asking her questions to assess if she has understood the facts about HIV infection, and options for preventing its transmission to the baby. Through your discussions about HIV infection, assess if she will be able to cope with a positive test. Clarify all her doubts, and give her reassurance of a healthy, long life through treatment, if necessary

- **Disclose the screening test result:** Inform the woman that the screening test is reactive, which means that she is likely to have HIV infection. Remind her that
confirmation of HIV infection will be done by ICTC after the childbirth and that you will coordinate the visit by ICTC Counsellor and Lab technician at her bedside.

- **Give time before discussing further actions:** Allow enough time for the woman to understand the test result and its consequences. Help her to manage her emotional response. Keep reminding her that she has options available to protect her child from HIV infection and also for her to live a long healthy life.

- **Discuss prophylaxis for her and the newborn:** Inform her that by taking the three-drug regimen immediately, she can reduce the risk of HIV transmission to the newborn during delivery. If HIV test is confirmed by additional tests, she needs to continue to take the medicines under the guidance of a doctor at the ART Centre. This is to prevent risk of HIV transmission to the baby during breastfeeding, and also to prevent progression of HIV infection to AIDS. Discuss also the Nevirapine prophylaxis for the baby by explaining that the syrup will be given to the baby immediately after birth and should be continued for at least six weeks. The doctors may take a decision to continue prophylaxis for another six weeks for greater protection to the baby.

- **Assure continued support:** Give an assurance that in addition to the ICTC counsellor, there are other organisations, such as NGOs (if any in the area) and DLN, who can give her support, if necessary, after her discharge. Having made the commitment, make sure that you remind her before shifting her to postnatal ward to take the referral details from the counsellor.

- **Avoid giving false reassurances:** Do not deviate from the facts and give false reassurances in an attempt to help the woman cope with the reactive test result. Emphasize that the test you performed is only a screening test and additional tests for confirmation will be done by the ICTC.

### 2.5 Managing anxiety

Many pregnant women may experience anxiety, fear, or other similar emotions after you disclose a positive screening test result. Their ability to cope will not just depend on what you tell them, but also on how you tell them.

Symptoms of anxiety include trembling, feeling uncertain, palpitations, tiredness, shortness of breath etc. You can help manage anxiety in the pregnant woman by:

- **Giving time to relax:** Being quiet for some time, while demonstrating empathy and support with your body language can help a woman relax.
- **Encouraging her to talk**: Gently ask the woman to explain the thoughts that are crossing her mind. Allow her to express her thoughts and emotions. Do not interrupt and maintain eye contact and body gestures to show that you are listening to her.

- **Countering negative thoughts and emotions with facts**: Remind the pregnant woman of facts that can alleviate negative thoughts. For example, if she fears an early death, remind her that there are many people who are living a healthy life for decades after detection of HIV infection. If she fears a poor quality of life, remind her that taking regular medicines and a healthy lifestyle can help maintain high immunity levels. She can live a life that she had wanted as long as she follows the guidelines for healthy living with HIV. Similarly, you can counter her fear of passing the infection to the baby by reminding her of prophylaxis for her and the baby.

- **Helping a woman overcome fear or denial**: A woman who is either afraid of living with HIV infection or is in denial needs to be told that accepting the infection is the first step towards preventing HIV infection in her baby through prophylaxis, and planning to live a healthy life. Give examples of people who have accepted their HIV infection with courage and are now leading healthy lives, taking care of their HIV negative children. Assure her that you can link her to organizations where she can meet other women who have faced similar situations.

### 2.6 Essential skills for effective HIV counselling

You can do effective HIV counselling by practicing the following five skills:

a. Active listening
b. Using supportive non-verbal communication
c. Asking open-ended questions
d. Showing empathy
e. Avoiding judgemental words

#### 2.6.1 Active listening

Active listening is an essential skill for counselling while you are responding to the pregnant woman’s verbal and non-verbal messages. It will encourage the woman to express her feelings, concerns and emotions openly. Once the pregnant woman feels that you have listened to her, she will be more motivated to listen to the messages you give her.

You can demonstrate active listening by doing the following:

- Listen to the entire message without interrupting
Paraphrase what you have understood in your own words. For example, “I get the feeling that you believe that HIV test is not required as you are healthy”

Ask for clarifications, if necessary. For example, “can you explain what you feel about taking HIV test when you are about to give birth to a baby?”

Avoid showing lack of concern or interest, such as by looking elsewhere, checking your time, responding to mobile phone, giving instructions to other staff in the labour room, etc.

Do not criticise the woman for being at risk of HIV or blame her or anyone else for the risk

Do not defend the woman’s concerns and questions

Do not listen only to disagree with what the woman says

2.6.2 Using non-verbal communication effectively

Non-verbal communication means everything that you convey without using words. It includes gestures, gaze, posture and expressions that can be substitutes for words and conveying information. It reflects your attitude to the pregnant woman.

You can convey respect and genuine concern for the pregnant woman by practicing the following aspects of non-verbal communication:

- Maintain eye contact
- Nod your head positively
- Lean slightly towards the woman
- Touch the women’s hands
- Pat on the shoulder, when she is in stress
- Do not attend to phone calls, and do not engage in other activities
- Do not entertain other staff or anyone else to interrupt you

2.6.3 Asking Open-ended Questions

Open-ended questions are those that do not have “yes” or “no” answer. Typically, open-ended questions begin with words such as “how”, “what”, “why”, etc. Open-ended questions encourage responses that can lead to further discussion and dialogue. For example,

“How do you think women normally react when they hear they have HIV infection?”
“What would you do if you were to learn that you have HIV infection?”
“Why do you feel that your life is ruined because of HIV infection?”
Using open-ended questions have **three** main advantages:

- They allow sharing of personal information
- They provoke pregnant women to think about their HIV status and analyze how they feel about the risk of transmitting HIV to their babies
- They make the discussion interactive and increase the women’s interest in the discussion

### 2.6.4 Showing empathy

By showing empathy, you show that you understand how a woman is feeling. You need to show empathy while responding to an emotional statement or feeling. By showing that you understand, you encourage the pregnant woman to discuss the issue further. You can show empathy through both, gestures and words.

### 2.6.5 Avoiding judgemental words

A pregnant woman who feels that you have made judgements about her or her situation is likely to be offended and refuse the results of screening tests and/or PPTCT services. Examples of judgemental responses are:

- “It is wrong for you to think like this”
- “How can you be so selfish or irresponsible and think only about you and not the baby?”
- “What is the use of crying now after making mistakes in our life?”
Implementing Guidelines for Preventing Mother to Child Transmission of HIV

In this chapter you will learn about:

a. ART for pregnant women presenting in labour
b. ARV prophylaxis for newborn and infants
c. Difference between earlier PPTCT guidelines and current (December 2013) guidelines
d. Labour and delivery in HIV positive pregnant women
e. Care during the post-partum period

Box 3 on page 34 describes the knowledge, skills and attitudes you require for effective implementation of guidelines to prevent mother to child transmission of HIV infection. You can refer to this Box periodically to assess your own capacities for implementing PPTCT guidelines, and identify issues for which you need clarifications and/or additional information from your supervisors, if necessary.

An increasing focus on early registration of pregnant woman has also led to an increasing trend in the number of pregnant women getting tested for HIV during pregnancy. As a result, most positive women would have been initiated on first line ART with three drugs during pregnancy itself. They are therefore likely to be aware of the benefits of ART for their own health, and for preventing HIV infection in their babies when they come for delivery.

When a HIV positive pregnant woman on ART comes for delivery, you need to ensure that she has the ART drugs to be taken during her stay at the hospital. You also need to find out her schedule of taking the medicine and help her adhere to the same schedule during and after the delivery. In case she has not brought her medicines, you need to find out if anyone from her family is able to get it (if they live close by) or inform the Medical Officer who will suggest ways to get the drugs.

This chapter focuses mainly on initiating ART for pregnant women presenting directly-in-labour and on initiating NVP prophylaxis for all HIV exposed newborns.
Box 3: Knowledge, skills and attitudes of labour room nurses required for implementing PPTCT guidelines during labour and postpartum period

**Knowledge:**
a. Triple drug ART regimen recommended as first line treatment for pregnant and lactating women, including for special circumstances such as Caesarean Section and false labour, and common side effects of ART drugs
b. Recommended dose for NVP prophylaxis in newborn, especially when pregnant mother has not received ART for at least 24 weeks before delivery
c. Benefits of ART and ARV prophylaxis
d. Role of ICTC Counsellor and lab technician for confirmation of HIV, CD4 testing and linking to ART centre for uninterrupted intake of ART and ARV
e. Exclusive breastfeeding Vs exclusive replacement feeding for HIV exposed infants
f. Guidelines for safer delivery techniques
g. Issues to be discussed with the positive woman and her family during postpartum period

**Skills:**
a. Overcoming barriers for initiating ART and giving ARV prophylaxis
b. Administering ARV prophylaxis and training the mother to do the same including cleaning of syringe or dropper
c. Educating mothers about ART and ARV prophylaxis in mothers and infants respectively and motivating them for adherence
d. Coordination with ICTC staff for counselling, confirmation of HIV, CD4 testing and linkages with ART centre
e. Counselling and advising mothers on exclusive breastfeeding up to 6 months for HIV exposed infants
f. Helping mothers overcome fears and anxiety related to her own HIV infection and risk to the baby during and after delivery
g. Practicing safer delivery techniques for delivering HIV positive women
h. Postpartum care for the newborn including initiating ARV prophylaxis, initiating breastfeeding and routine neonatal care
i. Counselling positive woman and her family on postpartum care, ART and ARV, infant feeding options, and postpartum depression

**Attitudes:**
a. Labour room nurses have a responsibility and opportunity to help eliminate HIV infection in infants, and make HIV positive mothers live positively
It is desirable that you check if ART drugs are available as soon as you report for your duty along with taking stock of other drugs and material required for the labour room. In case ART drugs are not available, you need to contact the concerned Medical Officer and request for early supply of drugs. This will help ensure that there is no delay in initiation of prophylaxis in case direct-in labour case is reactive to the screening test.

### 3.1 ART for pregnant women presenting in labour

As soon as you complete post-test counselling of the pregnant woman in labour whose screening test for HIV was reactive, you need to do the following for starting ART and giving her initial support for taking it for life:

1. **History taking:** Inquire if she was tested for HIV infection ever before, and if she has ever taken any ART drugs, especially Nevirapine and Efavirenz. You can skip this step if you have elicited this information before doing the HIV screening test.

2. **Starting ART:** If the woman in labour has never taken any ART drug, you need to start her on three drug regimen including Tenofovir (TDF) 300 mg + Lamivudine (3TC) 300 mg + Efavirenz (EFV) 600 mg after getting the prescription from the Medical Officer. A written prescription from the Medical Officer on the woman’s case sheet is essential for starting ART. All the three drugs should be given once a day. The same regimen should be continued if the HIV confirmatory test is positive in postnatal period and until the woman consults with the ART Medical Officer. It is essential to ensure that she consults with ART Medical Officer before being discharged from the hospital. In case the HIV confirmatory test is negative, ART drugs should be stopped.

3. **Educate:** Inform the woman that starting these medicines even at this late stage of pregnancy offers more protection to her baby being born than not taking the ART drugs. Inform her also that she will need to take the medicines for life after confirmation of HIV status at the ICTC. Explain that before she is discharged from the hospital, she will be explained the details of the treatment regimen and linked to ART centre from where she can access free and quality services for life.

4. **Inform ICTC:** You need to follow the standard procedure for informing the ICTC about the reactive screening test and ensure that the ICTC Counsellor and the lab technician come to the postnatal ward for counselling, doing confirmatory test, and drawing blood for CD4 testing in case HIV status is confirmed.
The protocol for women presenting directly in labour is summarised in Figure 5.

**Figure 5: Protocol for women presenting directly-in-labour with unknown HIV status**

- **Pregnant women coming directly-in-Labour**
  - HIV Status Known (HIV Positive)
    - **On ART**
      - Continue same medicines during delivery and lactation. (Ensure that mother has medicines available with her during delivery)
    - **Not on ART**
  - HIV Status Not Known
    - Conduct HIV screening test –in labour room/delivery ward (Whole Blood Finger Prick Test)
    - Found HIV Positive (no prior ARV)
      - Onset of Labour:
        - Start Tenofovir (TDF) 300 mg+ Lamivudine (3TC) 300 mg + Efavirenz (EFV) 600 mg
        - Continue until delivery
      - INFANTS born to HIV infected mothers:
        - Give Syrup Nevirapine soon after birth and continue once daily for 6 weeks (minimum)
      - After Delivery/Postpartum: Counselling and confirmation of HIV status (three tests) and blood sample collection for CD4 testing
      - Postpartum:
        - Continue Tenofovir (TDF) 300 mg+ Lamivudine (3TC) 300 mg + Efavirenz (EFV) 600 mg – Link to ART for ARV/ART

**Role of the ICTC Counsellor:**

The day after delivery, the ICTC Counsellor will need to focus on the following:

**a. Assigning Patient Identification (PID) Number:** Every morning, ICTC Counsellors are expected to check for any direct-in-labour cases with reactive HIV screening test. If yes, s/he has to assign a PID number to women with reactive screening test results
b. **Counselling:** The two main purposes of counselling by the ICTC Counsellor a postnatal woman are to:

- Clarify doubts, if any, about HIV infection, risk of transmission to the newborn, guidelines for managing HIV infection, HIV treatment, care and support services, and living with HIV infection
- Counsel and advice for exclusive breastfeeding for first 6 months, if breastfeeding has already been started. In case breastfeeding has not been started, counselling on infant feeding practices with specially emphasis on breast Vs replacement feeding is to be given. Emphasis needs to be given on the higher risk of HIV transmission in case of mixed feeding

c. **Coordinating for confirmatory tests:** The laboratory technician will confirm the HIV status by doing 3 rapid antibody tests. The Counsellor will coordinate with the postnatal ward nurse and facilitate the process of drawing the blood for confirmatory tests by the lab technician. It is essential that confidentiality is maintained so that other hospital staff and patients in the ward not learn about positive screening test and/or reasons for additional blood tests. If the HIV infection is confirmed, the lab technician needs to draw blood for CD4 testing (after post-test counselling)

d. **Counselling and testing the spouse:** The counsellor needs to ascertain if the woman would like her husband, or any other family member, to learn about her HIV infection. If not, s/he should not disclose it to the spouse. It is however desirable that the husband, if present at the time of delivery, should be counselled and tested for HIV infection

e. **Establish linkages with ART Centre:** Linkages with the ART Centre need to be established as a priority for two main purposes:

- Doing a CD4 test
- Continuation of ART

The ICTC Counsellor needs to ascertain if the woman is able to reach the ART centre within the next two days. If yes, the ICTC Counsellor needs to give a referral to the ART centre using the prescribed form and follow-up to ensure that the visit was made. If not, he/she should personally carry the sample for CD4 testing and return with the test report and one month’s supply of ART. It is desirable that the Counsellor is accompanied by the spouse or any other family member, in case a disclosure has been made.

The national PPTCT Guidelines emphasise that pregnant and lactating positive women be given priority for consultation and laboratory investigations at the ART Centre.
f. **Ensure there is no interruption in ART:** After the first two doses of ART are given in the labour room and postnatal ward, and confirmation of HIV status, it is the ICTC Counsellor’s responsibility to ensure that there is no interruption in ART. The following steps can help in ensuring ART compliance in positive women and their newborn:

- Asking the pregnant woman questions about ART and ARV to her infant to ensure that she has understood the regimen correctly
- Asking her to give NVP syrup to the baby under supervision before discharge and clarifying her doubts about dose and method of administration
- Explaining the probable side effects and ways to manage them and emphasising that medicines need to be continued despite initial side effects in order to give maximum protection to the baby
- Giving phone numbers of service providers such as labour room nurse, ICTC Counsellor and ART Centre Counsellor in case the woman needs to seek clarifications on ART and ARV. It is also desirable that address, timings and other details of ART Centre are also given to the postnatal woman before discharge
- Explaining the type of services and support offered by District Level Networks (DLNs) and giving them referrals to the same. Similar details of NGOs in nearby locations working on HIV and AIDS care and support, if any, should also be given

The broad principle is “as far as possible, direct-in-labour women must be seen by ART Medical Officer” at the earliest opportunity. This should however not delay starting of ART.

### 3.2 ARV prophylaxis for newborn and infants

Pregnant women who have been taking ART during pregnancy offer protection to their unborn babies against HIV infection. Additional ARV prophylaxis is required for all infants born to HIV positive mothers to further reduce the risk of HIV infection before delivery, and to reduce the risk of HIV infection after birth. The additional protection is especially necessary in three situations:

- a. Mother started ART late in pregnancy
- b. Mother did not adhere to the ART regimen as recommended, and
- c. The mother’s viral load continues to be high

ARV prophylaxis for infants whose mothers have received ART is, **NVP syrup once a day for six weeks.** This is when the baby receives the first immunisation. This prophylaxis
should be given irrespective of whether the baby is exclusively breastfed or has received exclusive replacement feeding. The dose and duration of infant NVP prophylaxis is given in Table 1.

### 3.2.1 ARV prophylaxis for infants born to positive women presenting in active labour

You would have given three-drug ART to the woman who arrives to the health facility in active labour and has tested positive for the HIV screening test. The baby’s prophylaxis will remain the same as described in Error! Reference source not found.. However, if the other is breastfeeding, the duration will be 12 weeks instead of 6 weeks as the mother had not received ART long enough to reduce the viral load in her blood. You should advice the mother to take the baby for Early Infant Diagnosis (EID) at six weeks as per the guidelines.

