Ministry of Public Health
National AIDS Control Program

Prevention of Parent-to-Child Transmission of HIV in Afghanistan
NATIONAL GUIDELINE

Kabul, Afghanistan
July 2009
Prevention of Parent-to-Child Transmission of HIV in Afghanistan

NATIONAL STRATEGY AND GUIDELINES 2009-10

Islamic Republic of Afghanistan
Ministry of Public Health
National AIDS Control Program
Kabul, Afghanistan
July 2009
Foreword – Suggested only

Stopping HIV infection from becoming established in Afghanistan and providing care and treatment for those affected are priorities for the Government.

The reported HIV prevalence remains well below 1% overall (and below 5% in more at-risk populations who currently represent the majority of infections). Nevertheless, a major effort will be needed to stop the epidemic from spreading into the general population. The prevention of parent-to-child transmission (PPTCT) of HIV is an important element of this effort, and of our Afghanistan National AIDS Strategic Framework, 2006-10.

In a low prevalence setting like Afghanistan, PPTCT requires both broad-based and carefully targeted interventions that are integrated into our Basic Package of Health Services. Broad-based interventions to prevent HIV infections in the wider community will reduce the risk of HIV infection in women of child-bearing age, and interventions targeted at more at-risk populations can ensure they access prevention and treatment services and minimise their risk of unintended pregnancies.

Should a pregnancy occur in a family affected by HIV, we must be able to draw on sound, evidence-based interventions to prevent infection passing to the baby. The new National Strategy and Guidelines on PPTCT draw on the latest available evidence for managing pregnancies affected by HIV. They include a Quick Reference Guide for busy clinicians, who need quick access to specific information to guide decisions, and a comprehensive reference manual where more clinical or technical information is required.

Strategic approaches will be refined during a pilot phase in population centres with established access to counselling, testing and antiretroviral drugs – this will teach us much about the implementation realities in Afghanistan. Early and regular reviews will enable us to continue to learn from our own experience, and to gradually extend the “reach” of PPTCT services to more provinces. The Guidelines will be updated regularly, enabling us to continue to not only draw on evolving international lessons but, more importantly, on our own experience in this complex and evolving area of HIV medicine and clinical care.

I would like to thank all those individuals and organisations whose expertise contributed to these first national PPTCT Guidelines. Our thanks go also to UNICEF for providing support for expert and stakeholder consultations on the preliminary draft of the Guidelines, and to GFMU for supporting the printing and distribution of the manual.

Dr. Sarwar Ahmadzai
Acting Director, National AIDS Control Program
Ministry of Public Health
Table of contents

Foreword – Draft.........................................................................................................................i
Table of contents....................................................................................................................... ii
Acronyms and Abbreviations ................................................................................................. v
Note regarding Terminology...................................................................................................... viii
Goal, Purpose and Intended Readership of these Guidelines ................................................. xiii
Period of Validity ...................................................................................................................... xiii
Acknowledgements................................................................................................................... xiv

Chapter 1: Background Information .......................................................................................1
  1.1 HIV Infection in Afghanistan......................................................................................... 1
  1.2 HIV Prevention in Mothers and Young Children ...................................................... 3
  1.3 Establishing PPTCT Services in Afghanistan............................................................... 8
  1.4 References ...................................................................................................................... 9

Chapter 2: Primary Prevention of HIV in Women of Reproductive Age ......................... 11
  2.1 Strategic Overview ......................................................................................................... 11
  2.2 Priority Actions ............................................................................................................. 13
  2.3 Integrating Prevention with existing SRH and MNCH Services ............................... 16
  2.4 Further Reading ............................................................................................................. 19

Chapter 3: Strengthening HIV Detection in Pregnancy – Counselling and Testing ...... 20
  3.1 Overview ......................................................................................................................... 20
  3.2 Guiding Principles for PITC in Antenatal Settings .................................................... 23
  3.3 Pre-Test Information and Counselling ........................................................................ 26
  3.4 HIV Testing ................................................................................................................... 29
  3.5 Post-Test Information and Counselling ....................................................................... 30
  3.6 Testing Women of Unknown HIV Status in Labour .................................................. 33
  3.7 Quality Assurance for Counselling Services ............................................................... 33
  3.8 Priority Actions ............................................................................................................. 33
  3.9 Further Reading ............................................................................................................. 35

Chapter 4: Prevention of Unintended Pregnancies in HIV-Infected Women ................. 36
  4.1 Strategic Overview ......................................................................................................... 36
  4.2 Reproductive Decision-Making for PLHIV ................................................................. 38
  4.3 Modern Contraceptive Methods for PLHIV ................................................................. 39
  4.4 Traditional Contraceptive Methods for PLHIV ........................................................... 45
  4.5 Termination of Pregnancy ............................................................................................ 46
Annex I: Diagnostic Rapid Testing Algorithm ................................................................. 103
Annex II: Types of Testing for HIV Infection in Exposed Infants .............................. 105
Annex III: Testing and Referral Algorithm (Pilot Phase) ........................................ 107
Annex IV: Labour Ward Management Algorithm (Pilot Phase) ............................... 108
Acronyms and Abbreviations

3TC  Lamivudine
ABC  Abacavir
AED  Academy for Educational Development
AFASS  Acceptable, feasible, affordable, sustainable and safe
AHS  Afghanistan Health Survey
AIDS  Acquired immune deficiency syndrome
ANASF  Afghanistan National Strategic Framework for HIV/AIDS, 2006-2010
ANC  Antenatal care; antenatal clinic
ARI  Acute respiratory infection
ART  Antiretroviral therapy
ARV  Antiretroviral
ASAP  As soon as possible
BCG  Bacille Calmette Guerin (tuberculosis) vaccine
BHC  Basic Health Centre
BPHS  Basic Package of Health Services
CBO  Community based organisation
CHC  Comprehensive Health Centre
CHW  Community Health Worker
CITC  Client-Initiated Testing and Counselling
CPHL  Central Public Health Laboratory
CT&S  Care, treatment and support
d4T  Stavudine
DBS  Dried blood spot
DOTS  Directly observed treatment short-course (for tuberculosis)
EBM  Expressed breast milk
ECP  Emergency contraceptive pill
EFV  Efavirenz
ELISA  Enzyme linked immuno-sorbent assay
EPHS  Essential Package of Hospital Services
EPI  Expanded Programme on Immunization
EQAS  External quality assurance scheme
FBC  Full blood count
FBO  Faith based organisation
FHI  Family Health International
HAART  Highly active antiretroviral therapy
HBsAg  Hepatitis B surface antigen
HCV  Hepatitis C virus
HIV  Human immunodeficiency virus
HUB  HIV Urban Base
IATT  Inter-Agency Task Team on Prevention of HIV Infection in Pregnant Women, Mothers and their Children
IDU  Injecting drug user; injecting drug use
IEC  Information, education, and communication
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMCI</td>
<td>Integrated management of childhood illness</td>
</tr>
<tr>
<td>IPPF</td>
<td>International Planned Parenthood Federation</td>
</tr>
<tr>
<td>IUCD</td>
<td>Intra-uterine contraceptive device</td>
</tr>
<tr>
<td>LFTs</td>
<td>Liver function tests</td>
</tr>
<tr>
<td>LPV/r</td>
<td>Ritonavir-boosted lopinavir</td>
</tr>
<tr>
<td>M&amp;E</td>
<td>Monitoring and evaluation</td>
</tr>
<tr>
<td>MAC</td>
<td>Mycobacterium avium complex</td>
</tr>
<tr>
<td>MARP</td>
<td>Most at-risk population</td>
</tr>
<tr>
<td>MDG</td>
<td>Millennium Development Goal</td>
</tr>
<tr>
<td>MICS</td>
<td>Multiple Indicator Cluster Survey</td>
</tr>
<tr>
<td>MMR</td>
<td>Maternal mortality ratio</td>
</tr>
<tr>
<td>MNCH</td>
<td>Maternal, neonatal and child health</td>
</tr>
<tr>
<td>MOPH</td>
<td>Ministry of Public Health</td>
</tr>
<tr>
<td>MSM</td>
<td>Men who have sex with men</td>
</tr>
<tr>
<td>N-9</td>
<td>Nonoxynol-9 (spermicide)</td>
</tr>
<tr>
<td>NACP</td>
<td>National AIDS Control Program</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-government organisation</td>
</tr>
<tr>
<td>NNRTI</td>
<td>Non-nucleoside reverse transcriptase inhibitor</td>
</tr>
<tr>
<td>NRTI</td>
<td>Nucleoside reverse transcriptase inhibitor</td>
</tr>
<tr>
<td>NRVA</td>
<td>National Risk and Vulnerability Assessment</td>
</tr>
<tr>
<td>NVP</td>
<td>Nevirapine</td>
</tr>
<tr>
<td>OCP</td>
<td>Oral contraceptive pill</td>
</tr>
<tr>
<td>OI</td>
<td>Opportunistic infection</td>
</tr>
<tr>
<td>OST</td>
<td>Opioid substitution therapy</td>
</tr>
<tr>
<td>PCP</td>
<td>Pneumocystis jiroveci (formerly known as P carinii) pneumonia</td>
</tr>
<tr>
<td>PCR</td>
<td>Polymerase chain reaction</td>
</tr>
<tr>
<td>PI</td>
<td>Protease inhibitor</td>
</tr>
<tr>
<td>PITC</td>
<td>Provider-initiated testing and counselling</td>
</tr>
<tr>
<td>PLHIV</td>
<td>People living with and affected by HIV infection</td>
</tr>
<tr>
<td>PMTCT</td>
<td>Prevention of mother-to-child transmission</td>
</tr>
<tr>
<td>PPTCT</td>
<td>Prevention of parent-to-child transmission</td>
</tr>
<tr>
<td>PTCT</td>
<td>Parent-to-child transmission</td>
</tr>
<tr>
<td>QA</td>
<td>Quality assurance</td>
</tr>
<tr>
<td>RDT</td>
<td>Rapid diagnostic test</td>
</tr>
<tr>
<td>sdNVP</td>
<td>Single-dose nevirapine</td>
</tr>
<tr>
<td>SRH</td>
<td>Sexual and reproductive health</td>
</tr>
<tr>
<td>STI</td>
<td>Sexually transmissible infection</td>
</tr>
<tr>
<td>SW</td>
<td>Sex worker</td>
</tr>
<tr>
<td>TB</td>
<td>Tuberculosis</td>
</tr>
<tr>
<td>TBA</td>
<td>Traditional birth attendant</td>
</tr>
<tr>
<td>TDF</td>
<td>Tenofovir disoproxi fumarate</td>
</tr>
<tr>
<td>TFR</td>
<td>Total fertility rate</td>
</tr>
<tr>
<td>TLC</td>
<td>Total lymphocyte count</td>
</tr>
<tr>
<td>UNAIDS</td>
<td>Joint United Nations Programme on HIV/AIDS</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>UNFPA</td>
<td>United Nations Population Fund</td>
</tr>
<tr>
<td>UNGASS</td>
<td>United Nations General Assembly Special Session on HIV/AIDS</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
</tr>
<tr>
<td>UNIFEM</td>
<td>United Nations Development Fund for Women</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>USD</td>
<td>United States dollar</td>
</tr>
<tr>
<td>VCT</td>
<td>Voluntary counselling and testing</td>
</tr>
<tr>
<td>VCCT</td>
<td>Voluntary confidential counselling and testing</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
<tr>
<td>ZDV</td>
<td>Zidovudine (also known as azidothymidine; AZT)</td>
</tr>
</tbody>
</table>
Note regarding Terminology

HIV (the human immunodeficiency virus) is the virus that causes AIDS (acquired immunodeficiency syndrome). HIV destroys the body’s ability to fight a range of opportunistic infections and other AIDS-related diseases, many of which may be fatal. Antiretroviral drugs can slow down replication of the virus and greatly improve immune function and enhance quality of life, but they do not eliminate (or ‘cure’) HIV infection.

A person is described as HIV-infected when they show evidence of HIV infection, usually through the presence of HIV or viral antigens or antibodies in blood or other body fluids. The terms HIV positive and HIV negative simply refer to the results of testing; there may be a delay of several weeks or months before infection with HIV can be confirmed by a blood or other test. HIV is highly infectious during the early weeks and months following infection (even though it may be undetectable on testing – the ‘window period’).

Provider initiated counselling and testing (PITC) describes a strategy where counselling and testing is recommended or initiated by a health care provider. It may be initiated on clinical grounds (because the individual has signs, symptoms or a medical condition that could be associated with HIV transmission or infection), following known HIV exposure (e.g. for children born to HIV-infected mothers), on epidemiological grounds (because the client is a member of an identified more at-risk population; MARP) or to enable individuals to access available prevention, treatment and care services (e.g. pregnant women).

Client initiated counselling and testing (CITC) describes the situation where an individual themselves, rather than the provider, requests a test for HIV – usually (but not always) due to concern about possible exposure.