### 3.2.2 ARV prophylaxis for infants born to positive women who did not receive ART during pregnancy or labour

<table>
<thead>
<tr>
<th>Birth weight (kg)*</th>
<th>Daily NVP dose in mg</th>
<th>NVP dose in ml**</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 2 kg</td>
<td>2 mg/kg Once a day</td>
<td>0.2 ml/kg Once a day</td>
<td>Up to 6 weeks irrespective of whether the baby is exclusively breastfed or exclusively replacement fed. The duration may be extended to 12 weeks if mother has not received ART for at least 24 weeks including women initiated on ART during labour and if she is breastfeeding the child.</td>
</tr>
<tr>
<td>2 – 2.5 kg</td>
<td>10 mg Once a day</td>
<td>1 ml Once a day</td>
<td></td>
</tr>
<tr>
<td>More than 2.5 kg</td>
<td>15 mg Once a day</td>
<td>1.5 ml Once a day</td>
<td></td>
</tr>
</tbody>
</table>

*The dose is relevant from birth till six weeks of age. Consultation with paediatrician trained in HIV care is essential.

**Considering the content of 10 mg Nevirapine in 1 ml suspension

If an HIV infected pregnant woman has not received ART during pregnancy OR labour, or the HIV infection is detected after delivery, the infant should be:

- Started on daily syrup of Nevirapine as per the dose recommended for baby’s weight during the first contact with health services
- Started on NVP even if the baby is more than 72 hours old
- Be given NVP for 12 weeks if the mother is breast feeding. During this time, the mother should be linked to the nearby ART Centre. The baby should be sent for EID at 6 weeks
As labour room nurse, you will be required to give only the first dose of ARV prophylaxis to the newborn as per the recommended dosage that is dependent on the birth weight and ensure that the baby is given NVP syrup for the rest of the baby’s stay at the health facility. You however need to know the details of infant prophylaxis, testing protocol, and treatment, care and support services for HIV exposed infants (HEI) for educating the mother before and after the delivery.

### 3.3 Differences between earlier and current PPTCT guidelines

Initial PPTCT guidelines had recommended three-drug ART to mothers for life only if the CD4 was less than 350 cells per mm$^3$. Positive women with CD4 more than 350 cells per mm$^3$ were given a single dose of Nevirapine (SD–NVP) tablet at birth. In both instances, the baby was given 2 mg/kg body weight SD-NVP within 72 hours after delivery.

Based on WHO guidelines, the Option B regimen was introduced only in Andhra Pradesh, Karnataka and Tamil Nadu. This regimen recommended ART for life for mothers irrespective of their CD4 count and daily NVP syrup to babies up to 6 weeks. The current guidelines, which will be scaled up to the entire country, also proposes lifelong ART to pregnant women irrespective of their CD4 count, at least 6 weeks NVP syrup to infants, which will be increased up to 12 weeks if the mother had not taken ART for more than 24 weeks before delivery or had not adhered to the schedule as desired, and was breastfeeding the infant. Table 2 summarises the old and current PPTCT regimens.

**Table 2: Comparison between old and current PPTCT regimens**

<table>
<thead>
<tr>
<th>Regimen for the mother</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CD4 level</strong></td>
<td><strong>Initial PPTCT regimen</strong></td>
<td><strong>Current regimen</strong></td>
</tr>
<tr>
<td>CD4 more than 500</td>
<td>No ART was given. Single dose 200 mg NVP given at the time of delivery</td>
<td>Initiated on lifelong three drug ART at the first contact with health services during pregnancy irrespective of CD4 count and WHO staging</td>
</tr>
<tr>
<td>CD4 between 500 - 350</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CD4 less than 350</td>
<td>Initiated on ART lifelong</td>
<td></td>
</tr>
</tbody>
</table>
### 3.4 Labour and delivery of HIV positive pregnant women

There is no difference in the practices related to labour and delivery of HIV positive pregnant women who knew their HIV status during pregnancy and who learned about it during labour. During the labour, you need to do the following:

a. Record the woman’s HIV status in the registers/records as per PPTCT guidelines  
b. Document details of the ART drugs taken during pregnancy, if any  
c. Give the same ART drugs that pregnant women on life-long ART has been taking during labour and delivery as per their usual schedule (dose and time)  
d. Start ART as described on Page 38 for women who were screened for HIV during labour  
e. Discuss breastfeeding with the pregnant women during labour and find out what their decision is (if not already decided). You can give the following information to help them make the decision:

- Exclusive breastfeeding for six months is best for baby’s physical and emotional wellbeing. After six months, it is desirable that she continues breastfeeding even when the baby starts supplementary feeds  
- Breastfeed is best started within one hour after delivery. You will help her initiate breastfeeding. Additional support will be given by the postnatal ward staff after she is shifted there  
- Taking ART and giving NVP syrup to the baby every day as recommended will protect the baby against the risk of HIV transmission during breastfeeding  
- If replacement feeding is preferred, it is important to practice exclusive replacement feeding for six months. Mixed feeding carries a higher risk of HIV transmission even with ART and NVP prophylaxis  

### 3.4.1 ART and Caesarean Section

Caesarean section is not recommended for preventing mother to child transmission of HIV. It should be performed only if there are obstetric indications for the same. Guidelines for use of ARV drugs during Caesarean sections are as follows:

<table>
<thead>
<tr>
<th>Initial PPTCT regimen</th>
<th>Current regimen</th>
</tr>
</thead>
</table>
| Single dose NVP 2 mg/kg body weight within 72 hours after delivery | Daily NVP syrup from birth till 6 weeks if mother had taken ART regularly for more than 24 weeks before delivery.  
Daily NVP syrup from birth till 12 weeks if mother had either not taken ART during pregnancy or taken it irregularly, if the mother is breastfeeding the baby. |
For elective (planned) Caesarean section, ART should be given prior to the operation

- Women on life-long ART should continue their standard ART regimen
- In case of emergency caesarean section in pregnant women who are not on ART, the three-drug regimen should be started before the surgery and continued thereafter

Complications of Caesarean section are higher in HIV positive women, with fever being the most commonly reported complication. This is why all HIV positive women who undergo Caesarean section should receive standard prophylactic antibiotics.

### 3.4.2 ART regimen for pregnant women who have prior exposure to SD-NVP

In case an HIV infected pregnant woman has taken SD-NVP for prevention of mother to child transmission in an earlier pregnancy, she may be resistance to both, Nevirapine and Efavirenz. In such case, the recommended regimen is Tenofovir (TDF) 300 mg + Lamivudine (3TC) 300 mg + Lopinavir (LPV) 200 mg/ritonavir(r) 50 mg.

One tablet of Fixed Dose Combination (FDC) of TDF (300 mg) and 3TC (300 mg) should be given once a day while two tablets of FDC of LPV (200 mg)/r (50 mg) should be given twice a day.

### 3.4.3 ART and false labour

In case of false labour, or mistaken ruptured membranes, the women on life-long ART should continue their normal schedule of taking the drugs. In case of women who were initiated on ART during false labour, ART should be continued as initiated. It is important to link the woman to the ART centre at the earliest, preferably within two days.

### 3.4.4 Safer delivery techniques

The risk of mother-to-child transmission of HIV increases in six main situations:

1. Prolonged rupture of membranes
2. Repeated per vaginal examinations
3. Assisted instrumental delivery, such as vacuum or forceps
4. Invasive foetal monitoring procedures such as scalp or foetal blood monitoring
5. Episiotomy, and
6. Prematurity
The risk of HIV transmission during delivery can be reduced by observing the following **seven** practices:

1. Practice standard (universal) precautions recommended for delivery, which are summarised below
2. Minimise vaginal examination, and use aseptic techniques during vaginal examination
3. Do not rupture membranes artificially. You should keep membranes intact as long as possible. Artificial rupture of membranes should be done only if there is foetal distress or delay in progress of labour
4. Avoid invasive procedures such as foetal blood sampling, foetal scalp electrodes
5. Avoid instrumental delivery as far as possible. You may still need to choose instrumental delivery if there is foetal distress or the mother is very tired and you need to shorten the duration of labour. If instrumental delivery is indicated, low-cavity outlet forceps is preferable to ventouse as it is generally associated with lower rates of foetal trauma than ventouse
6. Avoid routine episiotomy, as far as possible
7. Suctioning the newborn with nasogastric tube should be avoided unless there is meconium staining in the liquor

### 3.4.5 Infection control measures during delivery

Infection control measures during delivery involve:

a. Using personal protection for
   - Drawing blood sample
   - Giving injections
   - Conducting delivery
   - Wiping newly born baby
   - Cleaning umbilical cord
   - Assisting mother to express breast milk

b. Reducing splash of blood and fluids by
   - Using clamps and gauze
   - Avoiding milking of umbilical cord
   - Cutting umbilical cord as soon as possible

c. Disposing waste based on standard protocols
3.4.6 Disposal of waste material from delivering HIV positive women

Standard Waste Disposal Management Guidelines should be followed for disposal of tissues, placental and other medical or infectious waste material from delivering positive pregnant women.

3.5 Care during the post-partum period

In addition to the routine post-partum care for HIV negative mothers and their newborn, the following services are required for HIV positive mothers and the HIV exposed newborn.

Care for the newborn should start immediately after birth. Within one hour of delivery,

- HIV exposed infants should receive NVP prophylaxis immediately after birth and no later than six hours. Please refer to Table 1 for the dosage
- Place the newborn baby on the mother’s abdomen for establishing skin contact. This helps in (a) maintaining baby’s body temperature, (b) bonding between mother and newborn, and (c) initiating breastfeeding within 1 hour of birth
- Encourage exclusive breastfeeding: If the mother has not yet taken a decision on exclusive breastfeeding or exclusive replacement feeding for 6 months, advice her once again on the benefits of breastfeeding and baby’s protection if she takes ART as per recommended schedule and gives NVP syrup to the baby everyday
- Initiate breastfeeding within one hour of birth: This has several advantages. It ensures that the newborn receives colostrums, the “first milk”, which is rich in vitamin A, antibodies and other protective factors. It helps establish breastfeeding by taking advantage of the newborn’s intense suckling reflex and alert state. It also reduces the risk of postpartum haemorrhage in mother
- Give replacement feeding to the baby only if the mother has died, or has terminal illness or if she decides not to breastfeed despite adequate counselling

The mother should be trained to administer NVP prophylaxis to the infant using a syringe or dropper provided with the NVP syrup. Teach her how to wash the equipment with clean boiled water after every use.

Care for the positive woman in the post-partum period focuses mainly on continued support for helping her take steps to improve her quality of life and prevent HIV infection in
her newborn. You need to remember that postnatal period is more stressful for positive women as compared those who are HIV negative. In addition to shouldering the responsibilities of a mother, spouse, daughter-in-law, etc., she also has the responsibility to manage her HIV infection effectively.

If the spouse and/or family members of the positive woman are aware of her HIV status, it is desirable that you involve them in family counselling so that they are able to support the new mother and the new baby more effectively. The following **seven** issues should be discussed during counselling of postnatal woman and her family (if relevant):

1. **ART for the mother:** The positive mother should take ART drugs as per the schedule recommended. This will keep her healthy and stop HIV infection from progressing. Side effects such as vivid dreams, nightmares, hallucinations, sleeplessness, dizziness, headache and depression usually subside within two to six weeks. Medicines should be continued as per the schedule despite the side effects.

2. **ARV for the baby:** Remind the mother to give the baby NVP prophylaxis in the dose recommended every day at the same time for at least six weeks irrespective of whether the baby is exclusively breastfed or receives exclusive replacement feeding. At the end of six weeks, the doctor will take a decision on whether to continue NVP for additional six weeks or not.

3. **Follow-up of the baby:** Care and follow-up of the infant for immunisation, clinic visits, EID, starting co-trimoxazole prophylaxis (CPT) at 6 weeks and continuing it at least till 18 months of age.

4. **Regular ART Centre visits:** Monthly ART Centre visits and importance of family’s support for the same.

5. **Family support:** Importance of family’s support for ensuring exclusive breastfeeding for 6 months, continuation of breastfeeding up to one year in babies testing negative during EID and up to 2 years if EID results are positive and initiation of paediatric ART. You should also discuss weaning foods to be introduced at 6 months irrespective of type of feed during the first six months.

6. **IUD insertion:** Mother should be encouraged to get post-partum intra-uterine device (IUD) inserted within 48 hours of delivery. In case she is not prepared for it, she should be encouraged to get Cu-T inserted at six weeks. The couples should also be motivated to use condoms for every sexual act despite Cu-T insertion in order to ensure double protection.
7. **Vasectomy**: Fathers should be encouraged for no scalpel vasectomy (NSV) between 18 months to two years, when the baby’s survival has been assured

### 3.5.1 Education on post-partum depression

Almost eighty percent of women experience “low” feelings after childbirth, especially during the first one week after birth. Some studies have indicated that occurrence of post-partum depression is likely to be higher among positive women. You can educate postpartum women and their families about post-partum depression as follows:

a. **Early symptoms**: Between 3 to 10 days after delivery, a woman is likely to feel tearful, irritable, have mood changes, experience fatigue, anxiety and feelings of sadness of loneliness

b. **Causes of early symptoms**: The early symptoms of post-partum depression are due to several factors such as sudden changes in hormone levels after childbirth, unexpected discomfort from breast engorgement and birth pain, adjustment to parenthood and sleep deprivation

c. **“Normal” duration of early symptoms**: The early symptoms usually disappear after a few days and require no treatment. The spouse and the family can help alleviate the symptoms by showing empathy, support, care and concern

d. **When to consult a doctor**: The following symptoms are indicative of post-partum depression and require treatment and counselling:

- Crying
- Irritability
- Sleep disturbances – either lack of sleep or sleeping throughout the day
- Eating problems – either no appetite or excessive hunger and eating all day
- Persistent feeling of sadness
- Lack of desire or inability to take of herself and/or the baby
- Exaggerated concerns about the baby
- Memory loss
- High degrees of anxiety or fear
- Experiencing panic attacks including palpitations
- Chest pain
- Dizziness
- Clod flushes, and
- Shaking
The above symptoms may start at delivery, or a month or so later. In some women, it may begin when they first have their menstruation after childbirth or at the time of weaning.

e. **Adverse consequences of postpartum depression:** Undetected and untreated postpartum depression can lead to:
   - Decreased adherence to ART
   - Interference with mother-baby bonding
   - Strained relationships with spouse, other family and friends
   - The woman continues to feel unwell and unhappy

   Early detection and timely treatment and counselling support can help prevent adverse impacts of postpartum depression.
Providing stigma and discrimination free services

In this chapter, you will learn about:

a. Acts, causes and outcomes of stigma and discrimination related to HIV and AIDS
b. Elements of stigma and discrimination free services, and
c. Helping positive women overcome stigma and discrimination

Box 4 on page 49 describes knowledge, skills and attitude you require for providing stigma and discrimination free services. It will be helpful if you refer to this Box to assess your confidence in providing quality services to positive women.

In recent years, few health conditions have elicited as much stigma and discrimination as HIV and AIDS. Intense multiple efforts during the last 15 years have reduced stigma and discrimination towards people living with HIV and AIDS (PLHIV) in various aspects of their life. However, much more needs to be done before positive people can live with dignity and exercise their basic human rights to education, health care, employment, etc.

Many positive people across the country have reported stigma and discrimination in healthcare settings. Such perception makes it difficult for them to access timely health services. Being aware of your feelings, thoughts and attitudes about HIV and AIDS can help you address those that adversely affect the quality of care that you provide to the positive people.

4.1 Acts of stigma and discrimination in healthcare settings

Stigma and discrimination of positive men and women in health facilities often manifests as one or more of the following:

- Labelling PLHIV as immoral, or passing comments on their morality
- Delay in providing services
Denial of health services, especially obstetric and surgical care

Poor quality of service delivery as compared to what is provided to other patients, such as refusing to touch them, to change linen or to do dressing of wounds, expressing anger or disgust

Blaming positive people for their situation

Breach of confidentiality of HIV status

Discarding instruments, universal precaution equipment, etc. used while providing services to PLHIV in a separate bin

Using additional universal precaution equipment as compared to those used while providing services to other patients

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**Box 4: Knowledge, skills and attitudes of labour room nurses required for providing stigma and discrimination free services**

**Knowledge:**
- Causes, acts, outcomes and impacts of stigma and discrimination of PLHIV, especially in health facilities
- Facts about HIV, especially its risk of transmission in health care settings, and window period
- Universal precautions guidelines for various clinical procedures
- Medical waste disposal guidelines
- Criteria for stigma and discrimination free services in health facilities

**Skills:**
- Consistent practice of universal precautions, and supervising appropriate levels of staff for the same
- Following guidelines for medical wastes disposal, and supervising appropriate levels of staff for the same
- Ability to put a barrier between personal feelings and beliefs about HIV and AIDS and provision of services to positive people
- Practicing stigma and discrimination free services
- Helping positive people overcome their fears, biases and prejudices, if any, related to quality of health services

**Attitudes:**
- “It is my responsibility to ensure that my personal beliefs and feelings about HIV and AIDS do not reflect in my work”
- “By providing stigma and discrimination free services, I am contributing to increased utilisation of HIV related services, and thereby to prevention and control of HIV and AIDS”
4.2 Causes of stigma and discrimination

*Fear of acquiring HIV infection* is reported to be the commonest cause of stigma and discrimination of positive people in health facilities. Many health care providers believe that since HIV is transmitted through contact with body fluids, and they routinely come in contact with body fluids, they are at “great” risk of acquiring HIV infection. This fear is mainly because of inadequate knowledge about HIV and AIDS, especially factors that influence HIV transmission in health facilities.

Other common causes of stigma and discrimination of positive people in health facilities are:

- Lack of accurate knowledge about HIV transmission in hospital setting
- Myths and misconceptions related to HIV transmission in hospital setting
- Cultural beliefs that link HIV with sexual behaviours that are not accepted as common social norms
- Inadequate supply of universal precaution equipment
- Lack of confidence in the efficiency of universal precaution equipment for preventing HIV transmission
- Lack of, or inadequate knowledge about post-exposure prophylaxis (PEP)
- Fear of deterring other patients from accessing health services

4.3 Outcomes of stigma and discrimination in health facilities

Stigma and discrimination of positive people in health facilities has several adverse outcomes at individual, family and community levels. The outcomes described below are relevant for both, positive men and women.

Individual level:

Stigma and discrimination in health facilities affects an individual in *five* main ways:

a. *Increased morbidity and mortality:* People who face stigma and discrimination in health settings are less likely to have confidence in the health system and health service providers. As a result, they will either not access services, or delay accessing them. Not seeking timely health services sets in a vicious cycle where prolonged or frequent illnesses further reduce immunity, which in turn increases the illness episodes. Rapid progression of HIV to AIDS can also reduce the lifespan
b. *Increased unemployment:* A person who falls sick frequently is less likely to work regularly and may find it difficult to find regular work or employment. Illness may also necessitate giving up the work that the positive person was doing earlier. If the positive person does not have skills for any other vocation, he/she remains unemployed.

c. *Increased expenditure on health:* If the positive person chooses to seek health services from a private health facility because of the perception of better quality of care, the economic burden increases. Even if a person were to seek treatment from a government health facility, there are several hidden costs such as cost of transportation, cost of medicines not available in the health facility, cost of laboratory tests and other investigations, etc.

d. *Adverse impacts on emotional and mental health:* Positive people, especially those who experience stigma and discrimination, are more likely to experience intense sadness, depression, anger, resentment, withdrawal and a feeling of hopelessness. They are also more likely to abuse drugs and/or alcohol as a means of coping, which adds to the deteriorating emotional and mental health.

e. *Tendency to avoid disclosure of HIV status:* Stigma and discrimination make it difficult for positive people to disclose their HIV status even in health facilities. When service providers learn about HIV status, their mistrust of positive people increases, which in turn increases stigma and discrimination.

**Family level**

The *four* main adverse impacts of stigma and discrimination of positive people are:

a. *Lower socio-economic status:* When a positive person is unable to engage in economically gainful activities, the family’s economic status naturally deteriorates. Increased expenditure on health further adds to decreased economic status. There are several examples of families having lost all their savings and assets due to HIV infection in one or more family members.

b. *Increased debt:* Families without any assets and savings are likely to go into an increasingly large debt due to loss of wages and increased expenditure on health. The debt also increases the risk of exploitation of children and women.

c. *Increased stigma and discrimination at home:* People’s fear of HIV and AIDS increases when health care providers discriminate against positive people. This in turn increases stigma and discrimination at home.
d. **Increase in number of child headed families:** Increased mortality due to HIV related illnesses leads to an increase in child headed families, increased school dropout, increased child labour, increased sexual and other forms of exploitation of children and increased emotional and mental health problems among children. Absence of adult caregivers aggravates the problems of child headed families

**Community level**

Detailed below are the **six** common impacts of HIV related stigma and discrimination:

a. **Increased transmission of HIV infection:** Fear of stigma and discrimination discourages people from accessing HIV preventive and testing services. Not practicing safer behaviours and delay in detection of HIV infection increases HIV transmission in the community

b. **Poor utilisation of HIV treatment, care and support services:** Disclosure of HIV status is important for accessing HIV treatment, care and support services. Stigma and discrimination makes it difficult for people to disclose their HIV status and therefore decreases utilisation of HIV related services

c. **Increased burden of communicable diseases:** Increase in prevalence of HIV increases the prevalence of most communicable diseases, and therefore increases government’s and community’s health expenditure. This increase can be at the cost of investment on other developmental programmes

d. **Adverse impact on community’s economy:** Even at a village level, HIV infection can adversely impact on the economy. Families affected by HIV are less likely to work or find work. This leads to reduction in manpower resources within the community. Affected families are also likely to spend less on food and other commodities, which also affects the economy

e. **Social disruption:** Isolation of some people and families disrupts the sense of connectedness that communities feel. It also impacts adversely on the community’s support to the affected family

f. **Increased violation of human rights:** Stigma and discrimination has a direct link to human rights violation. There have been several examples of children infected and affected by HIV having been dismissed from schools and adults finding their employment terminated due to HIV infection. Delay or denial of health services to the positive people is also a violation of their rights
4.5  *Elements of stigma and discrimination free health services*²

Stigma and discrimination-free health services can be broadly divided into *five* categories:

1. Access to services
2. HIV counselling and testing
3. Confidentiality
4. Infection control
5. Quality of care

**Access to services:**

- Positive people are not denied or delayed services, nor are they referred to other health facilities for services that are available within the facility
- The quality of care for positive people is the same as for other patients
- Positive people are not isolated within wards or other areas of the health facility
- Health facility has close links with HIV related services such as ICTC, ART centre, District Level Networks (DLNs) of positive people, etc.

**HIV counselling and testing:**

- HIV test is always done after counselling
- An informed consent is taken before the HIV test
- Every person tested is given post-test counselling, irrespective of the test result
- In case of provider initiated testing, the results are given to the provider. In all other instances, it is given only to the person tested

**Confidentiality:**

- The HIV status is disclosed only to the positive person and the health care provider treating him/her (in case of provider initiated testing)
- HIV status is not disclosed to the family and friends of person tested, unless he/she has given consent for it
- No label or signage is put on the patient’s bed, ward or medical files to convey the HIV status of the patient to other hospital staff and patients

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² Based on “The PLHA Friendly Achievement Checklist”, A Self assessment tool for hospitals and other medical institutions caring for people living with HIV and AIDS (PLHA) jointly developed for the study “Improving the hospital environment for HIV-positive clients in India” by Horizons/Population Council and Sharan: Society for Service to Urban Poverty
Infection control:
- Every staff member practices universal precautions consistently, for all patients, irrespective of their HIV status
- Guidelines for waste management practiced by all staff and departments/units of the health facility
- All staff have information about, and timely access to post-exposure prophylaxis (PEP)

Quality of care:
- Clinical management and care for positive people is of highest available standard, and the same as for other patients
- Pregnant women are offered additional support to adhere to life-long ART after it is started, taking decisions on exclusive breastfeeding for six months and linked to care and support services in the area
- Pregnant women are educated about their nutrition and healthy lifestyle during pregnancy, breastfeeding and subsequently too
- Postnatal women are educated about, and motivated to use services for their HIV exposed infant such as NVP prophylaxis, EID, CPT, etc.

It will be useful for you to reflect on which of the above elements of stigma and discrimination free service are not followed in your health facility. You can discuss such issues with your colleagues and supervisor(s) and together work towards making your health facility more sensitive to HIV positive people in general and HIV positive women and their children in particular.

4.6 Helping positive women overcome stigma and discrimination

Women are biologically and socially more vulnerable to HIV than men. Biological vulnerability is higher during sexual intercourse as the vagina is inside the body and has a large area of mucous membrane that keeps HIV present in the semen alive for a longer time and offers it more area to enter the body.

Sexually transmitted infections (STIs) increase the risk of HIV transmission and this why there is great emphasis on early detection and treatment of STIs. About half the women with STIs do not have any symptoms and such infections are therefore not likely to be treated. This further increases the women’s vulnerability.
Social vulnerability to HIV infection is higher among women because they often do not have adequate access to education and health services including HIV related information and services. Gender dimensions prevalent in most communities also make it difficult for them to participate in, and be assertive about their sexual rights. As a result, they are unable to negotiate safer sex practices with their partners.

The lower status of women in the society also means that they often face more stigma than men in their families and the communities. If the woman is detected to have HIV infection during pregnancy before the spouse/partner is tested, she is likely to be blamed by the spouse/partner and the family for the infection. The probability of violence, loss of shelter and economic support is likely to increase. As a result, the positive woman and her infant may not be able to access PPTCT services.

In case the woman who tests HIV positive during pregnancy or labour chooses to keep her HIV status confidential, there will be a delay in testing the husband, and therefore his treatment and care in case he is positive.

You can help reduce stigma and discrimination faced by the pregnant and lactating women by:

a. **Being a role model in quality care:** By demonstrating empathy and concern for the pregnant woman and providing services without discrimination, you will not only help women feel more confident, but you will also give confidence to other staff directly involved in providing services to positive women (and would therefore know her HIV status) that they are not at risk of acquiring HIV infection from the pregnant woman in labour. For this, you will need to practice universal precautions consistently and follow the recommended waste disposal guidelines.

b. **Sharing examples:** A pregnant woman, especially one who has learned of her HIV status during pregnancy or labour, is likely to be apprehensive about her and her baby’s health. In addition to clarifying her doubts and misconceptions about HIV and AIDS, and providing information on PPTCT services, you can also give her examples of other positive mothers who are leading healthy lives and raising HIV negative children after taking PPTCT services.

c. **Providing information on care and support services:** It will be useful if you can explain the services offered by DLNs and NGOs working in HIV sector and offer to link the mother and her baby to such services after delivery.

d. **Encouraging participation of spouse and family:** If the HIV positive woman agrees, you can disclose her HIV status to the spouse/partner and/or the family accompanying
her to the health facility. Counselling the spouse/partner and family and motivating them to support the woman and her baby to access ART and PPTCT services will help overcome stigma and discrimination that she may have faced at home. You also need to link her spouse/partner to the ICTC for counselling and testing.

It is important that you do not allow your personal beliefs, values, thoughts, feelings and attitudes to affect the services you provide to HIV positive women. For this, you need to be aware of your own feelings, thoughts and attitude towards HIV and AIDS and address those that are likely to affect the quality of care you provide to HIV positive women.
In this chapter, you will learn about first aid for occupational exposure and comprehensive management for protecting you from risk of acquiring HIV infection after exposure.

As explained in the previous chapter, fear of acquiring HIV infection is one of the main factors leading to stigma and discrimination of positive people in health facilities. You need to remember that practicing universal precautions consistently offers you adequate protection against HIV and other blood borne diseases such as Hepatitis B and Hepatitis C. However, in case there is an exposure to body fluids prophylaxis with ART drugs can protect you against risk of HIV transmission.

Post-exposure prophylaxis (PEP) is the term used for comprehensive management given to minimize the risk of HIV infection after potential exposure to HIV infection. It includes:
1. First aid
2. Counselling
3. Risk assessment
4. Relevant laboratory investigations based on informed consent of the source and exposed persons
5. Provision of antiretroviral drugs for four weeks depending on the risk assessment, and
6. Follow-up and support

An exposure is defined as:

a. An injury to the skin, such as needle-stick injury or cut with sharp instrument
b. Contact with mucous membrane of the eye or mouth
c. Contact with non-intact skin, especially when the exposed skin is chapped, abraded or afflicted with dermatitis, or
d. Contact with an intact skin when the duration of contact is prolonged, such as several minutes or more with blood or other potentially infectious body fluids

Potentially infectious body fluids include:
- Blood
- Semen
- Vaginal secretions
- Cerebrospinal fluid
- Synovial, pleural, peritoneal or pericardial fluid
- Amniotic fluid
- Other body fluids contaminated with visible blood

Tears, sweat, urine and faeces, and saliva are considered “not at risk” unless they contain visible blood.

PEP should be started as soon as possible after the exposure and within 72 hours. The earlier it is started, greater is its effectiveness. It is important to do a baseline rapid HIV test before starting PEP. There are six steps in managing occupational exposure:

### 5.1 Managing exposure site – First Aid

First aid for the *skin* that is broken after an injury with needle-stick or sharp instrument requires that you:
- Immediately wash the wound and surrounding skin with water and soap and rinse
- Do not scrub the area
- Do not squeeze the injured area
- Do not use antiseptics solution or skin washes such as bleach, chlorine, alcohol or betadine

In case of exposure to the *eye*, you need to:
- Irrigate exposed eye immediately with water or normal saline
- Sit on a chair, tilt the head back and ask a colleague to gently pour water or normal saline over the eye
- Leave contact lens if you are wearing contact lenses while irrigating as they will form a barrier over the eye and help protect it
- Remove the contact lens once the eye is cleaned and clean them in the normal manner. This will make them safe to wear again
- Avoid use of soap or disinfectant in the eye

In case of exposure to the *mouth*, you need to:
- Spit fluid out immediately
- Rinse mouth thoroughly using water or saline and spit again. You can repeat this process several times
- Avoid the use of soap or disinfectant in the mouth

Immediately after the first aid, you need to report to a Medical Officer who is responsible for post-exposure prophylaxis (PEP) in your health facility. Table 3 summarises the dos and don’ts for managing the exposure site.
### Table 3: Dos and Don’ts of first aid for the exposure site

<table>
<thead>
<tr>
<th>Do</th>
<th>Do not</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remove gloves, if appropriate</td>
<td>Do not panic</td>
</tr>
<tr>
<td>Wash the exposed site thoroughly with running water</td>
<td>Do not put the pricked finger in the mouth</td>
</tr>
<tr>
<td>Irrigate with water or saline if eyes or mouth have been exposed</td>
<td>Do not squeeze the wound to bleed it</td>
</tr>
<tr>
<td>Wash the skin with soap and water</td>
<td>Do not use bleach, chlorine, alcohol, betadine, iodine or other antiseptics or detergents on the wound</td>
</tr>
</tbody>
</table>

### 5.2 Establishing eligibility for PEP

PEP is ideally started within two hours of exposure but can also be given within 72 hours. The risk should be evaluated as soon as possible. If the risk is insignificant, PEP can be discontinued if it was already started. The risk of infection is mainly determined by the nature of the exposure and the status of the source patient.

Eligibility is established by:

a. Assessing the nature of exposure and risk of transmission
b. Assessing HIV status of the source of exposure, and
c. Assessing the exposed individual

a. Assessing the nature of exposure and risk of transmission

Three categories of exposure are described based on the amount of blood or fluid involved and the entry port. These categories, which are described in Table 4, are to help assess the severity of the exposure but may not cover all possibilities.

### Table 4: Categories of exposure

<table>
<thead>
<tr>
<th>Category</th>
<th>Definition and Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild exposure</td>
<td>Small volume on mucous membrane or non intact skin. For example, superficial wound with plain or low calibre needle, or contact with the eyes or mucous membranes, or subcutaneous injections with small bore needles</td>
</tr>
<tr>
<td>Moderate exposure</td>
<td>Large volume on mucous membrane or non intact skin, OR percutaneous superficial exposure with solid needle For example: a cut or needle-stick injury penetrating gloves</td>
</tr>
<tr>
<td>Category</td>
<td>Definition and Example</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Severe exposure</td>
<td>Percutaneous exposure with large volume. For example: an accident with a high calibre needle (&gt;18 G) visibly contaminated with blood, OR a deep wound (haemorrhagic wound and/or very painful) OR transmission of significant volume of blood OR an accident with material that as previously been used intravenously or intra-arterially</td>
</tr>
</tbody>
</table>

Wearing gloves during any type of exposure is a protective factor. In case the exposure is with material such as discarded sharps or needles that was contaminated for more than 48 hours, the risk of HIV infection is negligible but remains high for Hepatitis B as the virus survives for a long time outside the body.

b. Assessing the HIV status of the source of exposure

A rapid HIV test of the person who is the source of exposure should be done. In case it cannot be done, or results are not available immediately, PEP should be started before the HIV test result of the source is available. Informed consent should be taken before testing of the source of HIV infection as per the national guidelines. Table 5 lists the categories of situations depending on the results of the source.

<table>
<thead>
<tr>
<th>Source HIV status</th>
<th>Definition of risk in source</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV negative</td>
<td>Source does not have HIV infection. Source status of Hepatitis B and Hepatitis C should be considered</td>
</tr>
<tr>
<td>Low risk</td>
<td>HIV positive and clinically asymptomatic</td>
</tr>
<tr>
<td>High risk</td>
<td>HIV positive and clinically symptomatic</td>
</tr>
<tr>
<td>Unknown</td>
<td>Status of the patient is unknown and his/her blood is not available for testing. For example, injury during medical waste management when the source patient is unknown. The risk assessment in such situation is based on the exposure. HIV prevalence in the local community can be considered</td>
</tr>
</tbody>
</table>

c. Assessing the exposed individual

- The person who has exposure should first receive confidential counselling and assessment by Medical Officer who is trained in PEP
- A baseline HIV test is done on the individual having exposure to rule out pre-existing HIV infection
If the exposed individual already has HIV infection, PEP should not be given. They should be counselled for preventing HIV transmission at workplace and then referred to ART centre for CD4 count and further management.

The exposed person should also be assessed for emotional and psychological state related to the exposure and PEP, which will be addressed during counselling, if necessary.

### 5.3 Counselling for PEP

Counselling for PEP involves:

- Providing information on PEP such as what is PEP, and its risk and benefits
- Emphasising that PEP is not mandatory
- Taking informed consent
- Providing psychological support to help overcome fear and anxiety about the exposure and risk of blood borne infections
- Documentation of the exposure, HIV status of the source, counselling and PEP prescribed
- Discussing options for special leave from work, such as for two weeks initially, and longer, if necessary, based on the follow-up assessment of side effects, emotional state and other requirements

There is a risk of secondary transmission, in case the exposed person has acquired HIV infection. This is why the counselling should also focus on avoiding unsafe practices such as unprotected sex. The person exposed should also not donate blood till negative HIV status is established during follow-up. Counselling should focus on consistent condom use, and barriers for condom use, if any, should be addressed.