HIV testing must always be voluntary and accompanied by pre- and post-test counselling that includes risk assessment and reduction and the meaning and limitations of available tests. Client confidentiality must always be respected. This is part of the service provided by voluntary confidential counselling and testing (VCCT) centres.

VCCT is sometimes called voluntary counselling and testing (VCT). The inclusion of the word ‘confidential’ emphasises the fact that the results and process remain confidential between provider and client, and may reassure individuals who are worried about this aspect of the testing process. On the other hand, it may suggest that VCCT is concerned with something that is ‘secret’, possibly increasing the risk of stigma for people attending for VCCT. These Guidelines acknowledge that there is some ongoing discussion regarding this terminology in Afghanistan. The term VCCT is currently used in other HIV-related guidelines and policy documents, and is therefore also the term used in this document.

In these Guidelines, we also use the term parent-to-child transmission (PTCT) rather than mother-to-child transmission (MTCT). This emphasises the importance of Afghan men being involved in their own reproductive health and that of their partners (including knowing their HIV infection status). It also reduces the potential stigmatisation of women as being solely responsible for exposing their babies to a risk of HIV transmission during pregnancy.
Parent-to-child transmission is the most common and important source of HIV infection in children. Transmission risk is greatest during labour and delivery, but can also occur during pregnancy or through breast feeding. Injecting drug use (IDU) is the most common way that HIV is transmitted in Afghanistan. Female IDUs and the female partners of male IDUs are very important target groups for PPTCT activities.

**Key Facts**
- Without any intervention, up to 30% of children of HIV infected mothers will themselves be born infected with HIV.
- In exclusively breast fed infants, the risk increases by another 4–5% after 6 months.
- Babies who receive mixed feeding (i.e. both breast and formula) have a much higher risk of HIV transmission: the cumulative risk is about 42–45% after two years of continuous breast and complementary feeding.
- Without access to clean water and sanitation, formula feeding exposes infants to a much higher risk of diarrhoea and acute respiratory infection than in breast fed infants; overall mortality rates are lower in exclusively breast fed babies.
- The MOPH provides free antiretroviral (ARV) drugs to prevent infection in the baby during pregnancy.
- The MOPH also provides all necessary follow-up testing for the baby free of charge.

**Consequences of HIV infection in infants and children**

The consequences of HIV infection and AIDS in young children are serious. Without treatment, about one-third of infected children will die before their first birthday, and about half will die by 2 years of age; survival to 5 years of age is uncommon. This is made worse by the social impact on children orphaned as a result of parental HIV infection.

**What can be done to prevent transmission of HIV infection to infants and young children?**

To prevent HIV infection in infants and children, a network of four comprehensive strategies needs to be put in place at the community, health facility, Provincial and National levels.

This comprehensive approach includes a set of key interventions to be implemented as part of the Basic Package of Maternal, Neonatal and Child Health Services and the Essential Package of Hospital Services.

**Four Elements of a Comprehensive PPTCT Strategy**

1. Prevent HIV infection among women of childbearing age.
2. Prevent unintended pregnancies among women living with HIV.
3. Prevent HIV transmission from infected mothers to their infants:
   a) antiretroviral prophylaxis for mother and baby.
   b) safer delivery practices.
   c) safer infant feeding choices.
4. Provide appropriate treatment, care and support to women living with HIV and their children and families.

**Prevention of HIV among women of childbearing age**

The most effective way of preventing children from being born infected with HIV is to protect women against HIV infection.

- Identify the “HIV element” all clinical contacts.
- Educate women and their male partners about HIV prevention.
- Provide (or refer for) STI screening and treatment and voluntary, confidential HIV counseling and testing (VCCT).
- Help women plan or avoid pregnancies, and promote the use of condoms as “dual protection” against pregnancy and HIV / STIs.

**Involvement of the male partner**

A woman’s partner plays a critical role in determining her risk of HIV infection – especially if he is at risk of acquiring HIV infection himself. If he is HIV infected, VCCT offers a chance to practice prevention and seek important HIV-related health care, benefiting the entire family. Regardless of his HIV status, he also has an important role in decision-making in the family. Involving him in HIV-related VCCT and antenatal care can help ensure that he is supportive of the woman’s choices related to HIV, pregnancy, infant feeding and family planning.

**Family planning for couples living with HIV**

To avoid unintended, unplanned pregnancies among HIV infected women, careful reproductive health and family planning counselling is essential for all people living with HIV. Identify the “family planning element” in every clinical contact with PLHIV, and ensure strong...
Male (or female) condoms are the only contraceptive method that can provide "dual protection" against HIV / STIs and pregnancy, and are therefore most commonly recommended where one or both partners is infected with HIV.

Many other contraceptive methods are also suitable for women infected with HIV (e.g. pills, injectable contraception). Used correctly, they are more effective for pregnancy prevention than condoms but provide no protection at all against HIV or STIs. (See Sections 4.3 and 4.4 on pages 39-46 of the PPTCT Guidelines for more detail on contraception for HIV infected women and those on ART).

Couples should be free to make informed family planning choices, without coercion, and should have access to quality services to implement their choices.

For discordant couples (where one partner is infected with HIV and the other is not), the correct and consistent use of male condoms is the only method to effectively prevent HIV transmission to the uninfected partner. Condoms should be used even when another method is chosen to prevent pregnancy. (Section 4.6 on pages 47-48 of the PPTCT Guidelines describes approaches to helping and managing discordant couples).

If pregnancy occurs, offer all essential antenatal care as well as PPTCT interventions.

### Timing of Principal PPTCT Interventions

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Antenatal</th>
<th>Labour and Delivery</th>
<th>Postnatal</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAART during pregnancy (if indicated and available)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>ARV prophylaxis for mother (if available)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Interventions during delivery that are known to prevent MTCT</td>
<td>(discuss)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>ARV prophylaxis for infant (within 72 hours after birth)</td>
<td>(discuss)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Counselling and support for safer infant feeding</td>
<td>(discuss)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Provision of (or referral to) prevention and care, treatment and</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>support services for women infected with HIV, their infants and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>their families</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provision of (or referral to) prevention and support services</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>for women who test negative to help them stay uninfected</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### When to commence HAART

Initiate highly active antiretroviral therapy (HAART) in any pregnant woman with:

- WHO Stage IV disease, irrespective of CD4 cell count or total lymphocyte count (TLC)
- WHO Stage III disease with CD4 < 350 (or, if CD4 not available, treat irrespective of TLC)
- WHO Stage I or II disease with CD4 < 250 (and consider treatment if TLC < 1,500)

The standard HAART regimen in pregnancy is ZDV + 3TC + NVP.

Because of the risk of HIV drug resistance, pregnant women with indications for HAART should not be prescribed the short-course PPTCT regimens on the next page unless HAART is unavailable.

To avoid transfer of drug-resistant strains of HIV, counsel couples about continued condom use during the pregnancy.

### Recommended First-Line HAART Regimen for treating Pregnant Women, and Prophylactic Regimen for Infants

<table>
<thead>
<tr>
<th>Recipient</th>
<th>Timing</th>
<th>ARV(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother</td>
<td>Start ASAP in pregnancy and continue throughout pregnancy, labour and delivery and postpartum, for life</td>
<td>ZDV 300mg + 3TC 150mg twice a day + NVP 200mg once a day for 14 days If no reaction, continue ZDV + 3TC and increase NVP to 200mg twice a day after 14 days</td>
</tr>
<tr>
<td>Baby</td>
<td>Neonatal</td>
<td>Infant ZDV 4 mg/kg twice a day for 7 days If the mother has received less than 4 weeks of HAART, infant ZDV should be continued for 4 weeks</td>
</tr>
</tbody>
</table>

Precautions and alternative regimens are discussed in Section 5.2.2 on pages 58-59 of the PPTCT Guidelines.
Prophylaxis against PCP and other opportunistic infections

Women who fulfil the following criteria should take one double strength co-trimoxazole tablet (800mg/160mg) daily and remain on it for the rest of their pregnancy:

- WHO Stage III or IV disease, irrespective of CD4 cell count or TLC;
- WHO Stage I or II disease with CD4 < 350 (or anyone with Stage II if CD4 not available)

Prophylaxis for other OIs is summarised in Table 5.4 on page 60 of the PPTCT Guidelines.

Antiretroviral prophylaxis for mother and baby

The risk of HIV transmission to the baby can be reduced to 2% or less if the mother takes ARVs during the antenatal period (starting no later than 28 weeks of pregnancy), and with careful management of the delivery and provision of ARVs to both mother and baby for a short time following delivery.

Single Dose Nevirapine: the Minimum Standard for PPTCT –

The absolute minimum standard regimen for PPTCT in community settings is sdNVP for both mother and baby.

Delivery at Home or at a Health Sub-Centre, BHC, CHC or District Hospital

Minimum Standard = Single Dose Nevirapine for Mother and Baby

<table>
<thead>
<tr>
<th>Recipient</th>
<th>Timing</th>
<th>ARV(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother</td>
<td>Intrapartum</td>
<td>NVP 200mg once at the onset of labour</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If woman presents in established labour, give NVP as soon as possible in the first stage of labour</td>
</tr>
<tr>
<td>Baby</td>
<td>Neonatal</td>
<td>Infant NVP 2 mg/kg as soon as feasible (preferably within 12 hours, but no later than 72 hours following delivery)</td>
</tr>
</tbody>
</table>

The Recommended PPTCT Protocol –

Provided HIV infection is diagnosed no later than the second trimester of pregnancy, antenatal support and follow-up are available, and delivery takes place in a hospital or other health facility with trained staff and ARVs available, HIV-infected pregnant women should be offered the standard recommended regimen:

- ZDV from 28 weeks’ gestation; once the woman is in labour, ZDV + 3TC every 3 hours + sdNVP.
- A one-week “tail” of ZDV + 3TC is given in the postpartum period to prevent NVP resistance (due to the long half-life of NVP). The baby receives sdNVP plus a one-week course of infant ZDV.
- The risk of HIV transmission to the baby is about 2%.

Hospitals and other Health Facilities with an Established PPTCT Program

Recommended Standard PPTCT Protocol for Mother and Baby

<table>
<thead>
<tr>
<th>Recipient</th>
<th>Timing</th>
<th>ARV(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother</td>
<td>Antepartum</td>
<td>ZDV 300mg twice daily from 28 weeks’ gestation</td>
</tr>
<tr>
<td></td>
<td>Intrapartum</td>
<td>ZDV 300mg at the onset of labour and 3-hourly until delivery plus 3TC 150mg at the onset of labour and 12-hourly until delivery plus NVP 200mg once at the onset of labour</td>
</tr>
<tr>
<td></td>
<td>Postpartum</td>
<td>ZDV 300mg + 3TC 150mg twice daily for 7 days</td>
</tr>
<tr>
<td>Baby</td>
<td>Neonatal</td>
<td>Infant NVP 2 mg/kg as soon as feasible (preferably within 12 hours, but no later than 72 hours following delivery) plus Infant ZDV 4 mg/kg twice daily for 7 days</td>
</tr>
</tbody>
</table>

Special situations

Anaemia –

ZDV may cause anaemia and neutropenia. Investigate for and treat any underlying causes of severe anaemia (Hb < 7 g/dl) or neutropenia.

If there are maternal indications for HAART, other NRTI drugs (e.g. d4T or ABC) may be substituted for ZDV.

HIV-Infected Women in Labour who have not received Antenatal ARV Prophylaxis –

If the mother is delivering at home, a health care worker with PPTCT training can supervise sdNVP for both the mother and the baby.
At health facilities where full PPTCT interventions are available, commence the Standard PPTCT Protocol for the mother in labour and continue postpartum. The baby should receive sdNVP plus postnatal ZDV prophylaxis for four weeks.

**HIV Infection diagnosed after 28 weeks** – Commence the Standard maternal PPTCT Protocol as soon as possible.

For the baby, give neonatal sdNVP + ZDV as usual. If the mother has received less than 4 weeks of ZDV, extend the baby’s postnatal ZDV to four weeks.

### Hospitals and other Health Facilities with an Established PPTCT Program

**Alternative PPTCT Protocol where the Woman is already in Labour**

<table>
<thead>
<tr>
<th>Recipient</th>
<th>Timing</th>
<th>ARV(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mother</strong></td>
<td>Intrapartum</td>
<td>ZDV 300mg at the onset of labour and 3-hourly until delivery plus 3TC 150mg at the onset of labour and 12-hourly until delivery plus NVP 200mg once at the onset of labour</td>
</tr>
<tr>
<td></td>
<td>Postpartum</td>
<td>ZDV 300mg + 3TC 150mg twice a day for 7 days</td>
</tr>
<tr>
<td><strong>Baby</strong></td>
<td>Neonatal</td>
<td>Infant NVP 2 mg/kg as soon as feasible (preferably within 12 hours, but no later than 72 hours following delivery) plus Infant ZDV 4 mg/kg twice a day for 4 weeks</td>
</tr>
</tbody>
</table>

### Safer delivery practices

Treat STIs and other signs of infection in the mother. Allow normal delivery, but minimise both the duration of labour and obstetric interventions (including artificial rupture of the membranes and the frequency of vaginal examination).