### 5.4 Prescribing PEP

The first step for prescribing PEP is to decide on either the basic or 2-drug regimen or expanded 3-drug regimen.

**Table 6** lists the type of regimen recommended based on type of exposure and HIV status of the source while **Table 7** gives the PEP regimens.

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Status of source</th>
<th>Status of source</th>
<th>Status of source</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HIV +ve, asymptomatic</td>
<td>HIV +ve and symptomatic</td>
<td>Unknown</td>
</tr>
<tr>
<td>Mild</td>
<td>Consider 2 drug PEP</td>
<td>Start 2 drug PEP</td>
<td>Usually no PEP but 2 drug PEP can be considered</td>
</tr>
<tr>
<td>Moderate</td>
<td>Start 2 drug PEP</td>
<td>Start 3 drug PEP</td>
<td></td>
</tr>
<tr>
<td>Severe</td>
<td>Start 3 drug PEP</td>
<td>Start 3 drug PEP</td>
<td></td>
</tr>
</tbody>
</table>
As mentioned earlier, PEP is best started within two hours, and HIV testing of the source patient should not delay the decision on whether to start PEP or not. In case HIV status of the source is not available at the time of starting PEP, the 2-drug regimen is started, and if necessary, shifted to 3-drug regimen after consultation with a Medical Officer trained in PEP. PEP should be taken for four weeks.

If the HIV infected person, who is the source of exposure, is taking ART or has taken them earlier, it is important to consult with ART Medical Officer on the PEP regimen. This is because of the high risk of HIV being resistant to the drugs being taken by the source.

The ART Medical Officer should also be consulted in case the woman with exposure is pregnant, irrespective of whether she has been initiated on ART or not.

**Table 7: Recommended PEP regimens**

<table>
<thead>
<tr>
<th>Regimen</th>
<th>Preferred regimen</th>
<th>Alternative regimen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic 2-drug regimen</td>
<td>Zidovudine (AZT) 300 mg twice a day + Lamivudine (3TC) 150 mg twice a day</td>
<td>Stavudine (d4T) 30 mg twice a day + Lamivudine (3TC) 150 mg twice a day</td>
</tr>
<tr>
<td>Expanded 3-drug regimen</td>
<td>Basic Regimen + Lopinavir (LPV)/Ritonavir (r) 400/100 mg twice a day or 800/200 mg once a day with meals</td>
<td>Basic Regimen + Nelfinavir (NLF) 1250 mg twice a day or 750 mg thrice a day on empty stomach</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>OR, as a 3rd choice:</strong> Basic Regimen + Indinavir (IND) 800 mg every 8 hours on empty stomach along with consumption of about 8-10 glasses of water per day (1.5 litres)</td>
</tr>
</tbody>
</table>

### 5.5 Laboratory investigations

HIV test is recommended soon after the exposure to establish a baseline, against which future test results can be compared. PEP is however not delayed in case it is not possible to do HIV test immediately. The HIV test can be done after counselling and informed consent up to several days after the exposure.
Tests for Hepatitis B (based on immunisation status for Hepatitis B) and Hepatitis C are also recommended to rule out exposure to these two blood borne pathogens.

It is also desirable to do CBC and liver function tests to establish their baseline.

### 5.6 Follow-up

Irrespective of whether PEP was started or not, it is desirable to do clinical and laboratory follow-up. Clinical follow-up is done to monitor for signs of HIV seroconversion such as acute fever, generalised lymphadenopathy, pharyngitis, non-specific flue like symptoms and ulcers in the mouth or genital area. Such symptoms are observed in about 50%-70% of people with primary HIV infection within 3-6 weeks after exposure. If a primary infection is suspected, ART Medical Officer should be consulted as soon as possible for further management.

Healthcare providers taking PEP can have side effects such as nausea, diarrhoea, muscular pain and headache during the early days of starting the prophylaxis. The treatment should continue despite these side effects, most of which are mild and short-lived. Follow-up support to ensure continuation of PEP despite side effects is important. In case they are very uncomfortable, medicines to counter them can be taken.

During the clinical follow-up, the exposed person is once again advised to practice safer behaviours such as avoiding blood donation and having unprotected sex to prevent secondary transmission. Barriers for condom use, if any, should be addressed.

Laboratory follow-up of HIV testing is done at 6 weeks, 3 months and 6 months irrespective of whether PEP was taken or not. Testing at 6 weeks may not be enough as PEP drugs may delay detection of antibodies in case there is HIV infection. This is why HIV test is repeated at 3 months and 6 months.

It is desirable to test for Hepatitis B, 2 to 4 weeks after exposure in case the person exposed has not received Hepatitis B vaccination. Further tests for Hepatitis B and Hepatitis C are also recommended 3 months and 6 months after exposure.

In case a healthcare provider gets repeated exposures, it is desirable that he/she undergoes additional training to prevent future exposures.
Frequently Asked Questions

This chapter gives responses to commonly asked questions about implementing PPTCT guidelines in real life situations. Kindly remember that all the information related to the questions is included in the previous chapters. These questions are meant to facilitate clarification of doubts.

6.1 Natal care for women whose HIV status is not known

1. If a woman with history of HIV risk behaviour refuses HIV testing despite counselling, what should be done?

Counselling should be repeated in women reporting high risk behaviour(s) and/or similar behaviours in their spouse/regular partners. During the repeat counselling, it is important to explore reasons for refusing an HIV test and address such reasons. In most cases, it is because a woman is afraid of stigma and discrimination, including denial of health services. You can reduce some of her fears by assuring her that:

- The screening test result will be kept confidential
- She will get quality services irrespective of the results of the screening test. In case the test result is reactive, she can take medicines to protect her baby from HIV infection
- Taking regular treatment and adopting a healthy life style will allow her to live a longer and healthier life even if she has HIV infection

In case the woman continues to refuse HIV test while in labour, the ICTC counsellor should be requested to counsel her in the postnatal ward. Efforts to motivate the woman should continue until an HIV test is done.

2. Sometimes women come in advanced stage of labour and there may not be enough time to counsel and then do the HIV screening test. What should be done under such situations?

Unless there is crowning of head, efforts should be made to counsel her in brief and take informed consent for the screening test.
If the test cannot be done because of advanced stage of labour, it should be done as early as possible after the delivery, preferably before the woman is shifted to the postnatal ward. In case the screening test is reactive, the mother should be initiated on ART and baby should be started on Nevirapine prophylaxis.

3. **If a woman comes in second stage of labour and HIV screening test is reactive, can she still be initiated on ART?**

Yes. Every effort should be made to start ART. In case she is unable to swallow the drugs during labour, ART should be started at the earliest after the delivery. The baby should receive Nevirapine syrup and continued for 12 weeks.

4. **Can ART drugs be initiated without Medical Officer’s prescription to a woman in active labour?**

Medical Officer’s prescription for ART is necessary. You need to inform the Medical Officer and start ART as soon as the screening test result is known to be reactive so that ART can be initiated without any delay.

5. **If a woman is reactive to HIV screening test and yet refuses to take ART because of the fear of disclosure of HIV status to spouse and subsequent stigma and discrimination, what should be done?**

You need to try your best to explain to the woman that the medicine will protect her baby from HIV infection. In addition, reiterate that:
- The HIV screening test does not confirm HIV infection. If the confirmatory tests are negative, she will be asked to stop the medicines
- If confirmatory tests are positive, her HIV status will be disclosed to family members only after she agrees
- No one in her family will be informed about the nature of medicines unless she has agreed to disclose her HIV status to the family
- The ICTC Counsellor will sensitise and counsel her husband/partner, and the family, if necessary, and make every effort to ensure that they recognize the need to provide her and her baby HIV related treatment and care
- Some NGOs and networks of positive people also offer home-based support, if necessary

It is also important to explain that family’s support is very important for to learn to live positively with HIV and provide the best care and nurturing to her baby. There are ample services – both institutional and outreach that sensitise families and helps positive women live without stigma and discrimination.
6. How should counselling be done for a woman who is in labour and screaming in pain?

During the first stage of labour, there is several minutes gap in between two contractions. You first need to reassure the woman that the labour is progressing well and clarify her doubts or concerns. Talk to her in between two contractions. The distraction of making conversations itself may stop her from “screaming”.

7. When should the reactive result of HIV screening test of a woman in labour be disclosed to the woman?

You should inform the woman tested for the reactive screening test as soon as possible. Before disclosing the status, it is important to ascertain that she will be able to accept the test result and participate in decision-making for ART and prophylaxis for the baby.

8. What information should be given to the family of a woman with reactive HIV screening test while she is in labour?

Result of the HIV screening test should be disclosed to the family unless the woman wants them to know. Every effort should be made to help overcome her reluctance to share the test result with the family.

Since it is important to continue ART for life, it is desirable that the family is also counselled about the need to adhere to the treatment before the woman is discharged from the hospital.

9. If the HIV screening test of a pregnant woman is reactive, and she is unable to participate in any dialogue due to pain, can ART prophylaxis be initiated without informing her?

If a woman in labour is able to swallow medicines, she can also give consent for starting ART. ART should be initiated without any delay.

10. Women who have delivered normally like to go home within 24 hours. If the ICTC is closed due to weekend or any other holiday at the time of labour and/or discharge, how should HIV test be confirmed?

Confirmatory tests for HIV can be done at ICTC only on the first working day after the delivery. It is desirable that the woman is not discharged until counselling and confirmatory test is done by ICTC and linkages are established with the ART Centre.
11. In case a woman has been taking ART during pregnancy, how should her compliance assessed in the labour room?

Ask the woman about her schedule to take ART. You can also verify it from her ART book, in case she is carrying it. Do not ask questions such as “have you taken your medicine every day?” Instead, ask “have you had any difficulty in taking medicines?” If yes, find out what were the difficulties, and if they led to irregular intake of drugs.

As labour room nurse, your responsibility is to give her ART drugs as per her schedule. You need to ascertain her compliance so that you can document it on her case sheet. Such documentation will inform ART counsellors that she needs adherence counselling. It will also help take a decision on duration of NVP prophylaxis for the baby.

12. What prophylaxis should be given to mother and baby in case a woman had not taken ART regularly?

The woman should be given the ART drugs she has been taking as per her schedule. You should reiterate the importance of taking ART drugs as recommended by the doctor to ensure that she lives a longer and healthier life. The baby should be given Nevirapine in a dose recommended for the baby’s birth weight. The duration of NVP for baby will be 12 weeks if mother has not taken ART regularly.

13. What should be done in case of shortage of test kits in the labour room?

Shortage of test kits indicates poor management of supply chain. Immediate steps should be taken to prevent such shortage in future.

In case of shortage of screening test kits, HIV test should be done by the ICTC on the next working day after the delivery.

14. What should be done in case of shortage of ART drugs in the labour room?

Shortage of ART drugs in labour room indicates poor management of supply chain and corrective measures should be taken at the earliest.

If there are no drugs in the labour room, you should try to procure them from the person in-charge in your health facility. If the drugs are not available in the health facility, then the Medical Officer should take steps to procure them at the earliest and initiate ART and ARV prophylaxis for mother and baby respectively.

15. What is the best time to initiate ART: before labour, during labour, after labour?
The best time to start ART is during the first three months of pregnancy, in case the pregnant woman has not started ART already. In case of women who come directly in labour, ART should be initiated immediately after getting a reactive HIV screening test result. It is important to do post-test counselling before giving the ART drugs.

### 6.2 Treatment and care for positive women and their newborn babies

1. **If a baby vomits NVP syrup, should another dose be given?**

   If the baby spits up a little syrup, you don’t need to give another dose.

   If the baby throws up most of the medicine, you need to check when the medicine was last given. If it was less than one hour before, you need to give another dose immediately. If it was more than two hours before, do not give an extra dose. Give the next dose as per the schedule.

   To prevent vomiting of the syrup by the baby, hold the baby at 45 degrees with hands down and head supported at the back. Use the medicine dropper to drip the medicine to the back of the tongue near the sides. This will prevent the baby from gagging. Avoid putting the medicine in the cheek pouches as the baby will be able to spit the medicine out.

2. **I have heard that ART has several side effects. If so, why is ART recommended even for pregnant women with high CD4 count?**

   Most side effects of ART subside within a few weeks. In rare cases when they don’t, the ART Medical Officer will review the ART schedule and make changes, if necessary.

   ART drugs reduce the viral load in the mother. This greatly reduces the risk of HIV transmission during pregnancy to the unborn child.

3. **Will the side effects of ART affect the unborn baby?**

   A woman can experience a few side effects for a few weeks after initiation of ART. The unborn baby, however, does not get affected by side effects in the mother. Most side effects subside within a few weeks. In case of persistent side effects, alternate drugs are prescribed at the ART Centre.

4. **Newborns are very fragile. Will a daily dose of Nevirapine not lead to severe side effects?**
Nevirapine protects the baby from HIV infection. Despite the mother taking triple ART drugs, some HIV may enter the baby’s body during delivery or breastfeeding. Nevirapine prevents such virus from replicating in the baby’s body. The side effects are usually minor and subside within a few days.

5. Will a HIV exposed baby develop Nevirapine resistance in case the baby acquires HIV infection?

Infants, children and adults who have take Nevirapine earlier may have developed resistance. They are therefore prescribed alternate drugs because of the possibility of resistance. Fear of resistance should not stop anyone from giving Nevirapine prophylaxis to the HEI.

6. Why should all HIV exposed infants be given CPT?

Co-trimoxazole prophylaxis protects infants from a wide range of bacterial infections and malaria. Other than skin rashes in a few people, it does not have side effects. In case an HIV exposed infant has acquired HIV infection, he/she will have low immunity and is at risk of acquiring serious infections such as pneumonia and diarrhoea. CPT helps prevent such infections.

7. Why should positive women be encouraged to breastfeed when we know that breast milk can transmit HIV infection?

It is true that HIV can transmit through breast milk. However, the advantages of breast milk far outweigh the risk of HIV transmission from mother to baby. A baby who is not breast fed is more likely to die, or be severely malnourished during the first year, and is at greater risk of diseases such as diarrhoea, pneumonia, etc.

ART greatly reduces the risk of HIV transmission through breast milk as it reduces the total number of viruses in the mother’s blood. Daily NVP prophylaxis to the baby offers additional protection against HIV transmission through breast milk.

8. Why is breast feeding recommended till one year if the child is negative? Is the child not getting exposed to HIV for a longer duration?

Once the mother starts ART, the viral load in her body fluids including breast milk will be very low. Optimum viral load suppression takes about 24 weeks. Therefore, even if a woman was initiated on ART during labour, her viral load would have reached maximum
suppression by the time the infant is six months old. The risk of HIV transmission is therefore very low are negligible compared to the benefits of breast feeding.

9. **Why is mixed feeding considered a greater risk for mother to child transmission of HIV?**

The lining of the newborn’s digestive system, especially stomach, is very fragile. When top milk, which contains animal protein, is given to the baby, the delicate lining of the stomach gets damaged. HIV can easily enter the body through the damaged stomach lining. This is why top milk is considered a higher risk of mother to child transmission of HIV through breast milk. The stomach lining can also get damaged with exclusive top feeding, but since there is no HIV in the milk, the baby is safe. As the digestive system gets stronger, the baby is able to digest variety of foods.

10. **Are the ART drugs secreted in breast milk? Will they affect a breastfed baby?**

Studies have shown that the drugs included in the three-drug ART regimen are safe to take during breastfeeding. They do not harm the breastfed babies.

11. **Should NVP syrup be given to the baby till six weeks of age or till six weeks after it was started?**

It should be given till six weeks after it was started. For example, if a baby is born at home and the visit to a health facility is 12 days after delivery, NVP syrup should be given from 12th day till 6 weeks after that.

12. **Can NVP be given to premature babies?**

The decision on whether to give NVP to premature babies will depend on the weight of the baby and the baby’s ability to swallow the syrup. A Medical Officer trained in Paediatric HIV will need to take the decision.

13. **Why is ARV prophylaxis for an infant recommended for 12 weeks if the mother was on ART for less than 24 weeks before delivery?**

As explained in question 8, it takes about 24 weeks for optimum suppression of viral load in the mother. In case ART was taken for less than 24 weeks, it is likely that the viral load is still high and therefore risk to the infant is also high.
14. What is the preferred regimen in case a woman has both HIV-1 and HIV-2 infections?

The regimen recommended for HIV-1 is relevant even if a woman has mixed infection with both, HIV-1 and HIV-2. In India, HIV-1 is more common.

In case a woman has only HIV-2 infection, she should not be given Nevirapine or Efavirenz as they are not effective against HIV-2. Such women should be given regimen consisting of TDF+3TC+LPV/r. This regimen should be continued even after delivery.

Infants born to mothers who have only HIV-2 infection should not be given NVP. Daily prophylaxis with AZT is recommended for such infants.

15. If a HIV positive pregnant woman comes directly-in-labour and reports that she was on ART earlier but had discontinued for more than 2-3 months, and if she is not able to give information on the drugs she was taking, can TDF+3TC+EFV be given to her?

If there is a possibility that the HIV positive woman has taken Efavirenze or Nevirapine earlier, they should not be given again. Lopinavir/ritonavir is to be given instead of Efavirenze.