If labour is not established quickly, augmentation of labour as per national obstetric guidelines should be initiated. If delivery is not imminent within four hours of rupture of the membranes or establishment of labour, seek advice from an obstetrician or physician skilled in managing HIV-affected pregnancies.

Minimise the risk of postpartum haemorrhage through active management of the third stage (i.e. oxytocin immediately after delivery, controlled cord traction and uterine massage).

Do not “milk” cord blood from the cord towards baby. Take great care with suction to avoid trauma of the baby’s upper airway.

### Infant feeding for HIV infected mothers

Selecting the most appropriate method of feeding for infants of HIV-infected mothers may be difficult.

In families where the custom is to breast feed and replacement (formula) feeding is not affordable, feasible, acceptable, safe and sustainable (see Table 6.3, page 80 of the PPTCT Guidelines), the overall risk to the baby from malnutrition, HIV and other infections can be minimised by exclusive breast feeding to 6 months of age.

**Mixed feeding must be strictly avoided**

### Transition from exclusive breast feeding to replacement feeding

In infants of HIV infected mothers, transition to replacement feeding (where all breast milk is replaced with breast milk substitutes) should take place at 6 months of age. It can take between 2-3 days and 2-3 weeks for transition to be established.

An open cup and teaspoon, rather than a bottle with a nipple (which is difficult to clean), should be used.

The mother can use the following techniques to help the transition from breast feeding to replacement feeding:

- Help the baby to get used to cup feeding by introducing expressed breast milk (EBM) by cup well before transition (e.g. between regular breast feeds)
- Once the infant accepts cup feeding of EBM, eliminate one feeding at the breast at a time and replace it with EBM given by cup
- If the breasts become engorged during this process, express breast milk (and discard it) and use cold compresses to reduce inflammation
- Avoid recommencing breast feeding after completing the transition to replacement feeding
- Resist the temptation to breast feed at night or when the child needs comforting

### Testing the baby for HIV infection

Testing for HIV infection in infants born to HIV-infected mothers can start as early as 2 months of age; refer to Section 7.3.4 on page 91 of the PPTCT Guidelines.
Goal, Purpose and Intended Readership of these Guidelines

The Goal of these Guidelines and their underlying Strategy is:
To contribute to the reduction of infant morbidity and mortality in Afghanistan by providing pregnant women and their families with universal access to integrated, comprehensive and quality-assured services for the prevention of parent-to-child transmission (PPTCT) of HIV infection, linked to ongoing care, treatment and support services, and thereby contributing to the achievement of the Millennium Development Goals.

The Purpose of the Guidelines is:

• to guide managers, health staff and communities on suitable strategies for the prevention and detection of HIV infection in women and their families;
• to assist people living with HIV (PLHIV) with their reproductive health choices – in particular, the avoidance of unplanned, unintended pregnancies;
• to assist clinical staff to make evidence based decisions about the most appropriate management of HIV infection in pregnant women and their male partners and prevention of HIV infection in their unborn and newborn babies, in a range of clinical settings;
• to assist clinical staff, individuals and communities to strengthen approaches to the care, treatment and support of PLHIV and their families.

The target population for the Guidelines includes pregnant women infected with HIV, their unborn and newborn babies, their partners and families, and their communities.

The target readership and end-users of the Guidelines include clinical service providers, program managers and policy makers.

Period of Validity

The PPTCT Strategy and Guidelines are valid to the end of 2010. This initial period of validity is aligned with the final two years of the Afghanistan National Strategic Framework for HIV/AIDS, 2006-2010, i.e. 2009-10. It is expected that systems for antiretroviral treatment, clinical care and support for PLHIV will be established in Afghanistan during this two-year period, and PPTCT services will evolve in parallel those services.

Furthermore, medical knowledge in relation to HIV medicine and PPTCT is changing rapidly – especially regarding antiretroviral (ARV) prophylaxis during pregnancy and infant feeding. The Guidelines will therefore be reviewed and, where necessary, updated every two years (or sooner if important new evidence becomes available).
Acknowledgements

This first edition of the *National Strategy and Guidelines for Prevention of Parent-to-Child Transmission of HIV in Afghanistan* builds on the HIV aspects of maternal, neonatal and child health and nutrition included in various national policies and guidelines:

- A Basic Package of Health Services for Afghanistan (2nd Edition, 2009)
- The Essential Package of Hospital Services for Afghanistan (1st Edition, 2005)
- National Reproductive Health Strategy (2006)
- National Licensed Drugs List (2007)

The document is also informed by the extensive literature review that contributed to the 2nd edition of the *National PMTCT Guidelines* in Nepal in 2007, and the following global technical strategies and clinical guidelines:


The knowledge and expertise of the contributing authors of these documents (and other reference material listed under Further Reading at the end of each chapter) is gratefully acknowledged.
Chapter 1: Background Information

1.1 HIV Infection in Afghanistan

1.1.1 Epidemiology

Afghanistan currently has a low reported prevalence of HIV infection. Nevertheless, the Afghanistan National Strategic Framework for HIV/AIDS, 2006-2010 (ANASF) notes that the country faces a serious threat from the HIV epidemic due to multiple and overlapping risk factors, including: over two decades of protracted armed conflict; the extremely low socio-economic and political status of women; a large internally and externally displaced population; poor social and public health infrastructure; a high prevalence of injecting drug use and related risk factors; and a relative lack of access to safe blood transfusion and injection practices.

The absence of systematic surveillance for HIV and other sexually transmissible infections (STIs) makes it difficult to determine the size of the population currently infected, and to understand the dynamics of transmission.

The first case of HIV infection in Afghanistan was notified in 1989. By the end of the post-2001 conflict period, still only a small number of cases had been identified.

To October 2008, the cumulative number of individuals infected with HIV was officially reported as 261, although this is based on sentinel surveillance at only two locations: the Kabul City Blood Bank and the Herat voluntary confidential counselling and testing centre. In Kabul in 2007, among a total of 31,793 blood samples screened using rapid diagnostic test (RDT) kits, the Blood Bank reported a total of 27 HIV positive cases (i.e. 84.9 per 100,000 screened donations). 2006-07 data from Herat show 9 HIV infections diagnosed among 2,910 male VCCT clients (0.31%), and 0 among 1,886 women. The Joint United Nations Programme on HIV (UNAIDS) and the World Health Organization estimate that the actual number of infections in Afghanistan may lie between 1,000 and 2,000.

An increasing prevalence of HIV infection will be complicated by a national incidence of tuberculosis (TB) that is among the highest in the world (168/100,000), with relatively modest performance in active case detection, treatment coverage and treatment success rates. Currently, however, HIV co-infection is uncommon among TB patients (0.2%).

1.1.2 At-risk populations

Afghanistan may be described as having a “low level” HIV epidemic, where recorded infection is largely confined to individuals with specific risk behaviour but the estimated prevalence of HIV infection remains below 5% in any sub-population.

The country is currently the world’s largest opium producer, and almost all known cases of HIV infection are associated with injecting drug use.

Historically, ingestion and inhalation were the favoured routes of administration among Afghan drug users. During the decades of conflict, about 8 million Afghans fled to neighbouring countries like Pakistan and Iran, which had a higher prevalence of HIV infection than Afghanistan, and where HIV has spread rapidly among injecting drug users.
Following the conflict, refugees began to return from neighbouring countries. Some of the returnees had become IDUs during their years away, and some brought HIV back to Afghanistan with them.3

A 2005 survey estimated that Afghanistan has almost 1 million drug users, including 200,000 opium users and 19,000 IDUs; an estimated 2% of Afghan men use opium and 1% inject heroin.5 More than half of IDUs share injecting equipment, including in prison.6

Other more at-risk populations (MARPs) with which IDUs intersect include: sex workers (SWs; especially among widowed and other women from lower socioeconomic groups),7 long-distance transport workers carrying goods into the landlocked country, men who have sex with men (MSM; about whom there are few published data),7 and possibly inmates in custodial settings. A 2005-06 study showed a 3% prevalence of HIV infection among IDUs in Kabul (range 1.7-5.1%), and a high prevalence of risk behaviours including sharing syringes (50.4%), paying women for sex (76.2%), and having sex with men or boys (28.3%).8

Knowledge of HIV infection and condom use among MARPs and the general population are reported to be extremely low,9 but the extent of HIV transmission to sexual partners of MARPs is unknown. Other challenges include high levels of illiteracy (especially among women – a barrier to HIV awareness and prevention), competing health priorities (e.g. high maternal and under-5 mortality rates, and a need to rapidly expand primary health care services in remote and under-resourced parts of the country) and the low status of women.10

The epidemic could therefore escalate rapidly if preventive measures such as harm reduction among MARPs are not implemented promptly.3

Other risk factors include paid blood transfusion and drug injection, and direct (“arm-to-arm”) transfusion from an unscreened donor.

### 1.1.3 HIV infection in women and children

A cross-sectional study of 4,452 antenatal mothers conducted at three government maternity hospitals in Kabul in 2006 estimated that their prevalence of antibodies to hepatitis B surface antigen (HBsAg) was 1.53% and antibodies to hepatitis C virus (HCV) was 0.31%. Antibodies to HBsAg were associated with the woman’s husband having a post-secondary level of education. No cases of HIV or syphilis were found.11

The vulnerability of Afghan children relates primarily to parent-to-child transmission of HIV from IDU and SW parents and the immaturity of prevention of parent-to-child transmission (PPTCT) services. The number of HIV-infected children is not known, and death from AIDS-related conditions in infancy and early childhood may be attributed to other causes.

### 1.1.4 Afghanistan National Strategic Framework for HIV/AIDS

The ANASF 2006-2010 places a strong emphasis on prevention (including through PPTCT) and universal access to care, treatment and support (CT&S) for people living with HIV.

---

* The existence of commercial sex workers in Afghanistan is a very sensitive topic and is often denied. Sex work is illegal and highly stigmatised.
Its 6 objectives include:

1. Strengthen strategic information to guide policy formation, program planning and implementation;
2. Gain political commitment and mobilise resources necessary to implement the national HIV/AIDS/STI strategy;
3. Ensure development and coordination of a multi-sector HIV/AIDS response and develop institutional capacity of all sectors involved;
4. Raise public awareness on HIV/AIDS and STI prevention and control, ensure universal access to behaviour change communication on HIV, especially targeting vulnerable and at-risk groups;
5. Ensure access to prevention, treatment, and care services for high-risk and vulnerable populations;
6. Strengthen the health sector capacity to implement an essential package of HIV/AIDS prevention, treatment and care services within the framework of the Basic Package of Health Services (BPHS) and the Essential Package of Hospital Services (EPHS).

The Framework notes that responding to the HIV epidemic requires a concerted and harmonised commitment and action from all government and non-government sectors, and commits Afghanistan to the UNAIDS “Three Ones” principles.

It emphasises strong linkages to the continuum of care for MARPs and PLHIV. This includes prevention and protection for street children (“at risk youth”), whose lifestyle and daily struggle for survival may lead them to drug use or providing sexual favours in return for food or shelter.

The establishment of PPTCT services falls under Objective 6 of the Framework (see also Section 1.4, below).

1.2 HIV Prevention in Mothers and Young Children

1.2.1 Risk of parent-to-child transmission

PTCT is the most common and important source of HIV infection in childhood.\textsuperscript{12} Globally, in 2005, UNAIDS estimated that more than 2 million children aged 14 years or younger were living with HIV,\textsuperscript{13} with about 180,000 new infections in the South and South-Eastern Asia subregions alone (the majority being infected with during pregnancy, labour or delivery or through breast feeding).\textsuperscript{14}

Historical studies suggest that, in the absence of any intervention, 35-42% of children born to HIV infected mothers in developing countries will become infected with HIV. In non-breast fed infants, the risk of acquisition of HIV infection is 15-30%; breast feeding increases the risk by an additional 5-20% (depending on the amount of virus [HIV] in the mother’s blood, known as the viral load).\textsuperscript{15,16}

PTCT is believed to be uncommon during early pregnancy, but the risk increases sharply in late pregnancy and during labour and delivery, or if the mother acquires a primary HIV
infection during pregnancy. Table 1.1 summarises estimated rates of transmission during pregnancy and for different durations of breast feeding. \(^{17}\)

<table>
<thead>
<tr>
<th>Phase of Pregnancy or Duration of Breast Feeding</th>
<th>Transmission Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>During pregnancy</td>
<td>5 - 10%</td>
</tr>
<tr>
<td>During labour and delivery</td>
<td>10 - 20%</td>
</tr>
<tr>
<td>During breast feeding</td>
<td>5 - 20%</td>
</tr>
<tr>
<td>Overall without breast feeding</td>
<td>15 - 30%</td>
</tr>
<tr>
<td>Overall with breast feeding to 6 months</td>
<td>25 - 35%</td>
</tr>
<tr>
<td>Overall with breast feeding to 18-24 months</td>
<td>30 - 45%</td>
</tr>
</tbody>
</table>

Table 1.2 summarises the maternal and infant factors that may increase the risk of HIV transmission during pregnancy, labour, delivery and breast feeding.

**The most important risk factor for P TCT is the mother’s viral load.** The risk of transmission to the infant is greatest when the viral load is high, which is often the case with recently acquired HIV infection or advanced (WHO Stage III or IV) clinical disease.

Where viral load assays are not available, low CD4 T-cell counts are similarly associated with increased risk of antenatal and intrapartum transmission.

<table>
<thead>
<tr>
<th>Pregnancy</th>
<th>Labour and Delivery</th>
<th>Infant Feeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>• High maternal viral load (new HIV infection or advanced clinical disease)</td>
<td>• High maternal viral load (new HIV infection or advanced clinical disease)</td>
<td>• High maternal viral load (new HIV infection or advanced clinical disease)</td>
</tr>
<tr>
<td>• Viral, bacterial or parasitic placental infection (e.g. malaria)</td>
<td>• Rupture of membranes more than 4 hours before labour begins</td>
<td>• Duration of breast feeding</td>
</tr>
<tr>
<td>• Sexually transmissible infections</td>
<td>• Invasive delivery procedures that increase contact with mother’s infected blood or body fluids (e.g. episiotomy, fetal scalp monitoring)</td>
<td>• Mixed feeding (i.e. any food or fluids in addition to breast milk)</td>
</tr>
<tr>
<td>• Maternal malnutrition (indirect cause)</td>
<td>• First infant in multiple birth</td>
<td>• Breast abscess, nipple fissures, mastitis</td>
</tr>
<tr>
<td></td>
<td>• Chorioamnionitis (e.g. from untreated STI or other infection)</td>
<td>• Poor maternal nutritional status</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Oral disease in the baby (e.g. thrush or sores)</td>
</tr>
</tbody>
</table>
After the onset of labour, transmission risk increases with the length of time the membranes have been ruptured. Higher risk of transmission to the baby during labour and delivery is also associated with other causes of acute chorioamnionitis – e.g. resulting from untreated STIs or other lower genital tract infections – and invasive delivery techniques that increase the baby’s contact with the mother’s blood.

Premature infants are more likely to become infected than full-term infants.

Duration of breast feeding is a key factor in postnatal transmission. Breast feeding for 6 months increases the overall risk of PTCT by about 9% for women with established HIV infection, by 14% when follow-up is extended to 18 months, and by 16% at two years. (Breast feeding appears to have no detrimental effect on the health of an HIV-infected mother).

The pattern of infant feeding also appears to affect the risk of postnatal transmission. Complete avoidance of breast feeding obviously removes the risk of transmission through lactation; however, an unsafe water supply or a family’s inability to afford consistent formula feeding exposes the infant to infectious diseases or malnutrition that may be far greater health risks than the risk of HIV infection.

Several recent studies of infants followed up for between 6 and 15 months of age have now demonstrated that exclusive breast feeding carries a lower risk of HIV transmission than mixed feeding (i.e. breast feeding combined with other fluids or foods) during the first 3-6 months of life. 18,19

Acute maternal HIV infection during lactation increases the overall risk of transmission to the baby by 29%, demonstrating the great importance of ongoing HIV prevention in HIV negative lactating women and their partners.

Breast infection (especially mastitis) and cracked or bloody nipples are additional risk factors for transmission during lactation, but can be prevented by improved breast feeding techniques and probably account for only a small proportion of postnatal infections.

Sores or candidiasis in the infant’s mouth may also facilitate infection occurring during breast feeding.

Pregnancy itself does not seem to have an effect on the clinical progression of HIV infection or AIDS. However, women infected with HIV are more likely to experience pregnancy-related complications, including premature labour and delivery.

1.2.2 Consequences of HIV infection in infants and young children

The direct consequences of HIV infection and progression to clinical illness in young children are serious.

Progression of HIV infection to clinical disease occurs more rapidly in children than in adults. The untreated mortality among HIV positive children is estimated at 26-45% in the first year of life and 35-59% at two years of age; probably only a fraction survive to 5 years of age. 20-22 The complex therapies used to treat paediatric HIV infection and AIDS-related conditions in upper and upper-middle income countries are generally neither feasible nor affordable in developing countries, and may not be widely available or accessible.

In heavily burdened countries, the HIV epidemic is now reversing many of the gains in child survival achieved over the last 25 years through activities like the Expanded Pro-
gramme on Immunization (EPI) and the Integrated Management of Childhood Illness (IMCI). Increasing numbers of married women, young unmarried women and girls are becoming infected, threatening the ability of many countries to achieve their Millennium Development Goals (MDGs) health, infant mortality, gender and education related targets. This is compounded by the social impact on children orphaned as a result of parental HIV infection, many of whom will be HIV infected themselves.

WHO has estimated that at least half of these deaths could be avoided through antibiotic prophylaxis against opportunistic infections (OI), and that the majority of deaths would be prevented if treatment for OIs and antiretroviral therapy (ART) were readily available. The overall impact of HIV on children will ultimately depend on the course of the HIV epidemic in women; this, in turn, will be influenced by the course of the epidemic in their male partners.

1.2.3 Comprehensive prevention of HIV infection in mothers, infants and young children

Interventions exist that can dramatically reduce the number of children born infected with HIV.

In June 2001, the United Nations General Assembly Special Session (UNGASS) on HIV/AIDS Declaration of Commitment undertook to reduce the proportion of infants infected with HIV by 20% by 2005, and by 50% by 2010, through:

- ensuring that 80% of pregnant women accessing antenatal care have information, counselling and other HIV prevention services available to them;
- increasing availability and access for HIV-infected women and babies to effective treatment, especially antiretroviral prophylaxis, to reduce PTCT of HIV; and
- effective interventions for women infected with HIV, including VCCT and, where appropriate, breast milk substitutes and a continuum of care, treatment and support.

To meet these targets, it is generally agreed that a four-pronged approach to PPTCT should be adopted. This is summarised in the Box, below.

<table>
<thead>
<tr>
<th>Four-Pronged UN Strategy for PPTCT of HIV</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Prevent HIV infection in women of reproductive age</td>
</tr>
<tr>
<td>2) Prevent unintended pregnancy in HIV-positive women</td>
</tr>
<tr>
<td>3) Prevent parent-to-child transmission of HIV by:</td>
</tr>
<tr>
<td>- providing antiretroviral therapy during pregnancy</td>
</tr>
<tr>
<td>- implementing safer delivery practices</td>
</tr>
<tr>
<td>- providing counselling and support on infant feeding methods</td>
</tr>
<tr>
<td>4) Provide care, treatment and support to HIV-infected parents, infants and families</td>
</tr>
</tbody>
</table>
The two most fundamental preventive strategies are protecting women against HIV infection and preventing unwanted or unintended pregnancies in HIV infected women.

The First Strategy –

The first strategy (or “prong”) focuses on primary prevention of HIV in women and their partners. If we can prevent women from becoming infected, the number of infected infants and children – as well as the number of children orphaned by AIDS – will also decrease.

The Second Strategy –

The second strategy focuses on good access to reproductive health services for PLHIV. If a woman is already infected with HIV, regular counselling and provision of contraception can ensure that unplanned pregnancy does not occur. If an HIV positive couple desire to become pregnant, careful pre-conception planning and appropriate interventions during pregnancy can reduce the risk of the baby being born infected.

The Third Strategy –

If an infected woman becomes pregnant, the risk of transmission of HIV to her child can be reduced to 2% or less using the approaches of the third strategy – combination ARV prophylaxis from as early as feasible in the pregnancy, and careful management of the delivery to reduce the exposure of the baby to maternal blood and secretions.28

Pregnant women with advanced HIV infection require full, highly active antiretroviral therapy (HAART), both to reduce the risk of AIDS related illness and to minimise the risk of PTCT.

In the absence of ARV prophylaxis, elective caesarean section can reduce the risk of HIV transmission during delivery. However, if ARV prophylaxis or HAART are provided during pregnancy and labour, the potential benefit of caesarean section is greatly reduced compared to its risks and disadvantages.

The risk of HIV transmission to the baby can be further restricted after delivery if HIV-infected women do not breast feed. In resource limited settings, including many areas of Afghanistan, refraining from breast feeding is generally not safe – it may place the baby at grave risk of malnutrition and infectious diseases (especially diarrhoea and acute respiratory infection [ARI]). It may also not be feasible or acceptable to the family, and breast milk substitutes may not be available or affordable. Approaches to PPTCT therefore need to take into account the nutritional and environmental health realities of such settings.29

The Fourth Strategy –

The fourth strategy focuses on linking PPTCT services with integrated, family-centred, primary and preventive care for PLHIV – clinical care and follow-up, prevention, nutrition, family planning, counselling and other supportive care – as well as continuing ART when indicated.
1.3 Establishing PPTCT Services in Afghanistan

1.3.1 Overall strategic approach to introducing PPTCT services

Care, treatment and support services for PLHIV in Afghanistan remain rudimentary. To achieve the greatest possible coverage and access, it will be important to aim for a decentralised, community-based model for basic PPTCT services, linked to VCCT services as part of the BPHS, which can be implemented in primary care settings in Afghanistan. Basic PPTCT services would be supported through secondary and specialist care services.

1.3.2 ANASF priorities

PPTCT services are scheduled to be established (as Output 6.4 of the ANASF 2006-2010) in conjunction with other CT&S services and the introduction of ARVs during 2009. Key strategies include:

- to establish a Technical Working Group on PMTCT (done)
- to determine the prevalence and barriers to testing for HIV and other vertically-transmitted infections among women in Afghanistan
- to develop national guidelines for rapid testing in labour and PMTCT
- to integrate HIV counselling and testing into the maternal health care components of the BPHS that includes antenatal care
- to establish comprehensive PPTCT reference services including ARV prophylaxis
- to integrate PPTCT and paediatric HIV care components into the BPHS
- to prioritise HIV infected children and pregnant women for CT&S programs

1.3.3 Longer term targets

In June 2001, the UNGASS on HIV/AIDS set goals to reduce the proportion of HIV-infected infants by 20% by 2005, and by 50% in 2010. This would be achieved by:

... ensuring that 80% of pregnant women accessing antenatal care have information, counselling and other prevention services available to them, increasing the availability of and by providing access to HIV-infected women and babies to effective treatment to reduce mother-to-child transmission of HIV, as well as through effective interventions in HIV-infected women, including voluntary and confidential counselling and testing, access to treatment, especially anti-retroviral therapy, and where appropriate, breast milk substitutes and the provision of a continuum of care.

This is clearly challenging for a country like Afghanistan, where PPTCT services are only just being established and data on baselines and coverage are poor.

To guide country level efforts, WHO and the Inter-Agency Task Team (IATT) on the Prevention of HIV Infection in Pregnant Women, Mothers and their Children have proposed the following program coverage levels:

- At least 80% of all pregnant women attending antenatal care (ANC) are provided with information on PPTCT
• At least 80% of all pregnant women attending ANC are tested for HIV, including those previously confirmed to be living with HIV
• At least 80% of pregnant women living with HIV receive ARV prophylaxis or ART to reduce the risk of mother-to-child transmission
• At least 80% of eligible pregnant women living with HIV receive ART for their own health
• At least 80% of infants born to women living with HIV receive co-trimoxazole prophylaxis
• At least 80% of pregnant women living with HIV receive infant feeding counselling and support at the first infant follow-up visit
• At least 80% of women living with HIV are successfully referred and enrolled in comprehensive longitudinal care and treatment
• At least 80% of infants born to women living with HIV receive a virological HIV test within two months of birth

1.4 References


Chapter 2: Primary Prevention of HIV in Women of Reproductive Age

2.1 Strategic Overview

2.1.1 Rationale – women’s specific risks and vulnerability to HIV

It is important to note that HIV infection is not gender-neutral. Women are biologically at twice the risk of acquiring HIV infection as men, and their relative lack of decision-making power, education, and economic independence may further increase their risk.

This may, in turn, make women more vulnerable to coercive or transactional sex. In more developed HIV epidemics, over 75% of all HIV infections are acquired sexually or through transmission during pregnancy, labour, delivery or breastfeeding. The presence of non-HIV STIs in either or both partners increases the risk of sexual transmission of HIV.

Women may be forced into sex work by poverty and social marginalisation, and this may place them at risk of acquiring and transmitting HIV to their sexual partners (some of whom may be IDUs or members of another at-risk population).