16. Why is LPV/r given to women exposed to Nevirapine or Efavirenz earlier but Atazanavir is not recommended?

The risk of developing toxicity is higher with Atazanavir than with LPV/r.

17. Why are two Protease Inhibitors LPV/r recommended? Why is “r” written in small letters?

Lopinavir alone has low bioavailability and is therefore not very effective. When it is combined with sub-therapeutic doses of another Protease Inhibitor, Ritonavir, its blood levels increase greatly. Ritonavir is written as “r” as it is in low doses.

18. Efavirenze was reported to have some teratogenic effects earlier. What is the current evidence and is it adequate now?

Data on use of Efavirenze and Tenofovir was limited earlier and more data is available since 2010. There is persuasive indication that the Efavirenze is safe for use throughout pregnancy, including the first trimester.

6.3 Referral for HIV positive mother and HIV exposed infant
1. **What are the advantages of EID?**

   Just like all illnesses, early diagnosis and treatment of HIV infection can slow down its natural progression. Early detection of HIV infection in infants helps ensure timely treatment and care so that they remain symptom free for a longer time.

2. **What should I do if my health facility does not have testing facilities for HIV exposed infants?**

   HIV exposed infants are not tested at birth. They are first tested for HIV at the age of 6 weeks. The dried blood sample is collected at ICTC and sent to a testing laboratory assigned to the ICTC.

   Your role is to mainly educate the woman in labour about the services available. Follow-up support will be given by ICTC Counsellor.

3. **How can I ensure that a woman who tests positive for HIV during labour goes to ICTC for confirmation?**

   A decision on whether to send the postnatal woman to ICTC for counselling and testing or to ask the ICTC Counsellor to visit her in the postnatal ward will depend on factors such as physical condition of the woman after delivery, privacy for pre-test and post-test counselling, etc.

   Your responsibility is to inform the ICTC Counsellor and ensure that s/he meets the postnatal woman for pre-test counselling. If necessary, you too can counsel her for confirmatory tests.

4. **How do I ensure that the husband/partner of the woman who has tested positive for HIV also goes for HIV test?**

   Your responsibility is to do screening test for women in labour, and to refer women with reactive screening test. You also have a responsibility to refer the woman to ICTC and ensure that confirmatory test is done on the next working day. The ICTC counsellor will counsel the husband/partner for HIV test.

5. **How do I ensure that a woman in labour with reactive HIV screening test goes to ART centre?**

   HIV screening test is not confirmation of HIV status. HIV status is confirmed by three antibody tests by the ICTC. Your role is to make sure woman receives ICTC services and
follow-up till the confirmatory test is done. The ICTC Counsellor will take responsibility of linking her to the ART Centre.

6. **What special care should I take for establishing breastfeeding for an HIV exposed newborn?**

Guidelines for initiating breastfeeding for newborns are the same for all women, irrespective of their HIV status. If a woman is HIV positive, you need to keep reiterating the benefits of exclusive breastfeeding and high risk of HIV transmission through mixed feeding.

7. **What are the consequences for women who have renal failure and are put on TDF without doing baseline and other investigations?**

Ample emphasis is given to ensuring that a postnatal woman who was detected to have HIV infection during labour should reach ART centre within two days, or at least as early as possible. This is because baseline investigations are done at the ART centre. In case of women who are detected to have renal failure, alternate drugs are prescribed and renal failure managed as per standard protocols.

8. **How can a positive mother be motivated for lifelong ART?**

There is no magic tool for motivating a woman to take lifelong ART. Even if she is motivated at the time of delivery, motivation levels may come down over a period of time when she finds herself and her child healthy. This is why regular follow-up support should be provided after initial counselling and support in the first few months after delivery. Follow-up needs to be done mainly by ART Centre and ICTC Counsellor. If necessary, networks of positive people and other NGOs involved in HIV and AIDS programme implementation can also be involved in the follow-up.

### 6.4 Ethical issues

1. **Why is it important to keep HIV status of a pregnant woman confidential?**

HIV infection is associated with high levels of stigma and discrimination – at home, in the community and in health facilities. Family and/or health care providers who do not have the required level of sensitivity and knowledge about HIV can become perpetrators of stigma and discrimination. A pregnant woman who needs supportive family and healthcare providers for her emotional and physical well being can be deprived of such support if her HIV status is disclosed.
2. **Who and when should I disclose the HIV status of a woman in labour whose HIV screening test is reactive?**

The only person who should know about the reactive HIV screening test is the woman who has undergone the test. With her permission, you need to inform other healthcare providers who are directly involved in providing her clinical services.

3. **Everyone will know HIV status of a woman when I use the safe delivery kit. How can I still keep her status confidential?**

An ideal situation is where protective equipment used on HIV positive women is the same as for HIV negative women.

The only people who will know about your using safe delivery kit are the labour room staff members. If all staff members in labour room have required sensitivity towards HIV positive women, their HIV status will not be discussed – either in the labour room or outside.

4. **What should I do if the husband/partner of a positive woman refuses to go for HIV test?**

As labour room nurse, you are not required to test the husband or partner of HIV positive women or those with reactive HIV screening test. The ICTC Counsellor will take required steps to counsel and test the husband/partner. The Counsellor may also take help from NGOs involved in HIV programme implementation or networks of positive people, if necessary.

5. **What should I do if the husband/partner and/or family of positive woman refuse to take her back home after delivery?**

The ICTC Counsellor usually takes lead in counselling the husband/partner and family of positive postnatal women. In case of non-cooperation from the husband or family, and/or their refusal to accept the woman, other staff members such as nurses and Medical Officer can also counsel the family. The postnatal woman should be kept in the health facility till the husband/partner and the family have committed to take responsibility for the mother and her infant.

As labour room nurse, your responsibility is to refer the woman to ICTC Counsellor and talk to the family, if necessary.
6. **What should I tell other patients in the labour room or ward when they come to know that one of the patients is HIV positive?**

In case other patients come know of HIV status of a positive mother, you need to discourage any gossip about the positive mother, and sensitise and educate other patients on HIV and AIDS. You should also try to find out the source of disclosure and take steps to avoid similar situation in future.

### 6.2 Preventing HIV transmission at workplace

1. **How safe are the safe delivery kits?**

   The safe delivery kits are SAFE! They contain all the protective equipment that you require for protection from blood borne pathogens during labour.

2. **What should be done if there are no safe delivery kits in the labour room?**

   Lack of safe delivery kits indicates poor management of supply chain. Systems should therefore be strengthened to avoid shortage.

   You need gloves, water proof gown or apron, goggles, mask and shoes to protect yourself from blood borne pathogens during delivery. All these will be available in your health facility. You can use either fresh disposable protective gear or sterile reusable material.

   Some health facilities report shortage of goggles and boots. You can cover your feet with thick plastic bags and tie the ends on the legs so that the skin does not come in contact with any body fluids. Alternatives to goggles such as visors of helmet can be used, if necessary.

3. **Is the risk of transmission greater from women who know their HIV status?**

   Whether a woman knows her HIV status or not, the risk of HIV transmission exists if a woman is infected. The risk is significantly higher in case of window period, when the woman would test negative for HIV infection. This is why universal precautions are recommended for all clinical procedures where there is risk of contact with body fluids.

4. **What should I do in case there is a splash of blood or amniotic fluid on my skin?**

   After a splash of blood or any other body fluid such as amniotic fluid on unbroken skin, you need to wash the area immediately with running water. You can use soap and
water. Do not use antiseptics. In case the contact is with eyes or mouth, you need to irrigate them with water. You also need to report to the Medical Officer responsible for PEP immediately.

5. **What should I do if there is a needle stick injury while repairing tears in HIV positive woman?**

If the skin is broken after a needle-stick injury or any other sharp instrument, you need to remove the gloves and other protective equipment and wash the wound and surrounding skin with water and soap, and rinse. You should not scrub. You should also **not** use antiseptics or skin washes such as bleach, chlorine or alcohol.

6. **How can I be sure that the gloves I use to check the progress of labour gives me necessary protection?**

Disposable gloves are safe to use as long as the packet in which they are packed is intact. Reusable gloves need to be checked for leaks before they are sent for sterilisation. To ensure greater protection from gloves, you should change them between patients and procedures in the labour room even if they are not soiled.

7. **We don't have elbow length gloves. How can I protect myself during labour and/or vaginal examination?**

Elbow length gloves cover the gown sleeves and prevent the gown sleeve from getting soaked during delivery. It is also useful during manual removal of placenta and from repair or surgery of cervix and vagina. While it is true that elbow length gloves do offer additional protection, regular gloves are also effective for receiving and cleaning the baby, for receiving placenta and for suturing. In any case, it is desirable that you minimise vaginal examination, rupture of membranes and manual removal of placenta.

8. **I have myopia and wear glasses. It is very uncomfortable to wear goggles along with my glasses. How should I protect my eyes?**

You need to keep gap between your goggles and glasses. An effective way to do this is to buy goggles that have a thick frame on the sides.

9. **How should I dispose the safe delivery kit?**

You first need to disinfect the gloves, plastic apron, etc. by soaking them in 0.5% chlorine solution for ten minutes and then dispose them in red bin/bag.
10. What should I do with linen on which positive woman was resting before or after delivery?

Irrespective of a patient’s HIV status, soiled linen must be put in plastic bag. The bag should be tied and then sent to the laundry. The person sorting the linen in the laundry should wear gloves.

11. What should I do with instruments used on positive woman?

You should disinfect instruments just as you would for instruments used for other women in the labour room and then send them for sterilisation.

12. Can a labour table used for conducting delivery of HIV positive woman be used for conducting another delivery?

The cleaning process for labour room tables is the same for all women, irrespective of their HIV status. You need to mop the table and instruments that have come in contact with patient as per infection control guidelines in your health facility.
Section 2
Reference Reading
Basic Facts on HIV and AIDS

In this chapter, you will learn about:

a. Modes of transmission of HIV
b. Prevention of HIV infection
c. Testing guidelines for HIV infection
d. Natural progression of HIV infection
e. Guidelines for treatment of HIV infection

HIV is the short form of Human Immuno Deficiency Virus. As the name suggests, it destroys the immunity of a person infected with the virus. As of today, HIV has no cure. However, medicines are available to control replication of HIV and thereby prolong life.

AIDS is the short form of Acquired Immuno Deficiency Syndrome. It is an advanced state of HIV infection where the body’s immune system is destroyed and therefore a wide range of opportunistic infections affect the body.

Opportunistic infection (OI) is an infection caused by an organism that may not cause illness in a person with healthy immunity but will result in signs and symptoms of a person with weakened immune system.

Types of HIV: There are two types of HIV virus: Type1 and Type2. Both types are prevalent in India although Type 1 is more frequently reported. HIV Type 1 is a more virulent than Type 2. This means that HIV Type 1 transmits easily and is faster to progress. HIV Type 2 is generally milder slower to progress and poorly transmitted. Presence of Type I and Type II in the same person results in rapid progression of the infection.

7.1 HIV Transmission

A person can get infected with HIV only if two conditions are fulfilled:

a. Viral load: A sufficient concentration of HIV in the body fluid is necessary to cause infection. Low concentration of HIV cannot lead to infection
b. Point of entry: HIV must find a way to enter the body
7.1.1 HIV transmission in health facilities

In a hospital environment, exposure to the following body fluids can transmit blood borne infections including HIV:

- Blood
- Cerebrospinal fluid
- Synovial fluid
- Peritoneal fluid
- Pleural fluid
- Pericardial fluid
- Amniotic fluid
- Semen
- Vaginal fluid

In addition to the above, any other body fluid that is visibly contaminated with blood can also transmit the infections. This means that stools, urine, saliva, nasal secretions, vomits, and breast milk can transmit infections only if there is visible blood.

The body fluids can be grouped in three categories – A, B and C as shown in Table 8.

<table>
<thead>
<tr>
<th>Category A</th>
<th>Category B</th>
<th>Category C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood</td>
<td>Sweat</td>
<td>Cerebrospinal Fluid</td>
</tr>
<tr>
<td>Semen</td>
<td>Tears</td>
<td>Amniotic Fluid</td>
</tr>
<tr>
<td>Menstrual Blood</td>
<td>Saliva</td>
<td></td>
</tr>
<tr>
<td>Vaginal Fluid</td>
<td>Skin Oils</td>
<td></td>
</tr>
<tr>
<td>Breast milk</td>
<td>Urine without visible blood</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stools without visible blood</td>
<td></td>
</tr>
</tbody>
</table>

The fluids in Category A have a high enough concentration of HIV for transmission. Contact between body fluids in this category can transmit HIV infection. The fluids in Category B contain very small a concentration of the virus which therefore cannot cause transmit HIV. The fluids in Column C have a high concentration of HIV. They are however not likely to be exchanged between people normally. Hospital staffs who are likely to come in contact with the body fluids in Category C must take precautions to prevent exposure to such fluids.

Activities and services normally performed by various categories of hospital staff that put them at risk of HIV transmission is as shown in Table 9.
<table>
<thead>
<tr>
<th>Category of hospital staff</th>
<th>Probable activities and services that have a risk of HIV transmission</th>
</tr>
</thead>
</table>
| Surgeons                   | • Performing surgeries  
                            • Passing sharps  
                            • Giving intravenous injections or drawing blood  
                            • Wound dressing  
                            • Disposal of sharps and needles |
| Obstetricians              | • Conducting deliveries  
                            • Suturing perineal tears  
                            • Doing vaginal procedures  
                            • Giving intravenous injections or drawing blood  
                            • Disposal of sharps and needles |
| Physicians                 | • Pleural tap  
                            • Abdominal tap  
                            • Giving intravenous injections or drawing blood  
                            • Disposal of needles |
| Nursing staff in OT        | • Assisting in surgeries  
                            • Giving intravenous injections or drawing blood  
                            • Passing sharps  
                            • Dressing surgical wounds  
                            • Disposal of sharps and needles  
                            • Sterilization |
| Nursing staff in labour rooms | • Conducting deliveries  
                            • Assisting in deliveries  
                            • Suturing perineal tears  
                            • Giving intravenous injections or drawing blood  
                            • Disposal of sharps and needles |
| Nursing staff in wards     | • Giving intravenous injections and drawing blood  
                            • Handling urine and faecal matter with visible blood in the bed pan  
                            • Handling soiled linen  
                            • Disposal of used needles used for intravenous injections  
                            • Dressing wounds |
| Laboratory technicians     | • Drawing blood samples  
                            • Handling tissues  
                            • Handling body fluids such as urine and faecal matter with visible blood  
                            • Disposal of needles other infected materials |
| Ward boys/Ayah/Sweeper     | • Cleaning spills of blood and other body fluids  
                            • Handling soiled linen  
                            • Handling urine and faecal matter in bed pans when there is visible blood  
                            • Wastes disposal |
7.1.2 Common modes of HIV transmission

Outside of health settings, HIV is normally transmitted through contact between four body fluids: blood, vaginal fluids, semen and breast milk. Behaviours that can result in contact with these body fluids include:

- Unprotected sexual intercourse
- Blood transfusion
- Sharing needles and syringes
- Parent to child transmission during pregnancy, delivery or breast feeding

Factors that influence the risk of acquiring HIV infection include:

1. Number of sexual partners and rate of partner change
2. Frequency of unprotected sex between partners who are not in mutually faithful relationship
3. Local HIV prevalence rates among the high-risk behaviour groups
4. Types of sexual acts
5. Inconsistent use of condoms, or using condoms incorrectly
6. Presence of sexually transmitted diseases in either of the partners
7. Viral load in the person infected with HIV
8. Type of HIV
9. Practicing more than one risk behaviours, such as engaging in unprotected sexual intercourse and sharing needles and syringes

Unprotected sexual intercourse

The most common route of spread of HIV infection in India is through unprotected sex between partners where either of the two is infected. Unprotected sex means having penetrative sex (anal, vaginal and oral) without condom. Every unprotected sexual intercourse does not lead to HIV infection. Factors that influence sexual transmission of HIV include:

a. **Biological factors:** Women are at greater risk of being infected with HIV through unprotected sex because:
   - Semen from the infected male sexual partner remains in the woman’s vagina for a longer time
   - Larger surface area of vagina provides greater opportunity for the virus to enter the body
A large number of women with sexually transmitted infections (STIs) may not have any symptoms at all. In the absence of any symptoms, STIs are less likely to be treated, thereby increasing the risk of HIV transmission.

b. **Sexually transmitted infections (STIs):** Untreated STIs increase the risk of HIV transmission. Any ulcer or damage to the skin of the penis or mucous lining of the vagina and cervix increases the risk of HIV transmission. STIs that cause ulcers or sores on the genital organs make it easier for HIV to enter the body. Abnormal genital discharge due to some STIs increase the risk of HIV transmission because of the large number of white blood cells.

c. **Type of sex:** Anal sex has a higher risk of transmitting HIV infection as compared to vaginal sex. Although anal sex is more common among men who have sex with men (MSM), a large number of heterosexual partners also practice it. The receptive partner is at greater risk of getting HIV infection as compared to the penetrating partner during anal sex.

Anal sex carriers a higher risk of HIV transmission because:

- Anus does not have the ability to secrete lubricating fluid like vagina. It also does not expand easily like a vagina during sexual intercourse. These two factors increase the risk of damage to the inner lining of anus and rectum. HIV can easily enter the body through the damaged lining.
- HIV stays longer in the rectum of the recipient partner of anal sex. Longer the HIV remains in the body, greater is its opportunity to enter the body.