Early marriage adds to the risk of transmission – especially if the husband is older and has had more sexual exposure, or if sexual intercourse is traumatic.

Women and girls are more likely than men and boys to become primary carers of those who are infected with HIV when they develop AIDS-related illnesses, and the expectation that they will care for younger siblings or ill relatives means they may not be able to go to school or work. Often, they fulfil these roles in the absence of adequate services and without proper community or family support mechanisms.

HIV-infected women are even more vulnerable to abuse or abandonment than women who are not infected. Economic assets, such as land and housing, can act as a protective factor in women’s lives but, in Afghanistan, laws and customs prevent women from owning or inheriting property and other assets. If a woman’s husband or father falls sick or dies from an AIDS-related illness (and especially if the woman is sick herself), she may lack access to legal protection of property rights and lose her home, inheritance, possessions and livelihood.

Without addressing the many ways in which these circumstances contribute to women’s increased vulnerability, HIV prevention and reducing the risk of perinatal transmission will have limited success in Afghanistan.

2.1.2 Socioeconomic and development context in Afghanistan

The 2003 Multiple Indicator Cluster Survey (MICS), the 2006 Afghanistan Health Survey (AHS) and other studies have highlighted aspects of the socioeconomic context in Afghanistan that present both direct and indirect challenges to implementing the ANASF, establishing PPTCT services, and scaling up VCCT services and the primary prevention of HIV.
* Demographics –

Afghanistan’s population is young, with an estimated 33.8% of the population aged less than 15 years and 13.8% under five.

There are about 105 males for every 100 females. About 3% of households have a female head.

* Poverty and Economic Security –

Afghanistan’s estimated Human Development Index, 0.346, ranks it 174 out of 178 countries.

The Central Statistics Office has estimated that more than 40% of the population lives in extreme poverty (i.e. living in families where the monthly *per capita* income is less than USD 10). Many people affected by poverty are among the estimated 77% of the population that lives in rural areas.

* Gender and the Status of Women –

The Gender Development Index for Afghanistan is 0.310 – ranking it second-last in the world.

UNIFEM estimates that there may be as many as 1 million widows in Afghanistan, and that their average age is 35 years. In Kabul, there are about 50,000 war widows, each supporting an average of 6 dependents.

An estimated 70%-80% of women face forced marriages, and 57% of girls are married before the legal marriage age of 16 years.

Only 38.2% of women in Afghanistan are economically active. In 2004, the per capita Gross Domestic Product was USD 402 for women and USD 1,182 for men.

Women comprise almost 50% of health workers, but are greatly under-represented in other sectors and occupations.

* Literacy and Education –

Educational status is strongly associated with many health outcomes, and literacy skills help people to internalise prevention and behaviour change information and to learn how to access health and other services.

Two-thirds of the Afghan population has never attended school (77.8% of females and 54.6% of males).

Almost half of children aged 7-12 years are currently not enrolled in school. During the former Taliban regime, only about 3% of girls received any form of primary education. Males remain more likely than females to be enrolled in or attend school (net primary school attendance ratio 66% for boys, 40% for girls); the disparity in enrolment rates increases with age (net secondary school attendance ratio 18% for boys, 6% for girls).

The literacy rate among individuals aged 15 years and over is consequently extremely low (43.2% for males, 14.1% for females).

---

* A ban on women’s employment also affected boy’s education, as the majority of teachers had been women.
Access to Media and Communications –
Access to electronic media can enable people to receive health communication messages, especially where literacy is limited. Almost 50% of Afghan households own a radio, and two-thirds have access to one; almost one household in 5 owns a television.

Where a radio is available, women tend to listen to it (and especially during the early morning and late evening).

2.1.3 Knowledge and Awareness of HIV and Prevention Methods
Knowledge of HIV is high among male and female health workers (94%) and university students (up to 90%). However, only 4% of female SWs, 34% of truck drivers and 43% of IDUs have heard of HIV or AIDS.

Knowledge of prevention methods is better among IDUs than among other groups. About one third of students do not know that condoms are protective against sexual transmission, and condom use among SWs and transport workers is infrequent.

2.2 Priority Actions
There are a number of important first steps that need to be taken to strengthen and fully operationalise primary prevention of HIV among women and families. These are included in the proposed strategic framework in Table 2.1, below.

2.2.1 National
The ANASF 2006-2010 provides a clear direction for moving towards a more decentralised, community-based model for HIV counselling and testing and PPTCT that is fully integrated with community health services through the BPHS.

The National AIDS Control Program (NACP) and the Information, Education and Communications (IEC) Department of the Ministry of Public Health (MOPH) will focus on two specific groups through their Communication Strategy for Targeted HIV/AIDS Interventions:

a) MARPs (IDUs, SWs, MSM, etc) and, among them, those identified as especially vulnerable (migrant workers, mobile populations, uniformed personnel and street children); and

b) those influencing the enabling environment (top political leadership, religious leaders, leadership within the uniformed services, etc)

The Communications Strategy will guide and support the production of IEC materials for behaviour change communication in clinical and community settings and via mass media outlets. IEC materials targeting young women and mothers attending ANC should be included.

With inputs from the IEC Department, PPTCT Working Group and Reproductive Health Task Force, the NACP will have the responsibility for developing, updating and disseminating training materials for health workers on primary prevention.

Because of their access to and current work with MARPs and especially vulnerable groups, non-government organisations (NGOs) are identified by the Communications Strategy as
particularly well placed for carrying out behaviour change interventions among key populations, but also that NGOs need some capacity development in this area – this will be a key area for national coordination and technical support.

The NACP will maintain and support national level surveillance and monitoring and evaluation (M&E) systems.

2.2.2 Province

Health Managers –

The NACP has HIV Advisers in 8 provinces (Badakhshan, Balkh, Ghazni, Herat, Kabul, Kandahar, Konduz and Nangarhar), and has plans for positions in additional provinces in future.

Key activities at the Provincial level include engaging multi-sectoral partners in HIV prevention and awareness activities, engaging with NGO partners working on prevention and awareness at the sub-national level, and implementing the national IEC Strategy and conducting training for health workers within the province.

Provincial Health offices should also support the introduction and adoption of national guidelines on VCCT, risk assessment, and pre- and post-test counselling by District Health Services and at Provincial facilities under their jurisdiction.

However, their most important functions in primary prevention are to plan and support integration and linkages between different health programs within the province, especially the incorporation of prevention into maternal, neonatal and child health (MNCH) services, the TB program, and harm reduction programs for IDUs.

Provincial Hospitals –

All provincial hospitals should integrate primary prevention into their routine clinical contact with women and their partners, and ensure that linkages between different programs are operational.

2.2.3 District

District Managers –

District Managers should support the implementation of national guidelines on VCCT, risk assessment, and pre- and post-test counselling.

They also have an important role in incorporating HIV prevention into other health programs within the District (including MNCH services, the TB program and harm reduction programs for IDUs), and ensuring that inter-referral is functional.

District Hospitals –

All District Hospitals should integrate primary prevention into their routine clinical contact with women and their partners.

District Hospital personnel and Community Midwives can work in partnership to support, train, coordinate and manage the HIV prevention work of staff of Basic Health Centres (BHCs) and Comprehensive Health Centres (CHCs), including operation of VCCT centres.
District Hospitals also have an important role in training in HIV prevention and sexual and reproductive health (SRH), resource mobilisation, and establishing systems for M&E of primary prevention activities at facilities under their supervision, and monitoring and reporting on the incidence of HIV and STIs.

2.2.4 Community

Community Health Facilities –

All categories of community based health worker and volunteer have an important role to play in dispelling misconceptions about HIV and stigma and discrimination associated with HIV infection, and stimulating community dialogue about HIV prevention, care, treatment and support.

Health facility managers and Community Midwives need to identify Community Health Worker (CHWs) and other community members (e.g. teachers, religious leaders) who have the potential to become involved in primary HIV prevention and PPTCT counselling. The training and support needs of these workers and individuals needs to be assessed, training conducted and supervision provided.

Health Centre staff and CHWs need to initiate health education and promotion on HIV and STI prevention and care, including safer sex practices, birth planning, optimal infant feeding and family planning (using both group and individual education strategies).

They should establish the supplies of reproductive health commodities that are needed and distribute male and female condoms.

They can develop outreach programs for young people, and initiate antenatal, couple and/or partner counselling. Establishing partnerships with NGOs and other Community based organisations (CBOs) – especially those serving the needs of returnees and their families, IDUs, SWs and other MARPs – is a very important aspect of every health facility’s networking in the community.

To link prevention activities with good quality clinical care and supervision, they need to identify patient and specimen referral and transportation links for HIV VCCT and syphilis and other STI screening.

Community Leaders and Community Level Action –

A comprehensive approach to preventing HIV infection in infants and young children must include community, health sector and other partners working together for the prevention of primary HIV infection in women.

A crucial starting point is identifying, engaging and sensitising leaders about HIV as an issue of importance to their community, including for parents and families. With the help and support of leaders, we can stimulate awareness among men and women of reproductive age – and particularly young people – on basic facts about HIV and AIDS, behaviour change, pregnancy planning and PPTCT.

This can best be achieved through education and community linkages supporting safer and more responsible sexual behaviour and practices, provision of condoms, and the early diagnosis and treatment of STIs.
This will reduce the number of mothers infected with HIV and, in turn, reduce the risk to their unborn or newborn children.

Community leaders, CHWs and Community Midwives have very important roles to play, and must be supported by health facility staff under the strategic direction of the District health managers.

**2.3 Integrating Prevention with existing SRH and MNCH Services**

**2.3.1 Reaching the “at-risk” mother and baby**

Many women at risk of HIV infection (whose children are therefore those at risk for PTCT) do not look to hospitals for their health care needs and those of their children. If HIV prevention and PPTCT programs only target hospital populations, they are likely to miss the “average” at-risk mother and baby – especially those living in Remote Mountain or rural communities.

A woman of unknown HIV status may be poor, young, a widow, not attending school, or the partner of a man who has HIV risk behaviours. She may have a past history of STI or tuberculosis. She may rely on sexual encounter to earn money to feed her family, or for protection of herself and her children. **She is also more likely to use existing community-based MNCH and SRH services, and can therefore be reached through those services** (Figure 2.1). She may have attended ANC in the past (or for a current pregnancy), and she may have delivered previous babies at a BHC or CHC, or within a community served by a Community Midwife. She may also breast feed her babies and bring them for routine child care like immunisation and growth monitoring, and she may also seek advice on family planning.

![Figure 2.1](image)

**Key Linkages between Sexual and Reproductive Health Services and HIV Prevention, Treatment, Care and Support Services**

All of these elements of broader SRH and MNCH services represent opportunities to incorporate HIV prevention, detection through VCCT, and PPTCT.

Linking HIV prevention and PPTCT services with SRH also addresses the unmet need and rights of PLHIV and members of MARPs to these services. The majority of women living with HIV will be asymptomatic, and will therefore either not have been tested or will not be forthcoming about their HIV infection. Providing essential labour and delivery care (including safer delivery practices) will reduce the risk of PTCT, while better infection control through universal precautions (knowing that some women will be HIV positive) will improve the quality of maternity care for all women and their babies.

Adding HIV prevention to existing SRH services also provides greater support for “dual protection” – i.e. protection against unintended pregnancy and STIs (including HIV).

To maximize opportunities to prevent and reduce the risk of HIV infection for all mothers and babies, and to enhance program effectiveness and efficiency, PPTCT services should be an integral part of all existing SRH and MNCH services.

2.3.2 A special focus on young women

The MICS and Afghanistan Health Survey data cited above (Section 2.1.2) highlight the early age of marriage for many women and the high proportion who have received little or no education. This tells us that a focus on youth – especially poorer and less educated young women – is particularly important for HIV prevention and PPTCT.

While some young people may be reached by integrating PPTCT into existing MNCH and reproductive health programs, health service planners and health care workers should also explore other ways to reach young women and men with HIV and PPTCT information – in schools, at markets, at football matches and other sporting occasions, in the work place, at places where women gather, and in youth-friendly clinics.

Where VCCT is available, providers should pay extra attention to youth-friendly counseling content and approaches.

2.3.3 Importance of male partner involvement in PPTCT

Since a woman’s partner and male family members play such a crucial role in the family’s decision-making process, both mothers and fathers can influence the risk of transmission of HIV to the infant.

Because of the much greater risk to the baby posed by acute maternal infection during pregnancy and breast feeding (see Section 1.2), it is of great importance to avoid HIV infection or detect undiagnosed HIV infection in the male partner. Finding discordant couples (in this case, where the woman is not infected with HIV but her male partner is; see also Section 4.6) should be a priority so that appropriate counselling can be provided. This can only happen if the male partners of uninfected women are also counselled on HIV prevention and tested for HIV.