Vaginal sex carries a lower risk of HIV transmission as compared to anal sex, and yet it is the commonest mode of HIV transmission in the country. This is mainly because of the large number of people who engage in unprotected vaginal sex.

Oral Sex can transmit HIV infection if there is contact with genital fluids and blood through cuts or wounds in the mouth, bleeding gums, etc.

**Blood transfusions**

The risk of HIV transmission through blood transfusion is very high if the blood is infected. Mandatory HIV test before transfusion of blood has greatly reduced this mode of HIV transmission. There is however a small risk in case the infection was in window period. Window period is the duration between the entry of HIV in the body and the detection of antibodies against it through blood test. Antibodies reach detectable levels within three
months. Government’s strategy of giving greater emphasis on voluntary blood donation after a self assessment of risks by donors has further increased safety of blood transfusions.

Parent to child transmission

HIV transmission from mother to child can occur during pregnancy, during delivery and during breast feeding. The greatest risk is during delivery. The risk of transmission is higher if the mother has either acquired the infection recently or is in advanced stage of the disease.

Intravenous injections

Sharing needles and syringes increases the risk of HIV transmission. Such behaviour is commonly observed among injecting drug users. Sharing needles for intravenous use increases the risk of HIV infection because the blood covering the needle will have HIV, which has direct access to the blood of the person who uses it next.

7.1.2 Levels of risk for getting HIV infection

The following situations carry no-risk for acquiring HIV infection:

- Drinking water or eating food from the same utensil used by an infected person
- Using wells or bathing or washing places used by people with HIV
- Getting bitten by a person with HIV
- Socialising or causally living with people with HIV
- Hugging, kissing or shaking hands with a person with HIV.
- Caring and looking after people with HIV
- Casual contact such as sitting next to an infected person, or by coughing or sneezing or from water, food, clothing, utensils, etc.
- Donating blood
- Working with people who are infected with HIV
- Sex between partners who have always been mutually faithful

The following situations carry low-risk for acquiring HIV infection. They are the safer sex practices.

- Deep kissing where no blood is exchanged.
- Mutual masturbation.
- Massaging each other’s bodies.
- Oral sex by a woman on a man wearing a condom.
- Having vaginal or anal sex with a condom.
The following situations carry high-risk for getting HIV and AIDS infection:

- Having vaginal or anal sex with a person without using condoms
- Having sex with a person who has sexually transmitted disease
- Deep kissing where blood is exchanged
- Wearing condoms after contact with the partner’s sexual organs
- Oral sex by either a man or a woman with a man who is not wearing condoms
- Oral sex by either a man or woman with a woman
- Infection of the unborn or newborn child of a pregnant woman with HIV infection
- Sharing injection needles for injecting drugs
- Getting a transfusion with blood or its products that is infected with HIV

The following situations increase the risk of engaging in high-risk behaviour:

- Having alcohol before having sex.
- Having drugs before having sex.
- Having sex when one is emotionally disturbed with feelings of insecurity, anger, frustration, etc.
- Spending time with a partner in privacy without buying condoms in advance.

### 7.1.3 Link between STIs and HIV infection

- Genital ulcers increase the risk of HIV transmission because the virus can easily enter the body through broken skin or mucous membrane
- In case of abnormal genital discharge, more number of HIV is shed and HIV survives longer. This also increases the risk of HIV transmission
- Herpes virus and HIV have a symbiotic relationship. If they occur simultaneously, HIV rapidly progresses to AIDS
- Since both, STIs and HIV infection transmit through unprotected sex, anyone who has STIs is at greater risk of HIV infection because of his/her sexual behaviour. On the other hand, if STIs were treated early and completely, the risk of HIV infection greatly reduces

### 7.2 Prevention of HIV infection

Preventive measures for prevention of HIV infection depend upon the mode of transmission. Detailed below are the preventive measures for healthcare providers and the four common modes of transmission.
7.2.1 Prevention of HIV transmission in healthcare settings

HIV transmission in healthcare settings can be prevented by practicing *universal precautions* consistently and following the recommended guidelines for wastes disposal. Universal precautions are a set of guidelines to protect you and the patients from accidental exposure of disease causing agents (pathogens) present in the blood and other body fluids of the patients. Examples of these disease causing agents are HIV, Hepatitis B virus and Hepatitis C Virus.

**Importance of universal precautions**

People infected with viruses such as HIV, Hepatitis B and Hepatitis C remain asymptomatic for a very long time. They however have the ability to transmit the infection to others through sexual contact and/or contact with various body fluids. This is why universal precautions need to be practiced for all patients because you will not know if they are infected HIV or Hepatitis B and C virus. There are *four* main rules for following universal precautions:

a. Considering all patients as potentially infectious and carrying blood borne pathogens in their blood and body fluids
b. Considering all blood, body fluids and tissues that need universal precautions are contaminated with blood borne pathogens
c. Considering non-sterilised needles and sharps as carriers of blood borne pathogens
d. Assessing and identifying risks before starting any procedure. This is because the type of protection used should be appropriate for the type of procedures to be performed and the type of exposure you expect.

There are *four* main features of universal precautions:

1. Wearing personal protective equipment
2. Preventing injuries with any sharp instruments, needles, etc.
3. Hand washing.
4. Safe decontamination of instruments and other contaminated equipment.

**Guidelines for using protective barriers**

Protective barriers are equipments that reduce the risk of exposure of skin and mucous membrane to infected body fluids. They include gloves, gowns, masks, protective eyewear and shoes. Guidelines for choosing protective barriers for different types of exposure are as shown in Table 10.
Table 10: Guidelines for using protective barriers

<table>
<thead>
<tr>
<th>Level of risk</th>
<th>Procedures that carry risk of exposure</th>
<th>Recommended protective barriers</th>
</tr>
</thead>
</table>
| **Low risk** – contact with skin but without any visible blood | • Injections  
• Minor wound dressing | Gloves are helpful but are not essential |
| **Medium risk** – Possibility of contact with blood or other body fluids, without the risk of a splash | • Vaginal examination  
• Insertion or removal of intravenous cannula  
• Handling of laboratory specimens  
• Dressing large open wounds  
• Cleaning spills of blood  
• Venepuncture (puncturing veins to draw blood) | • Gloves  
• Aprons may be necessary |
| **Medium risk** – probable contact with splash of blood or other body fluids | • Intubation | • Gloves  
• Apron  
• Goggles  
• Mask |
| **High risk** – possibility of contact with blood, splashing or uncontrolled bleeding | • Major surgeries  
• Vaginal delivery | • Gloves  
• Water proof gown or apron  
• Goggles  
• Mask  
• Shoes |

Heavy duty rubber gloves should be used for cleaning instruments, handling soiled linen or when dealing with spills.

Preventing injuries from sharp instruments, needles, etc.

Injuries with sharps can occur either during use or after use. **During the use**, healthcare providers doing the procedure and the assistants are at risk. Solid needles normally cause injury when the needle pricks the tip of the index finger during suturing. Hollow bore needles normally cause injury while drawing blood. The risk of injury is higher when a hand is used instead of tying a tourniquet while giving injections and during a needle biopsy. Other sharps like surgical instruments normally cause injury while they are passed from one person to another.

**After using the sharps**, injury normally happens when:

- Sharps are left on the surfaces and not discarded properly
RecAPPING NEEDLES
Passing sharps and sharp instruments
Attempting to mutilate or bend a needle
Adopting inappropriate methods to discard and sorting sharps

Disposal of needles and sharps

Accidents with needles and sharps are the commonest mode of transmission of blood borne viruses and bacteria to hospital staff. Having two different sizes of specially designed puncture resistant metal containers for sharp disposal can prevent such accidents. The small container needs to be placed on treatment trays and near operating tables, while the larger container needs to be placed in treatment rooms and nursing stations.

The following six steps can prevent injuries due to sharps:

1. Do not recap needles and do not bend them or break them by hand
2. Discard disposable needles and other sharps immediately after use into the puncture resistant containers, which should be located at the site of the procedure
3. If a needle has to be removed from a syringe, use needle forceps and exercise utmost care
4. Do not pass sharps from one person to another. The person who uses the sharp should pick up the instrument and drop it into the sharps container after use
5. During surgery, if sharps need to be passed, use an instrument transit tray and do not pass directly by hand
6. Never overfill a sharps container – all sharps containers should be emptied when they are 75% full

Take care to prevent injuries by sharp instruments, especially with hollow bore needles that have been used for drawing blood from the veins and other procedures that require the needle to enter the veins.

Reducing risk of injuries during surgeries

There are five ways to reduce the risk of injuries during surgery:

1. Not retracting the tissues with hands
2. Ensuring good co-ordination among members of the team
3. Concentrating on the procedure
4. Taking care with cautery tip at all times
5. Avoiding grabbing instruments from the tray – use an intermediate transit tray to reduce accidents while reaching for instruments

Risk of injuries due to needles and sharps can be reduced by:

1. Avoiding needle and sharp tip contact
2. Using instruments to grasp the needle and sharps and not picking them up with fingers.
3. Never retrieving needles and sharps with fingers
4. Moving unused and used sharps out of the surgical field
5. Shielding the scalpel to prevent the surgeon from inadvertantly injuring the assistants.
6. Exercising care with wires and long pins

Risk of injuries while tying sutures can be prevented by tying the knot away from the needle and clamping the needle with the tip in the clamp and then cutting off the suture.

7.2.2 Prevention of sexual transmission of HIV infection

Sexual transmission of HIV can be prevented by adopting ABCD guidelines and prevention and early treatment of STIs.

The ABCD guidelines include:

A. Abstaining from sexual intercourse. This is however difficult many people
B. Being in a mutually faithful relationship
C. Consistent use of condoms
D. Doing non-penetrative sexual intercourse. This means avoiding anal, vaginal or oral intercourse and adopting safer options such as mutual masturbation

In addition to the above, it is also important to reduce the number of sexual partner and reduce the frequency of sexual intercourse.

Syndromic management of STIs: The government has expanded and strengthened the programme for early diagnosis and treatment of STI using an approach called Syndromic Management of STIs. In this approach, simultaneous treatment is given to all infections that cause similar symptoms along with risk reduction counselling. It helps start treatment early, without waiting for laboratory investigations and allows treatment of mixed infections.

7.2.3 Prevention of HIV transmission through needles and syringes

Practice of universal precautions in health care settings prevents transmission of HIV in health facilities. Targeted interventions are implemented in areas with high prevalence of
injecting drug use with an aim to promote safer behaviours including use of safe needles and syringes. The programme has a needle exchange programme where injecting drug users are provided safe needles and syringes and motivated to wean away from a culture of sharing the equipment.

**7.2.4 Prevention of HIV transmission through blood transfusion**

It is mandatory for all blood banks to test all blood for HIV before transfusion. In India, enhanced programme of blood safety has considerably brought down the risk of HIV transmission through blood transfusion. However, as mentioned earlier, there is a very small risk of HIV transmission if the blood is collected in the window period.

NACP’s emphasis on blood safety also lays emphasis on voluntary donation, where prospective donors from a low-risk population do a self assessment of their risks and then donate. A large number of blood banks have also started doing component separation, which means separating various components of blood and transfusing only those that are essential. This ensures a more effective use of blood and blood products.

In case of planned surgeries, some people may opt for autologous blood transfusion, which means that the patient receives his or her own blood that was collected and stored a couple of weeks before surgery.

**7.2.5 Prevention of mother to child transmission of HIV transmission**

The government has accepted recommendations of the Technical Resource Group on PPTCT based on WHO guidelines for reducing mother to child transmission of HIV infection. A decision has been taken to give lifelong ART to all positive pregnant women irrespective of their CD4 count and ARV prophylaxis for HIV exposed infants for at least six weeks.

**7.3 Natural progression of HIV infection**

The natural history of any disease describes the stages through which it passes if no treatment or any other intervention is given. Knowledge of natural history of a disease helps in identifying the stages at which appropriate intervention for prevention or control of the disease can be made.

*How HIV affects the body*

HIV begins to affect the body as soon as it enters it, irrespective of its route. It mainly affects a type of white blood cells called the T helper (CD4) lymphocyte. These cells are responsible
for the body’s immunity. As HIV begins to multiply, the numbers and functions of CD4 cells decline. As a result, the body’s immunity declines. With decrease in body’s immunity, the infected person develops several diseases, such as infections, some types of cancer, etc. The time frame between HIV’s entry into the body and development of AIDS varies from person to person.

**Window period**

As soon as HIV enters the body, antibodies start developing to fight it. The antibody level is however not high enough to be detected through routine blood tests. The period between HIV’s entry into the body and the detection of its antibodies is called window period. It lasts up to three months. During the window period, the infected person has high viral load and has higher risk of HIV transmission to others.

Window period is not the same as incubation period, which is the term used for duration between entry of the pathogen in the body and the first signs and symptoms of illness.

**Asymptomatic period:**

This period ranges from three months after infection to up to two to ten years. During this time, HIV continues to multiply in the body and the immunity keeps declining. The infected person does not, however, have any symptoms. He/she can still transmit the infection to others. Blood tests can detect HIV infection during this period.

The duration of asymptomatic period depends on various factors such as frequency of engaging in high risk behaviours, immunity of the person at the time of infection, lifestyle, nutrition, stress and frequency of illness episodes.

**Symptomatic period:**

After the asymptomatic period which ranges between two to ten years, the infected person begins to get frequent episodes of minor and major ailments. Opportunistic infections begin to affect at this stage. The duration of illness also increases. With ART, a symptomatic person can become asymptomatic for varying periods of time. Some people may also keep shifting between being asymptomatic and symptomatic for many years. Death occurs due to opportunistic infections, which might occur either singly or in groups.

Tb is the most common opportunistic infection in India. All patients with TB are referred for HIV counselling and testing. Similarly, all HIV positive people are routinely screened for TB.
The progression of HIV infection can be measured through CD4 count. Normal CD4 count in healthy adults ranges from 800-1200 cells/mm³. The risk of opportunistic infections increases as the CD4 count drops.

**Figure 6** illustrates the natural progression of HIV infection with and without ART.
7.4 Diagnosis of HIV infection

There are two types of blood tests for detecting HIV infection – screening test and confirmatory test.
Screening test is done by whole blood finger prick test. The results are available in less than half hour. It helps detect the presence of HIV in blood. A person with reactive screening test needs to go for confirmatory tests in order to confirm HIV status. A person with non-reactive screening test does not require repeat HIV test unless confirmatory test is done after counselling and taking informed consent through three rapid antibody tests at the ICTC. Post-test counselling is done while disclosing the test result to the person tested. A person with negative HIV result is tested again after three months to rule out window period. Confidentiality is maintained by ICTC.

7.5 Treatment for HIV infection

As mentioned earlier, HIV infection does not have a cure but can be managed with treatment. A combination of three ART drugs is recommended for all pregnant women, others CD4 less than 350, HIV positive people with TB (irrespective of CD4 count). Benefits of ART include increase in number of CD4 cells, and therefore increase in immunity and a decrease in viral load because of control over multiplication of HIV virus in the body. ART does not stop HIV transmission, but reduces the probability because of reduced viral load.

Once started, ART has to be taken for life. Adherence is very important to prevent drug resistance and to maximise the benefits of viral suppression. Many people find side effects of ART very troublesome. Most side effects subside within 2-3 weeks. Treatment education and counselling, and emotional support during this period makes it easier for positive people to adhere to ART regimen.
The PPTCT Programme

The vision of preventing parent to child transmission (PPTCT) programme is to ensure that women and children are alive and free from HIV.

The goal of the programme is to work towards elimination of HIV in children, and improving maternal, newborn and child health and survival in the context of HIV infection.

There are five objectives to achieve the above goal:

1. To detect HIV infection in pregnant women
2. To provide access to comprehensive PPTCT services to HIV positive pregnant women
3. To provide access to early infant diagnosis (EID) to HIV exposed infants. This means infants born to HIV positive mothers.
4. To ensure access to anti-retroviral drugs (ARV) prophylaxis or anti-retroviral therapy to HIV exposed infants
5. To ensure compliance with ART in HIV positive pregnant women and ARV/ART in HIV exposed children.

The National PPTCT Programme has four approaches for preventing HIV transmission in women and children. These are:

   a. Primary prevention of HIV in general population
   b. Prevention of unintended pregnancies in HIV positive women
   c. Prevention of mother-to-child transmission of HIV
   d. Care, support and treatment of HIV positive mother and HIV exposed child.

Approach 1 – Primary prevention of HIV

This means preventing HIV infection in women, especially in child bearing age. Programmes such as Adolescents Reproductive and Sexual Health (ARSH) can help prevent HIV infection in adolescent girls and women through HIV education, increasing access to condoms and increasing their ability to insist on safer sex. Such activities are carried out by, among others, ANM, AWW, NGOs working for HIV prevention and through mass media.
Approach 2 – Preventing unintended pregnancies among women living with HIV

It is every woman’s right to choose to have, or not have a child irrespective of HIV status. Preventing unplanned and unintended pregnancies among HIV positive women is however important for reducing the number of babies exposed to HIV infection. Family planning counselling is ideally provided to every positive woman in child bearing age at ART centres. It is also helpful if such counselling is given during all contacts with other service providers such as at ICTCs and other health facilities.

Approach 3 – Prevent HIV transmission from HIV positive pregnant women to their babies

Steps should be taken to start three-drug ART for positive pregnant woman when they first
come in contact with health service provider. This can be during antenatal care, during delivery or even during breastfeeding. Every HIV exposed baby is also started on Nevirapine (NVP) prophylaxis at birth and is continued till six weeks of age. The duration of NVP can be increased to 12 weeks in three situations:

a. ART was started during delivery
b. ART was started after delivery
c. Mother has taken ART for less than 24 weeks before delivery. This is because it takes at least 24 weeks after starting ART for viral load to decrease to a level that gives least risk of HIV transmission to the baby

In case the baby is not breastfed at all, NVP is stopped at 6 weeks irrespective of when ART was started on the mother.

**Approach 4 – Provide care, support and treatment to women living with HIV, their children and families**

It is important to prevent HIV transmission from mothers to babies. It is equally important to ensure that HIV positive parent(s) live a long and healthy life. It is also essential that their families provide them with the necessary support. Efforts are therefore necessary to ensure that HIV exposed babies and their parents access ART and other treatment services regularly and avail all other care and support services accessible to them. Family counselling is also provided as necessary at ART Centres and ICTCs, and all other agencies involved in HIV prevention, care and support.

PPTCT services are integrated with general health services such as basic antenatal care (ANC), natal and postnatal services (PNC), sexual reproductive health and family planning, early infant diagnosis (EID), paediatric ART, ARSH, TB (tuberculosis) and services related to sexually transmitted infections (STIs) and reproductive tract infections (RTIs). Special efforts are made to strengthen postnatal care to HIV infected mothers and their infants.

**8.1 The Essential Package of PPTCT Services**

The PPTCT programme provides access to all pregnant women to services related to diagnosis, prevention, care and treatment of HIV infection. The main purpose is to integrate PPTCT services delivery within existing Reproductive and Child Health (RCH) programme. A total of *eleven* services are included in the Essential Package of PPTCT services. Of these, 2 are for greater involvement of families, 5 are for the positive women and 4 for HIV exposed infants (HEI).
Greater involvement of families:

1. Moving from “ANC centric” approach to a “Family centric” approach and ensuring involvement of spouse and other family members

2. Strengthen follow-up and outreach through ANMs, ASHAs and District level networks and other outreach workers to support HIV infected pregnant women and their family.

Services for the mother:

3. Offering group or individual counselling routinely to all pregnant women attending antenatal clinics and then testing all pregnant women with ‘opt out’ option

4. Providing three-drug ART to all HIV infected pregnant and breast feeding women for life.

5. Providing nutrition counselling and psychosocial support for HIV positive pregnant women. Nutrition support is given by establishing linkages with ANM, ASHAs, Community outreach workers and District Level Networks of Positive People (DLNs) to advise them on the right foods to take. DLNs also offer peer counselling and psycho-social support

6. Providing care for associated conditions such as STI, RTI, TB & other Opportunistic Infections (OIs)

7. Promote institutional delivery for all HIV positive pregnant women. ANMs, ASHAs or other community workers need to accompany the positive pregnant woman for institutional delivery. Sensitisation and capacity building of health care providers at all levels is done to reduce stigma and discrimination of positive pregnant women.

Services for the HIV exposed infant

8. Providing counselling and support for initiation of exclusive breastfeeding within an hour of delivery and continue exclusive breastfeeding for six months. After six months, complementary feeding should be given along with breastfeeds. A small number of babies born to HIV infected mothers who have serious illness or have died and a few reluctant mothers (who at their own risk despite counselling) may decide not to breastfeed but adopt exclusive replacement feeding (ERF).

9. Provide ARV prophylaxis to infants from birth up to a minimum period of 6 weeks.
10. Integrate follow-up of HIV-exposed infants (HEIs) into routine healthcare services including immunization.

11. Ensure initiation of Co-trimoxazole Prophylactic Therapy (CPT) and Early Infant Diagnosis (EID) at 6 weeks of age and follow the EID guidelines subsequently.

The PPTCT programme requires that all pregnant women are offered HIV counselling and testing services. The National AIDS Control Organisation (NACO) and National Health Mission (NHM) have given greatest emphasis on all pregnant women learning about their HIV status as a routine part of antenatal screening blood tests. Other services for pregnant women based on their HIV status and services for the HIV exposed infants are as listed below.

Services for HIV negative pregnant women include:

- Safe sex counselling
- Couple counselling
- Linkages to family planning services
- Distribution of free condoms
- Behaviour change communication (BCC) for high risk women and their sexual partners
- Repeat HIV testing, considering window period if spouse/partner is positive or if the pregnant woman or her partner has high risk behaviour
- Infant feeding and nutrition counselling

Services for HIV positive pregnant women include:

- Antenatal care – at least four visits should be ensured
- Counselling on choices of continuation or medical termination of pregnancy (MTP) within the first 3 months of pregnancy
- Screening for TB and other opportunistic infections (OIs)
- Screening and treatment for STIs
- WHO clinical staging and CD4 testing
- Counselling on positive living, safe delivery, birth-planning and infant feeding options
- Couple and safe sex counselling and HIV testing of spouse/partner and other living children.
- Linkage to ART services
- Provide ART regardless of clinical stage and CD4 count
- Nutrition counselling and linkages to Government/other nutrition programmes
- Family Planning Services
- Exclusive breastfeeding reinforcement and infant feeding support through home visits
Psycho-social support through follow-up counselling, home visits and support groups

Services for HIV exposed infants include:

- Exclusive breastfeeds up to 6 months and continued breastfeeds in addition to complementary feeds after 6 months up to 1 year for Early Infant Diagnosis (EID) negative babies and up to 2 years for EID positive babies who receive Paediatric ART
- Postpartum NVP prophylaxis for infant for minimum 6 weeks
- EID at 6 weeks of age; repeat testing at 6 months, 12 months and 6 weeks after cessation of breastfeeds
- Co-trimoxazole prophylaxis from 6 weeks of age
- HIV care and Paediatric ART for infants and children diagnosed as HIV positive through EID
- Growth and nutrition monitoring
- Immunizations and routine infant care
- Gradual weaning after 6 months and introduction of complementary feeds from 6 months onwards along with continuation of breastfeeding for at least 1 year for adequate growth and development of the child
- Confirmation of HIV status of all babies at 18 months using all 3 rapid antibody tests

8.2 General Principles

The general principles related to PPTCT services are as follows:

- Informed consent should be taken from all antenatal cases as per guidelines
- Individual and group counselling should be done to inform all pregnant women about comprehensive package of antenatal screening including HIV testing and its benefits. It also includes routine antenatal screening tests such as haemoglobin (Hb %), Urine albumin/sugar, VDRL/RPR, blood grouping & typing
- Pregnant Women who opt-out of HIV testing should be offered repeat counselling to explore the reasons for opting out, address any misunderstandings and encourage them to reconsider their decision. These women should be offered routine HIV testing at each subsequent clinic visit
- Post-test counselling for all pregnant women should be done based on the results of HIV test. Those with negative HIV test results should be educated on remain negative for life. Those with HIV positive tests result should receive counselling, support and referrals to care and treatment services
Pregnant women referred by ANMs after reactive whole blood screening test should also undergo pre-test counselling and follow the usual HIV testing protocol at the stand-alone ICTCs for confirmatory tests.

Disclosure of HIV status is to be done only at stand-alone ICTCs after appropriate confirmatory testing as per laboratory guidelines (post-test counselling) and only by trained health staff (MO, Nurse or Counsellor).

All pregnant women referred to other HIV services including ART Centre, should be tracked to ensure that they actually reach the services, and have been registered at the respective centres.

Husband/partner and other children, if any, should be tested for HIV as per ICTC guidelines.

Husband/partner involvement during the pregnancy and thereafter is important. Couple counselling should be done for mutual psycho-social support, linking mother to the ART Centre, giving regular ARV prophylaxis to the baby and for family planning.

8.3 Antenatal screening for HIV, Syphilis and TB

The ANM at the village or sub-centre level does screening test for HIV and Syphilis using whole blood finger prick test. If the Syphilis test is reactive, the pregnant woman is referred to designated STI/RTI clinics or PHC with RPR testing facility for confirmation of Syphilis. If the HIV test is reactive then the pregnant woman is referred to stand alone ICTC for confirmation of HIV by three rapid tests. The patient then undergoes pre-test counselling at the ICTC by the ICTC counsellor. The ICTC collects 5 ml blood for HIV rapid tests and RPR test. After HIV and RPR testing, the patient returns to the ICTC counsellor for post test counselling. During post-test counselling the ICTC counsellor provides the HIV and syphilis test report and counsels the patient to go to the STI/RTI clinic for further follow-up and advice from the STI/RTI counsellor and Medical officer for treatment if required.

The ANM also checks for TB symptoms and refers pregnant women to designated microscopic centre (DMC) at PHC if there is a persistent cough of any duration. It may be accompanied by one or more symptoms including weight loss, chest pain, tiredness, shortness of breath, and fever, particularly rise of temperature in the evening. Some women may also have blood in the sputum, loss of appetite and night sweats. All HIV positive pregnant women are referred to Revised National Tuberculosis Control Programme (RNTCP) for TB diagnosis and treatment at the earliest. Figure 8, Figure 9 and Figure 10 describe the services to be offered to pregnant women related to screening for HIV infection, syphilis and tuberculosis respectively.
Figure 8: Services to pregnant woman during antenatal period related to HIV infection

1. Screening test for HIV
   - Provide group or individual pre-test counselling
   - Offer HIV test
   - **Agrees for test:**
     - Do Finger Prick Whole Blood Test for HIV screening
   - **HIV Negative**
     - Post test counselling, information and support
     - HIV Negative
       - Post test counselling, information and support
       - Refer to ART Centre for CD4 test, TB screening and clinical staging. Important to ensure that pregnant woman reaches ART centre and ART is started without delay, or waiting for CD4 and other laboratory reports
   - **HIV Reactive**
     - Post test counselling, information and support
   - **HIV Reactive**
     - Do confirmatory tests for HIV and RPR (if not done earlier)

2. Screening test for syphilis
   - Repeat counselling
   - Offer HIV test at each subsequent visit
   - **Agrees for test:**
     - Refer to ICTC for confirmation of HIV infection
   - **HIV Reactive**
     - Do confirmatory tests for HIV and RPR (if not done earlier)

3. Screening test for TB
   - Offer HIV test at each subsequent visit
   - **Refuses test or opts out**
     - Repeat counselling
     - Offer HIV test at each subsequent visit
   - **Agrees for test:**
     - Refer to ICTC for confirmation of HIV infection
Figure 9: Services to pregnant women during antenatal period related to Syphilis

1. Screening test for HIV
2. Screening test for syphilis
3. Screening test for TB

Do Finger Prick Whole Blood test for syphilis screening. Ask for more than one syndrome or condition, check for vaginal or cervical discharge, genital or ano-rectal ulcer, blisters or discharge, lower abdominal pain or tenderness, inguinal bubo, genital or anal warts, genital scabies, genital pediculosis

Syphilis screening test reactive

Refer to PHC or STI clinic for symptomatic treatment and RPR test for confirmation

RPR Positive

Continue treatment. Advise condom use and partner treatment
8.3.1 Sexually transmitted infections and reproductive tract infections

Sexually transmitted infections (STIs) and reproductive tract infections (RTIs) are known to cause infertility and increase the risk of acquiring HIV infection. Controlling STIs helps prevent HIV infection and provides opportunities for counselling about HIV prevention and reproductive health.

As mentioned earlier, syndromic case management (SCM) is the cornerstone of STI and RTI management that is endorsed by the WHO. This approach classifies STIs and RTI into syndromes, which are easily identifiable groups of symptoms and signs and provides treatment for the most common organisms causing the syndrome. It achieves high cure

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**Figure 10: Services to pregnant women during antenatal period related to TB**

1. Screening test for HIV
2. Screening test for syphilis
3. Screening test for TB

Refer pregnant woman to PHC with designated microscopic centre (DMC) if any of the above symptoms present

TB confirmed at DMC

Start anti-TB treatment
rates as it provides immediate treatment without waiting for laboratory investigations and is accompanied by risk reduction counselling and support, which includes partner treatment, condom promotion, counselling for preventing similar infections in future and referral for HIV testing. Table 11 lists the treatment recommended for various syndromes.

Table 11: Syndromic management of STIs and RTIs

<table>
<thead>
<tr>
<th>Syndrome</th>
<th>Treatment</th>
<th>Colour coded kits for treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urethral discharge</td>
<td>Tab. Azithromycin 1 g (1) and Tab. Cefizine 400 mg (1)</td>
<td>Grey</td>
</tr>
<tr>
<td>Cervicitis</td>
<td>Tab. Secnodazole 2 g (1) and Tab. Fluconazole 150 mg (1)</td>
<td>Green</td>
</tr>
<tr>
<td>Ano rectal discharge</td>
<td>Inj. Benzathine penicillin 2.4 MU (1) and Tab. Azithromycin 1 g (1)</td>
<td>White</td>
</tr>
<tr>
<td>Painful scrotal swelling</td>
<td>Tab. Doxycycline 100 mg (30) and Tab. Azithromycin 1 g (1)</td>
<td>Blue</td>
</tr>
<tr>
<td>Presumptive treatment</td>
<td>Tab. Acyclovir 400 mg (21)</td>
<td>Red</td>
</tr>
<tr>
<td>Vaginitis</td>
<td>Tab. Cefixime 400 mg (1) and Tab. Metronidazole 400 mg (28) and Cap. Doxycycline 100 mg (28)</td>
<td>Yellow</td>
</tr>
<tr>
<td>Genital ulcer disease – non herpetic</td>
<td>Tab. Acyclovir 400 mg (21)</td>
<td>Red</td>
</tr>
<tr>
<td>Genital ulcer disease – non herpetic: for patients allergic to penicillin</td>
<td>Tab. Doxycycline 100 mg (42) and Tab. Azithromycin 1 g (1)</td>
<td>Black</td>
</tr>
<tr>
<td>Lower abdominal pain</td>
<td>Tab. Acyclovir 400 mg (21)</td>
<td>Red</td>
</tr>
<tr>
<td>Inguinal bubo</td>
<td>Tab. Cefixime 400 mg (1) and Tab. Metronidazole 400 mg (28) and Cap. Doxycycline 100 mg (28)</td>
<td>Yellow</td>
</tr>
</tbody>
</table>

8.3.2 HIV-TB collaborative activities

The risk of active tuberculosis (TB) is about ten times higher in HIV-infected pregnant women compared to HIV uninfected women. Active TB in HIV-infected pregnant women can contribute to increased risk of maternal mortality, and is also associated with prematurity, low birth weight, and perinatal tuberculosis among infants. A recent study in India found that maternal TB increases the risk of HIV transmission from mother -to child by 2.5 times. The key TB prevention interventions recommended by World Health Organization at HIV care settings include airborne infection control at HIV care settings and Isoniazid Preventive Therapy (IPT). NACP is currently implementing airborne infection control measures like fast tracking of cough symptomatic patients, promotion of cough hygiene etc. at ART centres. Further, the National Technical Working Group (NTWG) on TB-HIV collaboration, at NACO
endorsed IPT as a strategy and recommended its implementation at all ART centres in the country. This activity is planned for roll-out in 2014-15.

Along with TB prevention, early detection and treatment of HIV-TB are also important for reducing mortality. The NACP and Revised National TB Control Programme (RNTCP) implement various activities jointly to ensure early detection and treatment. These include:

Activities for early detection of HIV associated TB

- HIV testing of presumptive TB cases
- HIV testing of diagnosed TB patients
- Intensified TB case finding (ICF) at ICTC
- ICF at ART centres

Activities to ensure early treatment of HIV

- Linkage of HIV-TB cases to ART
- Initiation of HIV-TB cases on ART

HIV testing of presumptive TB cases: Detection of HIV by offering HIV tests to diagnosed TB patients is being implemented by NACP and RNTCP jointly since 2007-08. NACP and RNTCP offer HIV test during evaluation of patients with TB symptoms. This activity is expected to expedite detection of HIV by 2-4 weeks, leading to early linkage to treatment and hence reduction in mortality.

Intensified TB case finding at ART centres: ICF at ART centres is implemented since 2010 and it is now implemented at all ART centres, Link ART centres and Link ART plus centres.