Regardless of the male partner’s HIV status, involving him in non-test dependent or HIV test-related counselling can help ensure that he is aware of and supportive of his partner’s choices related to HIV, infant feeding and family planning.
## Table 2.1 Primary Prevention of HIV Infection in Women of Reproductive Age – Integrated Summary of Strategic Elements and Actions

<table>
<thead>
<tr>
<th>COMMUNITY or LOCAL</th>
<th>HEALTH FACILITY</th>
<th>PROVINCIAL</th>
<th>NATIONAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Increase awareness of HIV; dispel local myths</td>
<td>• Identify the “HIV element” in every clinical contact</td>
<td>• Coordination and management through Provincial HIV Adviser</td>
<td>• Ongoing review of evidence (including surveillance among MARPs), and policy and major strategy development</td>
</tr>
<tr>
<td>• Mobilise community leaders</td>
<td>• Encourage prevention</td>
<td>• Implement and resource national Communications Strategy, especially targeting multi-sectoral leaders and MARPs</td>
<td>• Establish and implement national coordination mechanisms</td>
</tr>
<tr>
<td>• Encourage involvement of male partners</td>
<td>• Promote dual protection</td>
<td>• Facilitate intra- and inter-sectoral partnerships and linkages at sub-national level</td>
<td>o PPCT Working Group</td>
</tr>
<tr>
<td>• Identify, mobilise, orientate, train and supervise Community Health Workers</td>
<td>• Help women plan or avoid pregnancies</td>
<td>• Establish links and advocate with employer groups, international military assistance missions, NGOs, FBOs and CBOs at sub-national level</td>
<td>o Reproductive Health Task Force</td>
</tr>
<tr>
<td>• Provide non-test dependent counselling and support; refer for and facilitate access to and utilisation of VCCT as appropriate</td>
<td>• Provide STI screening and treatment</td>
<td>• Integrated training and support for District managers and health workers to introduce national strategies</td>
<td>o Harmonisation between national health programs</td>
</tr>
<tr>
<td>• Establish partnerships and linkages to NGOs and community based organisations</td>
<td>• Provide non-test dependent counselling where testing not available, and offer or refer for VCCT as appropriate</td>
<td>• Establish and maintain links between HIV awareness and prevention and other health programs (especially those serving MARPs or representing “entry points” for counselling and testing)</td>
<td>• Training (curricula, standards, guidelines and technical support)</td>
</tr>
<tr>
<td>o Community development NGOs and NGOs serving needs of MARPs (e.g. IDUs, SWs, mobile populations, street children)</td>
<td>• Establish intra-sectoral partnerships and linkages</td>
<td>• Production of IEC materials and key messages in support of national Communications Strategy, especially targeting multi-sectoral leaders and MARPs</td>
<td>o Health workers</td>
</tr>
<tr>
<td>o NGOs and international organisations addressing the empowerment of women (with a special focus on young, under-educated and vulnerable women)</td>
<td>o Linkages between MNCH and HIV services</td>
<td>• Monitor and analyse efficacy of available interventions for PPTCT</td>
<td>o Inputs to other sectors</td>
</tr>
<tr>
<td>o Community based NGOs addressing the sexual and reproductive health needs of young people</td>
<td>o Linkages between Reproductive Health and HIV services</td>
<td>• Resource mobilisation and harmonisation (human, financial)</td>
<td>• Identify national level NGO partners</td>
</tr>
<tr>
<td>o Faith-based initiatives and organisations (FBOs) and religious leaders</td>
<td>o Linkages with other health programs for special needs: e.g. TB, harm reduction for IDUs</td>
<td>• Development and sharing of knowledge and information through mass media (audio-visual) and print media targeting antenatal mothers</td>
<td>• Identification of national level NGO partners</td>
</tr>
<tr>
<td></td>
<td>• Link prevention to care, treatment and support as appropriate</td>
<td>• Establishment and maintenance of early antenatal care and principles of management of HIV positive pregnancies</td>
<td>• Production of IEC materials and key messages in support of national Communications Strategy, especially targeting multi-sectoral leaders and MARPs</td>
</tr>
<tr>
<td></td>
<td>• Integrated training for CHWs and community-based volunteers</td>
<td>• M&amp;E</td>
<td>• Monitor and analyse efficacy of available interventions for PPTCT</td>
</tr>
<tr>
<td></td>
<td>o Including engagement with traditional birth attendants</td>
<td>• M&amp;E (data disaggregated by gender and income or social class)</td>
<td>• M&amp;E (data disaggregated by gender and income or social class)</td>
</tr>
</tbody>
</table>
2.4 Further Reading


Chapter 3: Strengthening HIV Detection in Pregnancy – Counselling and Testing

3.1 Overview

3.1.1 Role of HIV counselling and testing

Voluntary confidential counselling and testing provides an important link between programs for HIV prevention, STI prevention and treatment, obstetric and neonatal care, and the detection and treatment of tuberculosis and other opportunistic infections. By “normalising” HIV screening and awareness, it may also reduce stigma and discrimination against PLHIV.

It can promote and sustain behaviour change, and may play a role in improving the quality of life of PLHIV. It is both an entry point and a stimulus for ART access and systems of care, treatment and support (Figure 3.1).

![Figure 3.1](source: UNICEF. Scaling Up VCT Services: Lessons Learned from Cambodia (2007))

The scaling-up of PPTCT services should be directly linked to the expansion of VCCT and SRH services. **It is important that PPTCT and VCCT services are coordinated and linked, and do not attempt to duplicate each other or evolve in parallel with each other or with the services provided through the BPHS or the EPHS.**

Because of its strong association with behaviour and behaviour change, HIV testing should always be provided in conjunction with quality-assured HIV and SRH counselling.
3.1.2 Client-initiated testing and counselling

Traditionally, HIV testing and counselling has operated on a client-initiated basis – i.e. the individual presents to a health facility requesting a test for HIV infection or “for AIDS”.

Under these circumstances, it is important to provide counselling and risk assessment, as well as to offer (or refer for) HIV testing according to the National Universal Access for HIV Prevention and Treatment Protocol 2008 (which incorporates the national guidelines for client- and provider-initiated counselling and testing) and the standards summarised in the Box, below.

<table>
<thead>
<tr>
<th>Minimum Standards for HIV Counselling and Testing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) HIV counselling and testing should be voluntary. Individuals should have sufficient information, understanding and freedom of choice to be able to give informed consent to testing.</td>
</tr>
<tr>
<td>2) Pre-test information should describe the purpose and procedure of HIV testing and the treatment and support that are available after testing.</td>
</tr>
<tr>
<td>3) There should be appropriate post-test information and counselling and/or referral.</td>
</tr>
<tr>
<td>4) There should be consistent commitment and ethical support to encourage partner participation and disclosure to significant others.</td>
</tr>
<tr>
<td>5) Persons whose test result is positive should receive counselling and referral to care, treatment and support where available.</td>
</tr>
<tr>
<td>6) HIV test results and counselling records should be treated confidentially and only those health workers with a direct role in the management of patients should have access to this information.</td>
</tr>
<tr>
<td>7) Persons whose test results are negative should receive counselling to enable them to remain free of HIV.</td>
</tr>
</tbody>
</table>


3.1.3 Non-test dependent counselling and risk assessment

It will take time to establish comprehensive, decentralised antenatal and other VCCT services. Most districts of Afghanistan have a low prevalence of HIV; even in the larger urban centres, most infections are documented among MARPs (see Section 1.1.2) – consequently, most individuals will have a low risk of exposure to HIV.

Health care providers therefore do not necessarily need to recommend HIV testing to everyone who visits a health facility – to do so would use a lot of resources (human, logistic, transportation, financial) to identify just a single HIV infected individual.
Where on-site testing not available, the focus should be on **non-test dependent primary prevention and counselling**, with **careful identification of potential risk factors** for acquiring HIV infection and **clinical conditions that could be associated with HIV infection or transmission**.

Where such risk factors are identified, **early referral to a centre where testing is available** will be necessary and essential.

### 3.1.4 Provider-initiated testing and counselling

Because injecting drug use is the single most common means of transmission of HIV infection in Afghanistan, the sexual partners of IDUs are also at particular risk. Prevention efforts must address the SRH needs of IDUs, their sexual partners, other MARPs and PLHIV and connect them with excellent family planning services.

Health facilities are an important point of contact with PLHIV or MARPs who may not know their HIV status but who are in need of prevention, education, diagnosis or CT&S. It is important not to miss opportunities to reach these individuals.

When a health care provider recommends HIV counselling and testing (rather than the individual asking for it), this is called provider-initiated testing and counselling (PITC).

PITC presents an opportunity to ensure that HIV is more systematically diagnosed in health care facilities in order to facilitate patient access to the HIV prevention and CT&S services that they need. **Note that PITC does not mean that HIV testing is mandatory or compulsory – individual informed consent should still always be given, in private, in the presence of a health care provider.**

### 3.1.5 “Entry points” for PITC

Decisions about PITC should be guided by the epidemiological and social context in the community. In Afghanistan, health care providers should recommend HIV testing and counselling – as part of routine health care – to the following clinical groups:

- all adults, adolescents or children who present to health facilities with signs or symptoms that could indicate HIV infection (including TB and other OIs)
- all infants born to HIV-infected women and all of her other children (as a routine component of follow-up care for all those children)
- all children presenting with suboptimal growth or malnutrition in settings where risk assessment counselling identifies one or both parents as at-risk of HIV infection and/or the mother was not screened for HIV during the antenatal period.

In addition to these three clinical groups, PITC should be provided as an integral part of:

- STI services and other reproductive health services (including medical assessment following sexual assault),
- antenatal, childbirth and postpartum services,
- health services for MARPs (especially harm reduction services for IDUs),
- Blood transfusion services, and
- TB services.
These are called the “entry points” for PITC.

Where an individual accepts a recommendation for PITC in a centre without co-located or nearby testing facilities, the CHWs, Community Midwives and NGOs can play an important role in facilitating transport and early follow-up for results and post-test counselling.

### 3.2 Guiding Principles for PITC in Antenatal Settings

#### 3.2.1 Antenatal PITC and education as a minimum standard of care

All clinical settings that provide:

- a) family planning services for women of childbearing age, and
- b) antenatal, labour and delivery, postnatal and other reproductive health care for pregnant women,

must be able to provide a basic package of HIV counselling- and testing-related services. This will include:

- as a minimum, non-test dependent counselling and individual risk assessment,
- pre-test information,
- testing (or referral for testing) where indicated, and
- post-test counselling (regardless of whether the test result is positive, negative or indeterminate).

As part of their counselling and pre-test information, all pregnant women presenting to ANC must receive information on the following:

- safer sex practices,
- prevention and treatment of STIs,
- prevention of HIV in unborn babies, infants and young children, including available PPTCT interventions, and
- HIV testing, post-test counselling and follow-up services (including access to ARV prophylaxis or HAART, where indicated).

There should also be a strong emphasis on counselling for partners or, if possible, as a couple. This is particularly important for sero-discordant couples (see Section 4.6).

#### 3.2.2 Informed consent

Informed consent is a fundamental principle of HIV counselling and testing. Clear and accurate information about HIV testing must be part of the standard package of care. This is necessary to ensure that the patient understands his/her rights and that he/she has the specific opportunity to consider and, if he/she wishes, to decline testing.

In the context of antenatal care, written informed consent is not necessary. However, the fact that the patient has provided informed and voluntary consent to an HIV test (and the test result) should be documented in the antenatal record.

It is the responsibility of staff providing antenatal counselling to ensure that it addresses the following aspects of care:
• understanding the purpose and benefits of testing
• understanding the counselling and testing process, including follow-up once the test result is known
• understanding the voluntary nature of HIV testing
• respecting the patient’s testing decision

3.2.3 When testing is declined

The voluntary nature of HIV testing means that the individual always has the right to decline an HIV test. However, if a woman declines an HIV test, her HIV status will remain unknown.

Declining an HIV test does not affect the patient’s access to services that do not depend upon knowledge of HIV status or test results. In such circumstances, the provider should make a careful effort to identify any risk factors and attempt to resolve any issues – e.g. related to her partner or family – that may be making her fearful or otherwise preventing her from accepting testing.

Even though they would not have the main indication for ARV prophylaxis (i.e. a positive test result), women who decline testing may be at risk for HIV infection and PPTCT – they should be counselled accordingly during antenatal care. They should be made aware that testing will still be available at later ANC visits or at the onset of labour, and that limited interventions for PPTCT may still be available and feasible at that time.

They should be reminded of the benefits of knowing their HIV status and that of their male partner, and the benefits to the baby of commencing interventions as early in pregnancy as possible should HIV infection be diagnosed.

3.2.4 Confidentiality

Confidentiality is an essential aspect of VCCT services, and is an important mechanism for establishing trust. Individuals may be more likely to seek counselling and testing where it is perceived as confidential.