8.4 Care and assessment of HIV infected pregnant women

HIV infected pregnant women may present to ICTCs and ART centres at various stages of pregnancy as indicated in Table 12. Pregnant Women who are detected to be HIV infected during antenatal care are initiated on ART (TDF+3TC+EFV) regardless of clinical stage or CD4 count. However, it is important to obtain sample of blood for CD4 count and for baseline tests before initiating ART. The initiation of ART should not be delayed for want of CD4 test results. Pregnant women who are detected to be HIV infected by screening test (by one test kit) during active labour should be initiated on ART but should be referred for confirmation of HIV status at the earliest and linked to ART centre, if confirmed positive. Table 12 provides summary of maternal lifelong ART and infant ARV for different clinical scenarios.
Table 12: Summary of maternal lifelong ART and infant ARV prophylaxis in different clinical scenarios

<table>
<thead>
<tr>
<th>Scenarios</th>
<th>Different clinical scenarios</th>
<th>Maternal ART</th>
<th>Infant ARV prophylaxis</th>
<th>Duration of infant ARV prophylaxis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mother diagnosed with HIV during pregnancy (first trimester)</td>
<td>Initiate maternal ART</td>
<td>NVP</td>
<td>6 weeks</td>
</tr>
<tr>
<td>2</td>
<td>Mother diagnosed with HIV during second or third trimester, labour or immediately postpartum and plans to breastfeed</td>
<td>Initiate maternal ART</td>
<td>NVP</td>
<td>Extending NVP to 12 weeks</td>
</tr>
<tr>
<td>3</td>
<td>Mother diagnosed with HIV during labour or immediately postpartum and plans to exclusively breastfeed</td>
<td>Initiate maternal ART</td>
<td>NVP</td>
<td>12 weeks</td>
</tr>
<tr>
<td>4</td>
<td>Infant identified as HIV exposed after birth (at 6 weeks or after) or maternal HIV antibody testing positive after delivery and is breastfeeding</td>
<td>Initiate maternal ART</td>
<td>NVP</td>
<td>Perform infant DNA/PCR if child is 6 weeks old or older. Immediately initiate NVP and continue for 12 weeks</td>
</tr>
<tr>
<td>5</td>
<td>Infant identified as HIV exposed after birth (through infant or maternal HIV antibody testing) and is not breastfeeding</td>
<td>Refer mother to ART centre after CD4 tests and baseline test and treatment</td>
<td>NVP</td>
<td>NVP for 6 weeks. Do HIV DNA/PCR test as per national guidelines on EID if the child is 6 weeks or older. Initiate treatment if infant is infected</td>
</tr>
<tr>
<td>6</td>
<td>Mother receiving ART but interrupts ART regimen while breastfeeding</td>
<td>Determine alternative ART regimen or solution, counsel regarding continuing ART without interruption</td>
<td>NVP</td>
<td>Until 6 weeks after maternal ART is restarted or until 1 week after breastfeeding has ended</td>
</tr>
</tbody>
</table>
8.4.1 Criteria for ART initiation

Initiation of ART in pregnant women needs to be done at the earliest and after adequate treatment preparedness for adherence to maintain her own health and also to prevent HIV virus transmission to the unborn baby. In HIV infected pregnant women the dictum should be “do not delay ART initiation”. ART is to be initiated lifelong in all pregnant women with confirmed HIV infection regardless of WHO clinical staging or CD4 cell count. TDF+3TC+EFV is recommended as first line ART in pregnant and breastfeeding women, including pregnant women in first trimester of pregnancy and women of childbearing age. ART has to be always initiated only at the ART Centre (the only exception is direct in labour cases where ART is initiated in the labour room).

8.4.2 Indications for co-trimoxazole prophylactic therapy (CPT) in pregnancy

The indications for co-trimoxazole initiation in pregnant women are same as those for other adults, which is CD4 ≤ 250 cells/mm$^3$. Co-trimoxazole prophylaxis helps reduce morbidity and mortality as it prevents Opportunistic Infections (OIs) such as Pneumocystis jiroveci pneumonia (PCP), toxoplasmosis, diarrhoea and other bacterial infections.

Co-trimoxazole should be continued through pregnancy, delivery and breastfeeding as per national guidelines. The dose is one double strength tablet every day. It is also important to ensure that the pregnant women taken their folate supplements regularly.

8.5 ART for pregnant women

All HIV infected pregnant women are seen as a priority in the ART centres. They should receive lifelong ART irrespective of their CD4 count and WHO clinical staging. This treatment has two main purposes: improving health and prolonging survival of the mother, and reducing the risk of HIV transmission from mother to child during pregnancy, delivery and breastfeeding.

HIV infected pregnant women initiated on ART are referred for routine baseline clinical and laboratory evaluation as per national guidelines for adults and adolescents. The absence or delay of laboratory investigations should not prevent initiation of ART.

Pregnant women who are already receiving ART for their own health should continue to receive the same regimen throughout pregnancy, labour and breastfeeding period, and thereafter lifelong. The treatment should not be changed if the positive pregnant woman has stabilised on the regimen she is taking and is responding adequately.
8.5.1 First line regimen

As mentioned earlier, all HIV infected pregnant women should start ART as soon as possible and continue ART throughout pregnancy, delivery, breastfeeding and thereafter lifelong. Even if pregnant women present late in pregnancy, ART should be initiated immediately.

- The recommended first line regimen is once daily fixed dose combination of Tenofovir (TDF) 300 mg + Lamivudine (3TC) 300 mg + Efavirenz (EFV) 600 mg. This regimen is to be given only if there has been no previous exposure to Nevirapine or Efavirenz.

- Infants of mothers who are receiving ART and are exclusively breastfeeding or doing exclusive replacement feeding should receive at least six weeks of infant prophylaxis everyday with Nevirapine syrup. Infant prophylaxis should begin at birth or when HIV exposure is known.

The recommended first-line regimen for pregnant and breastfeeding women is safe for both pregnant and breastfeeding women and their infants. It is well tolerated, has low monitoring requirements and is compatible with other drugs used in clinical care. It is also harmonised with the new recommendations for non-pregnant women as well as for men.

Alternate regimens for pregnant women who are unable to tolerate preferred first line regimen are:

- Zidovudine (AZT) + Lamivudine (3TC) + Efavirenz (EFV)
- Zidovudine (AZT) + Lamivudine (3TC) + Nevirapine (NVP)
- Tenofovir (TDF) + Lamivudine (3TC) + Nevirapine (NVP)

8.5.2 ART regimen for pregnant women with previous exposure to NVP or EFV

HIV infected pregnant women who have had previous exposure to SD-NVP for PPTCT prophylaxis in previous pregnancies or ART regimen with either Nevirapine or Efavirenz should be given one tablet everyday of TDF + 3TC and two tablets twice a day of LPV 200 mg/r 50 mg (Lopinavir/ritonavir).

8.5.3 Clinical and laboratory monitoring of pregnant women receiving ART

In addition to the national guidelines for clinical and laboratory monitoring of HIV infected adolescents and adults, the following points need focus among HIV positive pregnant women:
- Anaemia is common during pregnancy, especially around 28-34 weeks of pregnancy. Clinically significant anaemia should be looked for among HIV-infected pregnant women and timely corrective measures taken.

- WHO clinical staging is done to monitor the pregnant woman clinically to assess potential disease progression or treatment failure. Liver function tests and renal function tests should also be done if clinical signs indicate a need.

- Weight loss is one of the indicators used to determine deteriorating clinical stage, but this can be difficult to assess during pregnancy. When defining the clinical stage of a pregnant woman, it is necessary to take into consideration her expected weight gain in relation to the gestational age of the pregnancy and her potential weight loss from HIV.

- ART-related side-effects may overlap with that of common pregnancy conditions such as nausea and vomiting. Minor symptoms should be controlled symptomatically with medicines that are safe for use in pregnancy. Table 13 lists the major side effects of common ART drugs.

- Absolute CD4 cell count decreases during pregnancy because of pregnancy-related haemo-dilution. After delivery, when the body fluid changes to the non-pregnant state, and CD4 levels may rise by 50-100 cells/ul. Therefore, a decrease in absolute CD4 count in a pregnant woman receiving ART in comparison to CD4 values prior to pregnancy may not necessarily indicate immunologic decline and should be interpreted with caution. In case of a doubt, the pregnant woman is referred to the State AIDS Clinical Expert Panel (SACEP).

After 6 months of pregnancy, in case a pregnant woman is unable to go to the ART centre, the ART drugs can be given to an authorised member of her family. The drug dispensing to an authorised member can continue for 2 more months after delivery.

**Table 13: Common side effects of ART drugs**

<table>
<thead>
<tr>
<th>Name of drug</th>
<th>Major side effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tenofovir (TDF)</td>
<td>Toxicity of the kidneys. Abnormally low level of phosphates in the blood</td>
</tr>
<tr>
<td>2. Lamivudine (3TC)</td>
<td>Very few side effects. Some people have hypersensitivity Rarely inflammation of the pancreas</td>
</tr>
<tr>
<td>3. Efavirenz (EFV)</td>
<td>Neuro-psychiatric symptoms such as hallucinations, suicidal thoughts, nightmares, vivid dreams, etc.</td>
</tr>
<tr>
<td>Name of drug</td>
<td>Major side effects</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| 4. Lopinavir/ritonavir (LPV/r) | Disturbances of the digestive system  
Glucose intolerance  
Increased lipids in the blood  
Abnormal or degenerative conditions of the body’s fat tissue |

**8.6 Care of the HIV exposed infants**

Infants born to HIV infected women receive some protection from mother to child transmission of HIV from mother’s ART drugs. They however need additional protection during labour and breast feeding, especially if the mother has started ART late in pregnancy, has not taken ART regularly during pregnancy and does not have full effect of ART in terms of reducing number of HIV in the blood. ARV prophylaxis is therefore recommended for all HIV exposed infants for six weeks, irrespective of whether the baby is breastfed or not. The duration of prophylaxis is increased by another six weeks in case the baby is being breast fed and the mother had not received ART regularly for at least 24 weeks before delivery.

Details of dose and duration of daily Nevirapine prophylaxis for infants is given on page 39.

At six weeks, co-trimoxazole prophylaxis (CPT) is started and continued till the baby is 18 months of age. In case the baby tests positive for HIV infection in the confirmatory test, CPT is continued. Routine immunisation is given to the baby at six weeks, which includes first dose of OPV and DPT and second dose of Hepatitis B vaccine.

Test for early infant diagnosis is also done at six weeks through dried blood sample (DBS) for all HIV exposed infants. If the test is positive, a whole blood sample (WBS) is taken for further testing. In case WBS is positive, paediatric ART is started irrespective of CD4 cell count for babies less than two years.

In case the mother is breastfeeding the baby, she is educated on the dangers of mixed feeding. She should be informed that giving anything other than breast milk can increase the risk of HIV transmission to her baby. She should not give formula milk, cow’s milk or dairy milk, or any other liquid such as juices and water.

**Five Dos for infants at 6 weeks**

It is important to do the following for infants at 6 weeks:

1. Reinforcement of exclusive breastfeeding for first 6 months. Continuation of breastfeeds with introduction of complementary feeds after 6 months
2. EID testing
3. Starting immunisation
4. Starting co-trimoxazole prophylaxis (CPT) and continued till the baby is 18 months old. The prophylaxis is continued longer if the baby tests positive for HIV at 18 months, and
5. Continuing NVP prophylaxis for another 6 months IF the mother had not taken ART for at least 24 weeks for delivery OR the mother had not complied with the recommended ART regimen

8.6.1 Infant feeding practice

The National Family Health Survey, Phase 3 (NFHS-3) done during 2005-06 has shown that 57% of women of child bearing age have anaemia and about 30% infants are born underweight. If the nutritional status, especially anaemia is not corrected by two years of age, the children have irreversible changes in growth and development, including intellectual development. The national guidelines on feeding for HIV exposed and infected infants recommend exclusive breastfeeding for at least six months. Exclusive replacement feeding should be considered only if breastfeeding cannot be done either because the mother has died or is severely ill. In some instances, a woman may choose exclusive replacement feeding despite repeated counselling. If so, it should be recommended only if AFASS criteria are fulfilled as follows:

Affordable: The mother or caregiver can reliably afford to provide sufficient replacement feeding (milk) to support normal growth and development of the infant

Feasible: It is feasible for mother or caregiver to give exclusive replacement feeding for six months

Acceptable: The family is supportive of exclusive replacement feeding and accepts it without forcing the mother to breastfeed

Sustainable: The mother and the caregiver can sustain sufficient replacement milk for the first six months

Safe: Safe water and sanitation are assured at the household level and the community for preparing clean feeds and the mother or caregiver can prepare it frequently enough in a clean manner so that it is safe and carries a low risk of diarrhoea and malnutrition

After six months, complementary feeding should be introduced gradually, irrespective whether the infant is diagnosed positive or negative by EID. The breastfeeding should be continued up till 12 months for infants diagnosed to be HIV negative. It is important to ensure that the mother is taking ART regularly throughout breastfeeding.

In case two EIDs are negative, a third EID is repeated six weeks after stopping breastfeeding. In case the DBS is positive, WBS test is done. If it is positive, ART is started for the baby. Confirmation of HIV test is done at 18 months using 3 rapid antibody tests for all babies.
irrespective of whether the earlier EID was positive or negative, and irrespective of whether the baby was put on paediatric ART.

For babies put on paediatric ART, breastfeeding is recommended until baby is two years old.

Breastfeeding should not be stopped abruptly and should be gradually decreased over a month before it is stopped.
Safer surgical techniques are useful in conducting any operative procedures such as Caesarean section, repairing wounds and lacerations, etc. These are as described below:

- Use “dry” haemostatic techniques to minimise bleeding such as observing and following surgical fascial planes during dissection, judicious use of electro-cautery during Caesarean section, etc.
- During Caesarean section, the membranes should be left intact until the head is delivered through the surgical incision. The cord should be clamped as early as possible after delivery
- Round-tip blunt needles should be used for Caesarean section
- Fingers should be used to hold the needle
- Forceps should be used to receive the needle
- Good practices for transferring sharps to surgical assistant such as holding container for sharps
Labour room requirements and maintenance

The Indian Publish Health Standards (IPHS) have listed the following ten requirements for a fully equipped and operational labour room:

1. A labour table
2. Suction machine
3. Facility for oxygen administration
4. Sterilization equipment
5. 24-hour running water
6. Electricity supply with back-up facility (generator with POL)
7. Attached toilet facilities
8. Newborn Corner as per details described on page 116.
9. Emergency drug tray which has the following seven drugs:
   a. Inj. Oxytocin
   b. Inj. Diazepam
   c. Tab. Nifedipine
   d. Inj. Magnesium sulphate
   e. Inj. Lignocaine hydrochloride
   f. Inj. Methyl ergometrine maleate
   g. IV Haemaccel
   h. Sterilised cotton and gauze
10. Delivery kits, including those for normal delivery and assisted deliveries. Privacy of a woman in labour should be ensured as a quality assurance issue.

The recommended infrastructure for a labour room includes:

- A well lit (preferably shadow-less) and ventilated room that is at least 3.8 m x 4.2 m in size
- Separate areas for septic and aseptic deliveries
- Attached toilet
- Drinking water facilities, and
- Designated areas for dirty linen, baby wash and sterilisation.

It is essential that you follow standard treatment protocols for common problems during labour and for newborns in the labour room. The labour room should have restricted entry.
and separate foot wear should be used. You also need to ensure that all the essential drugs and equipment (functional) are available. It is important to maintain the labour room clean by washing and mopping with disinfectants regularly. Guidelines for keeping labour room sterile at all times are described on page 116.

IPHS guidelines also list the following desirable criteria for labour room:
- Delivery kits and other instruments shall be autoclaved where facility is available.
- If labour room has more than one labour table then the privacy of the women must be ensured by having screens between 2 labour tables.

### 10.1 Configuration of New Born care corner

- A clear floor area should be provided in the room for newborn corner. It is a space within the labour room, 20-30 sq ft in size, where a functional radiant warmer is to be kept. This space provides an acceptable environment for most uncomplicated infants born at full term. Services to be provided at the newborn care include (a) care at birth, (b) resuscitation, (c) provision of warmth, (d) early initiation of breastfeeding and (e) weighing of the neonate

- Oxygen, suction machine and simultaneously-accessible electrical outlets should be provided for the newborn infant in addition to the facilities required for the mother. *Both Oxygen Cylinder and Suction Machine should be functional with their tips cleaned and covered with sterile gauze etc for ready to use condition.* They must be cleaned after use and kept in the same way for next use. Clinical services provided here are administration of oxygen and airway suctioning

- Resuscitation kit including Ambu Bag (Paediatric size) should be placed in the radiant warmer

- Provision of hand washing and containment of infection control should be available if it is not a part of the delivery room.

- The area should be away from draught of air, and should have power connection for plugging in the radiant warmer.

### 10.2 Ensuring sterile environment in labour rooms

Maintaining a sterile environment in labour rooms at all times is essential for eliminating the risk of infections in the woman during delivery and the newborn. The same measures are relevant even for delivery of HIV positive pregnant women. *General measures* towards maintaining a sterile labour room require that:

- Unnecessary entry to the labour room is restricted
All staff members in the labour room wear mask while in the labour room
Hospital staff helping a woman delivery wear caps, mask, shoes or slippers and gown, and
Individual autoclaved instrument set is provided for each delivery

**Monitoring of the sterile environment** is done by:

- Taking random swab sampling form surfaces and disinfected articles every month, and
- Doing air quality sampling using Settle Plate method every month

In addition to the above, steps to keep labour rooms sterile include:

a. Cleaning and disinfection every morning
b. Cleaning and disinfection after every delivery, and
c. Need-based fogging

### a. Cleaning and disinfection every morning

The following cleaning and disinfection activities should be done at the beginning of each day after wearing utility gloves:
- Cleaning floors and sinks with detergent (soap water) and keeping the floor dry at all times
- Cleaning table tops and other surfaces such as light shades, almirahs, lockers, trolley, etc. with lock level disinfectant such as phenol (carbolic acid 2%)
- Cleaning monitor machines with 70% alcohol

The floor should also be mopped every three hours with disinfectant solution.

### b. Cleaning and disinfection after every delivery

Wearing utility gloves is also necessary for the following cleaning activities that should be done after every delivery:
- The spillage of blood or other body fluids on the floor, if any, should be absorbed with newspaper, which has to be discarded in the yellow bin. The area should be soaked in bleaching solution for ten minutes and mopped
- Placenta should be discarded in the yellow bins
- Waste and gloves should be discarded in designated bins and not on the floor
- Soiled linen should be discarded in the laundry basket and not on the floor. They should be disinfected with bleaching solution before washing and then autoclaving
- The table top should be cleaned with phenol of bleaching solution
c. Need-based fogging

Fogging is required after construction or renovation work in the health facility and after an infectious outbreak. It is done by:

- Using H$_2$O$_2$ based commercially available disinfectant meant for fogging and mopping
  Spraying or mopping liberally in the room and on table tops in case fogging equipment is not available and allowing 30 minutes contact time. It is not necessary to shut down labour room