Although information and pre-test counselling may be provided on a group basis (see Sections 3.3.1 and 3.3.2), it is essential that a private setting (e.g. a separate closed room) is used for all one-on-one discussions of HIV-related matters. In particular, individual risk assessment and post-test counselling for a person who has tested positive to HIV should take place away from other patients or staff not involved with that person’s care.

Staff must maintain the confidentiality of HIV test results at all times; information that is shared between health care workers and patients must be kept private. This applies to both verbal and written communications. Breaches of confidentiality may result in disciplinary action.

It is also important to recognise that good clinical care involves recording HIV results and communicating results to other health care providers who will be responsible for patient care. This is particularly important where there are strict cultural barriers to counselling or providing care to males and females together, and different health workers attend the male or female partner.
Patients should be advised that, as a way of ensuring that they receive appropriate medical care, personal and medical information (including the results of HIV testing) may be shared with other health care providers who have a direct role in the ongoing management of the individual and her family.

Women should be offered advice on the safe-keeping of patient- and parent-held records at home, including antenatal cards and child health cards.

Medical records administrators may need specific systems and training in handling confidential medical records in clinical settings where HIV testing and counselling are carried out. Only those health care workers who are directly involved in the individual’s care will have access to the patient’s records.

### 3.2.5 Stigma and discrimination

HIV is not only the greatest health challenge of our time – it is also one of our greatest human rights challenges. Those who are aware they are HIV-infected shoulder multiple burdens: stigma; discrimination; fear; rejection from family and community; and blame and physical violence from partners and community members.

**Origins in fear** –

Fear of becoming infected with HIV underlies all this behaviour, which remains a major global impediment to preventing HIV transmission, slowing the spread of the disease, and providing care, treatment and support to PLHIV and their families.

**Role of health workers** –

Health staff can serve as role models – both positive and negative – and their behaviour is often imitated in the community. Their attitudes towards PLHIV and MARPs should be as supportive and compassionate as for any patient, and staff should aim to “normalise” all contacts with PLHIV.

Health centres and health care workers providing PPTCT services can take the lead in challenging long-held community perceptions and practices. Health workers should get to know their local community, identify local HIV-related stereotypes, rumours and misconceptions, and ensure that these are addressed at appropriate times during both clinic hours and community meetings.

Health workers need to be encouraged to challenge their own attitudes, and to be supported with information and activities that address any risk – no matter how inadvertent – of care being compromised by stigmatising behaviour in health care settings.

**Male partner participation** –

Partners should participate in all aspects of PPTCT services, including exploration and counselling regarding their own attitudes to HIV, risk behaviour and gender equality. They need access to education about PPTCT risks and interventions (including ART and ARV prophylaxis and modified infant feeding practices), to be supported and counselled to undergo testing.

They may need to be referred to clinical HIV medicine services for management of their own clinical condition. This may include prophylaxis for OIs and/or ART.
Advocacy for women’s rights –
Health workers and civil society partners should ensure that women diagnosed with HIV are educated about their rights and know where to turn for help, including for legal advice, to challenge discrimination and stigmatisation.

Peer and community support –
Support groups linked to antenatal, PPTCT and HIV-related care and treatment services provide an opportunity for HIV-infected pregnant women to share experiences, and to be linked to other support services.

3.3 Pre-Test Information and Counselling

3.3.1 Group approaches to HIV education and counselling in ANC settings
Providing pre-test information helps prepare women and their partners to understand the counselling and testing process.
Group approaches to background information and education can free up more of the counsellor’s time for providing individual counselling to selected individuals.
ANC registration and waiting areas can be used for mass education methods, under the supervision of a nurse or health educator. Approaches include:
- Displays of PPTCT related materials
- Distribution of IEC materials on PTCT and PPTCT interventions
Larger group sessions should cover basic information about HIV and AIDS, how it is transmitted and the risks of perinatal transmission, risk reduction strategies, HIV testing procedures, and the advantages and disadvantages of testing. Printed materials, videos, guided discussions and role-playing exercises can all be used in a group setting. The woman should be exposed to this information again during subsequent ANC visits.
When audiovisual materials are used to provide health education messages, screenings can be followed by group discussion to clarify understanding and answer questions.
With basic training in HIV and counselling techniques, a midwife, nurse, CHW, lay counsellor or even an HIV-infected mother can provide pre-test information on HIV in group sessions. (With additional training, they can also conduct post-test counselling, pre-discharge counselling for mothers who were not tested prior to delivery and provide advice and counselling on infant feeding).
Health care workers and counsellors should jointly identify women who need or have requested individual pre-test counselling and testing or referral.
Where peer or lay counsellors provide HIV-related counselling (including for PPTCT), clear policies on their training, required skill level, supervision, confidentiality and possible remuneration will also be needed.

3.3.2 Pre-test counselling in small groups
Each woman should receive all the information she needs to make an informed decision about being tested for HIV.
Where feasible, more specific and detailed information about HIV testing can be provided to smaller groups. Information and discussion in the pre-test group session should include:

- Basic facts about HIV infection and AIDS, including the “window” period
- Risk reduction approaches (including consistent use of condoms and demonstration of their use)
- Discussion of comprehensive family planning options, including condom use for dual protection against unintended pregnancy and HIV and STI
- The advantages and potential disadvantages of HIV testing (see Table 3.1)
- HIV testing procedures, including the availability of free HIV testing (regardless of what other routine antenatal tests may be performed)
- The voluntary nature of HIV testing
- Procedures for providing and discussing results
- Discussion about the confidentiality offered to the clients, and the circumstances under which test results may be shared with other health care workers
- Clarifying the meaning of available PPTCT interventions, including ARV prophylaxis and its benefits for the pregnant mother and the unborn baby
- Communicating HIV status with partner and/or family and friends
- Infant feeding options
- Information on referral for related health care and social support

Table 3.1
Advantages and Disadvantages of HIV Testing

<table>
<thead>
<tr>
<th>ADVANTAGES</th>
<th>DISADVANTAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Knowledge of the result can reduce anxiety and stress</td>
<td>- Stress and uncertainty: HIV infected individuals may have difficulty accepting or adapting to a positive result</td>
</tr>
<tr>
<td>- Pregnant women infected with HIV can make decisions on how to reduce the chances of transmission to the baby and to her sexual and other contacts</td>
<td>- Fear and anxiety</td>
</tr>
<tr>
<td>- ARV prophylaxis during pregnancy and/or labour</td>
<td>- fear of how to approach her partner and disclose the result</td>
</tr>
<tr>
<td>- options for delivery</td>
<td>- constantly watching for the development of clinical symptoms of AIDS</td>
</tr>
<tr>
<td>- ARV prophylaxis for baby during neonatal period</td>
<td>- fear of how to maintain secrecy around diagnosis and the need to attend for more regular care</td>
</tr>
<tr>
<td>- explore infant feeding options</td>
<td>- May face stigma or rejection if information is shared with family and friends</td>
</tr>
<tr>
<td>- prevent infection to others through safer sex practices and/or harm reduction activities</td>
<td>- May find maintaining relationships difficult.</td>
</tr>
<tr>
<td>- Positive living</td>
<td>- May find restrictions placed on job opportunities, access to financing and insurance</td>
</tr>
<tr>
<td>- Symptoms can be identified and treated promptly</td>
<td>- Access to ART if needed to prolong and improve quality of life</td>
</tr>
<tr>
<td>- Can protect themselves from further infection</td>
<td>- Planning for the future of one’s family more easily</td>
</tr>
<tr>
<td>- Can improve their health by good sanitation, healthy diet, etc</td>
<td>- Making choices about sexual behaviour and future child bearing</td>
</tr>
</tbody>
</table>
3.3.3 **Timing of counselling and testing**

Especially in rural and mountain districts, many women attend for antenatal care late in pregnancy or may be seen only once or twice before delivery. Providers should therefore support and encourage women to be tested at the initial visit.

However, the decision to accept testing may require support from partners or other family members. This may entail a return visit with family decision makers, who should be given the same information and pre-test counselling that was provided to the woman.

Each woman must be reassured that declining an HIV test will not affect her access to antenatal care, related services or the later availability of testing.

She should be advised that, if she changes her mind, an HIV test can be provided during any subsequent antenatal visit right up to the onset of labour. However, she should also be informed that diagnosis of HIV infection later in pregnancy will be associated with a more limited range of protection that can be offered to the baby.

3.3.4 **Individual pre-test counselling**

Individual pre-test counselling and the opportunity for women to ask further questions in a more confidential setting will ideally be incorporated into routine ANC visits.

Where this is not practical, health care workers may refer patients to nearby VCCT centres for individual pre-test counselling or for clarification of information provided in the small group sessions.

3.3.5 **Pre-test counselling for couples**

A woman's partner's HIV status is a very important aspect of the family's decision-making framework.

Women attending for HIV-related counselling should therefore be encouraged – but not forced – to bring their partners to ANC counselling and testing sessions as:

- during counselling, health care workers can emphasise the man's responsibility for protecting the health of his wife or partner and their family;
- counselling male partners of pregnant women provides an opportunity to encourage men to practice safer sex (including by using condoms and limiting the number of concurrent partners);
- involving the male partner in HIV- and test-related counselling can help ensure that he is supportive of his partner's choices in relation to HIV, infant feeding and family planning (including decisions on whether or not to become pregnant again);
- testing both partners together as a couple may reduce the likelihood that the woman will be "blamed" for bringing HIV infection into the family;
- identifying discordant couples (i.e. where one partner is infected with HIV but the other is not) during counselling will provide the opportunity to discuss safer sex practices – see also *Discordant Couples*, Section 4.6.
Strategies for increasing partner involvement include providing women with a card from the ANC to take home to their partners, inviting them to “new fathers’ evenings”, fathers’ health checks or couples’ information sessions.

### 3.4 HIV Testing

#### 3.4.1 Availability

Rapid HIV antibody testing in (or close to) PPTCT settings enables same-day turn-around for test results – usually within 20-40 minutes.

This means clients can receive their test results and post-test counselling on the same day as they receive pre-test information and counselling, and a higher proportion of tested mothers, their partners and families will be offered and enrolled in PPTCT services.

Providing a same-day, one-stop HIV counselling and testing service depends on the test being available in the centre providing PPTCT services or at a co-located or nearby facility that provides VCCT. This reminds us that the expansion of PPTCT services should not out-pace the expansion of VCCT – if mothers have to travel too far for antenatal VCCT, they are less likely to be retained in follow-up and remain unaware of their HIV status.

Same-day counselling and testing also limits the risk of specimen mix-up, loss or delay. Where testing is co-located with ANC or takes place in a VCCT centre that is conveniently located nearby, less human, facility and financial resources are needed. In PPTCT sites located within hospitals, systems should be developed to ensure that HIV rapid testing and results are de-linked from other ANC tests, and that results are provided to patients on the same day as pre-test counselling occurs. It is preferable for facilities and dedicated staff to be available within the ANC clinic to perform rapid tests on site.

In order to expand the availability and accessibility of VCCT and PPTCT services, it is proposed that rapid testing (linked to counselling) initially be expanded down to the most peripheral facility staffed by a doctor, i.e. the Comprehensive Health Centre.

Other health care staff (e.g. nurses, health educators and other qualified professional staff) could potentially become involved in HIV rapid testing, provided they have completed and passed an MOPH-accredited training course on testing procedures.

To ensure the quality of testing, regular supervision, periodic assessment of skills and a quality assurance (QA) system for both RDT use and counselling should be in place and maintained (see Sections 3.4.3 and 3.7).

#### 3.4.2 Algorithms

HIV testing should follow the algorithms in the National Universal Access for HIV Prevention and Treatment Protocol 2008, using a screening test of appropriate sensitivity. The diagnostic accuracy of the RDT algorithm used in Afghanistan (refer Annex I) is generally comparable with ELISA.

Where the screening test is reactive, the specimen should be re-tested using a second, highly specific test.

If the results of the two tests differ, it will be necessary to refer the specimen to a laboratory for confirmatory testing using a third test (known as a “tie-breaker” test).
3.4.3 Quality assurance for testing

A QA system is crucial for a laboratory to detect and reduce errors, improve consistency among testing sites and help contain costs.

A QA system includes the following components:

- Systems to hire, retain, train, supervise and manage staff.
- Procedures to select, purchase, install, calibrate, maintain, service and repair equipment.
- Procedures to manage inventory.
- Procedures (including standard operating procedures) to manage specimens.
- Procedures for developing, approving, distributing forms and for storing records.
- Systems and staff to manage information and data, and assure client privacy and confidentiality.
- Procedures for reporting, addressing and recording errors.
- Systems for external quality assessment and internal audit or self-evaluation.
- A method for monitoring and improving the testing process and customer satisfaction.
- A system for ensuring occupational safety for staff conducting testing.

All centres offering rapid or laboratory-based testing must ensure that they comply with internal quality control and external quality assurance (EQAS) procedures as they become established by the Central Public Health Laboratory (CPHL).

3.5 Post-Test Information and Counselling

Initial post-test counselling and all HIV test results, whether positive or negative, must be provided to the individual in person, separately and privately for each patient.

3.5.1 Negative test result

A negative result on an HIV antibody test means that a woman is either not infected with HIV or, rarely, that she is in the “window period” of very early HIV infection and her level of antibodies is too low to be detected.

Post-test counselling provides an opportunity for a woman who tests HIV negative to learn how to protect herself and her infant from HIV infection. Post-test counselling – even for those who test negative for HIV – provides women with a powerful incentive to adopt safer sex practices, discuss family planning, understand the issue of discordance (see Section 4.6), and to encourage partner testing.

Components of post-test counselling for women testing HIV-negative include:

- Explain to the client that the test result is ready now
- Provide test results clearly and simply and show her the test results
• Review the meaning of test result, and discuss the “window period” if she has a recent risk exposure. Explain to the client that, if there is no significant risk in the previous three months, no repeat testing is required; if recent risk exposure is revealed at the time of post-test counselling, a specific date must be set for re-testing of the woman (and, if possible, her partner).

• Discuss and negotiate a specific, concrete risk reduction plan – skills in condom use, demonstration as necessary, and a supply of condoms for dual protection.

• Inform seronegative women about the implications of acquiring HIV during pregnancy and breast feeding – i.e. that the high viral load associated with acute HIV infection greatly increases the risk of transmission to an unborn baby or breast feeding infant.

• Discuss test result disclosure for partner and partner testing for HIV testing.

• Jointly assess whether the woman needs referral to a more extensive post-test counselling session or additional prevention support, including through community-based services.

3.5.2 Positive test result

A woman who tests HIV-positive is infected with HIV.

The health care worker must remain non-judgmental, supportive, and confident throughout the counselling process. Because women may present late in pregnancy or only attend ANC once, key PPTCT messages will need to be provided as part of the post-test counselling session – this includes encouraging the woman to attend for subsequent ANC visits and to deliver in a health facility with ARVs and a skilled birth attendant available.

During those follow-up visits, key PPTCT messages can be repeated and reinforced, counselling and support provided, ARV prophylaxis commenced (Chapter 5) and referral for initiation of HIV-related care and support, with ART if indicated (Chapter 7).

It is important that the client gets her test result as soon as possible, to clarify any implications for the pregnancy and to ensure that she takes appropriate HIV prevention measures.

Components of post-test counselling for women testing HIV-positive include:

• Explain to client that the test results are ready

• Provide the test result clearly and simply, show her the test results and explore her understanding of the test result

• Discuss the meaning of the test result and provide time to acknowledge it

• Determine whether she understands the meaning of the result and let her talk about her feelings

• Allow her to ask questions

• Talk about her immediate concerns

• Inform her about essential PPTCT issues: discuss the benefits and limitations of ARV prophylaxis and various infant feeding options
• Discuss disclosure and partner testing – specifically explore the risk of disclosure-related violence from her partner or other relatives and strategies to reduce it, and specifically assess the risk of suicide or self-harm (see Disclosure, Section 3.5.3)

• Refresh her information on how to prevent transmission of HIV, including provision of male and female condoms and guidance on their use.

• Encourage her to attend subsequent ANC visits and the importance of giving birth in a facility where perinatal PPTCT support (i.e. appropriate infection control, availability of intra-partum and neonatal prophylaxis) is available – explain to her where this is and begin to make a plan on how she will travel there later in the pregnancy or if complications occur

• Provide information about how she can stay healthy (e.g. good nutrition, sleeping under insecticide-treated bed nets in malarious areas) and how to access HIV-related services (e.g. co-trimoxazole prophylaxis, routine monitoring including blood tests, treatment of OIs and, where indicated, ART); this should be addressed early, as it provides hope to the mother and an understanding that health care providers are concerned about her and her partner’s well-being as well as that of her baby

• Encourage and offer referral for testing and counselling of partners and other children

Women found to be infected with HIV should be referred as early as possible for clinical staging (including a lymphocyte count, and CD4 and viral load testing when they become available) to see if ART is needed. If at all possible, have a health care worker or volunteer accompany her to the provincial or regional HIV care clinic to ensure that she receives and understands the necessary care, support and treatment.

### 3.5.3 Disclosure of HIV status

It is very difficult for HIV-infected pregnant women to keep their status confidential as they need specific and ongoing follow-up and treatment.

During the initial post-test counselling session, the counsellor and the HIV positive mother should begin to discuss disclosure, as this may help to:

- encourage the partner(s) to present for counselling and testing
- prevent the transmission of HIV to her partner(s).
- access PPTCT interventions
- receive support from her partner(s) and family when accessing PPTCT and HIV care, treatment and support services.

It is important to respect the woman’s choices regarding the timing and process of disclosure. A woman may perceive disadvantages to herself and her family in disclosing her HIV diagnosis; in some communities, this may include stigmatisation, discrimination, rejection or physical violence.
If the woman has indicated that her partner(s) and family may react negatively to her being infected with HIV, the counsellor can help the woman to problem-solve and build skills to use when she discloses her HIV status.

### 3.6 Testing Women of Unknown HIV Status in Labour

ARV prophylaxis for PPTCT should only be provided on the basis of HIV infection confirmed by rapid or laboratory-based testing. **ARVs should never be provided only on the basis of perceived risk or clinical suspicion.**

If women with unknown HIV status (i.e. who did not attend ANC or have not been tested during the antenatal period) present to a health service in labour, there may be time to perform HIV rapid testing and provide intra-partum and postnatal ARV prophylaxis to the mother and the infant. If labour is well advanced or delivery is imminent, it is still possible to provide ARV prophylaxis to the infant and infant feeding counselling to the mother.

Under these circumstances, rapid testing with informed consent but with an abbreviated approach to pre-test counselling is recommended. The health care worker should remain sensitive and supportive to the woman, and respect her right to refuse testing.

It is recommended that maternal ARV prophylaxis be provided on the basis of a single positive rapid test. The result can be confirmed after delivery.

If there are any delays in confirmatory testing, neonatal prophylaxis may also be provided on the basis of a single positive maternal rapid test in labour.

More detailed, individual post-test counselling will be provided after delivery. (ARV protocols for this situation are discussed in Sections 5.4.2 and 5.4.3).

### 3.7 Quality Assurance for Counselling Services

It is essential that the quality of both counselling and testing can be assured with appropriate monitoring and evaluation as a key and planned component of interventions.

Counsellors and other health care providers involved in PPTCT interventions sites must have adequate training, on-site coaching and technical support with supportive supervision.

The institution or training centre that develops the training package for HIV-related counsellors should also develop a QA tool. Periodic audits of centres offering PPTCT and VCCT services should be conducted to ensure that approaches meet the appropriate quality standard, and to offer remedial interventions where necessary.

### 3.8 Priority Actions

Our objective is to increase the number of women and couples who know their HIV sero-status through information, education and counselling on HIV prevention and care, referral to counselling and testing and, where indicated, to sites offering PPTCT services.

Priority actions include linking and coordinating the current expansion of VCCT sites with potential pilot PPTCT sites. This will involve careful collaboration and communication with Provincial and District health service managers.
Once potential links are identified, District health service managers can work with health staff to ensure that centres offering VCCT and PPTCT services that are either co-located or near to each other develop ways of working closely and in collaboration – especially to ensure same-day turn-around of testing and post-test counselling.

Centres offering VCCT and PPTCT services should identify and orientate interested NGOs and community level health staff and volunteers. NGOs – especially those working with MARPs – are valuable partners for community level follow up of tested individuals and their families, patient and specimen transportation, and promoting VCCT and PPTCT services among the communities they support.

### Table 3.2
**Strengthening Counselling and Testing Services in Antenatal Settings**
**Integrated Summary of Strategic Components**

<table>
<thead>
<tr>
<th>COMMUNITY or LOCAL</th>
<th>HEALTH FACILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>• Increase awareness of HIV; dispel local myths</td>
<td>• Ensure strong links and inter-referral between ANC and centres offering VCCT services</td>
</tr>
<tr>
<td>• Mobilise community leaders</td>
<td>• Ensure strong links and inter-referral between STI and TB programs and groups supporting MARPs</td>
</tr>
<tr>
<td>• Encourage involvement of male partners Promote active awareness-raising of VCCT and facilitate access to and utilisation of counselling and support services</td>
<td>• Train and orientate MNCH staff on antenatal education, risk assessment and counselling to increase timely identification of HIV infected status in pregnant women</td>
</tr>
<tr>
<td>• Establish partnerships and linkages to NGOs / CBOs</td>
<td>• Provide non-test-dependent counselling or PITC, or refer fro VCCT</td>
</tr>
<tr>
<td>o Community-based organisations</td>
<td>• Ensure MNCH staff are familiar with PPTCT services, their location, and how community members will travel there</td>
</tr>
<tr>
<td>o NGOs serving needs of MARPs (e.g. IDUs, CSWs, sexual minorities)</td>
<td>• Encourage involvement of partner and family</td>
</tr>
<tr>
<td>o Faith-based initiatives and organisations</td>
<td>• Identify and train CHWs, NGO counsellors</td>
</tr>
<tr>
<td>• Provide long term care and support through linkages with home based care programs, food support, income generating activities, NGOs, CBOs, FBOs, PLHA support groups, etc</td>
<td>• Offer all elements of essential ANC package if</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PROVINCIAL</th>
<th>NATIONAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Implement national policies, standards and guidelines</td>
<td>• Coherent national policies, strategies, standards and guidelines for universal access, and VCCT and testing protocols to increase early diagnosis and detection of HIV infection</td>
</tr>
<tr>
<td>• Ensure strong coordination and rational expansion of CVVT, PPTCT and ART services</td>
<td>• Development of IEC materials for use in ANC education sessions</td>
</tr>
<tr>
<td>• Disseminate IEC materials and train health workers in their use</td>
<td>• Development of curriculum and QA mechanisms for HIV-related counselling</td>
</tr>
<tr>
<td>• Train health workers in counselling and support</td>
<td>• Development of QA and EQAS mechanisms for HIV testing protocol</td>
</tr>
<tr>
<td>• Increase VCCT acceptability through client initiated or provider initiated mechanisms</td>
<td>• Ensure strong integration across MNCH, family planning and other programs</td>
</tr>
<tr>
<td>• Ensure strong links and inter-referral for PITC with STI and TB programs and groups supporting MARPs</td>
<td>• M&amp;E, with adjustment of approaches as necessary</td>
</tr>
<tr>
<td>• Assist with data collection for QA, EQAS and M&amp;E</td>
<td></td>
</tr>
</tbody>
</table>
3.9 Further Reading


5. UNICEF. Scaling Up Voluntary Counselling and Testing Services: Lessons Learned from Cambodia (2007)


7. WHO. Revised recommendations for the selection and use of HIV antibody tests (2008).


Chapter 4: Prevention of Unintended Pregnancies in HIV-Infected Women

4.1 Strategic Overview

4.1.1 HIV and parenthood

In Afghan society, childbearing plays a central role in the social identity of both men and women. For many people – including PLHIV – the ability to express oneself sexually and the desire to experience parenthood can give additional meaning to their lives.

Many PLHIV experience strong pressure from their family, community and health providers to give up the idea of having children – either because of the risk of HIV transmission to the baby or out of concern for the welfare of the children if the parents struggle to care for and support them in later childhood.

Some PLHIV (especially those with established families) may prefer to prevent pregnancy, either to delay and space their childbearing until they are clear about quality-of-life issues and access to ART, or to avoid childbearing altogether as a way of minimising demands and complexity in their lives.

4.1.2 HIV and pregnancy

Pregnancy and breast feeding do not appear to have an adverse effect on the progression of HIV infection or disease.

Conversely, for reasons that are not completely clear, HIV infection may have an adverse effect on both male and female fertility; it also appears to be associated with an increased risk of miscarriage, preterm delivery and low birth weight (although these associations are not strong).

Men and women living with HIV who are considering becoming a parent, either biologically or through adoption, clearly need special counselling and support.

4.1.3 Risk and consequences of unplanned fertility in Afghanistan

Although surveys document a steadily increasing use of contraception in Afghanistan, it is likely that unplanned pregnancies remain common.

This fact will influence our strategic choices in scaling up primary prevention of HIV and prevention of unintended pregnancies in PLHIV.

High Fertility Rate and Maternal Mortality Ratio –

The total fertility rate (TFR) in Afghanistan is currently estimated at around 7.1 children per woman, and is one of the highest in the world. TFR is slightly higher among rural than urban women. The crude birth rate is reported to be 48 per 1,000 population.

The estimated maternal mortality ratio (MMR) of 1,600 per 100,000 live births is also among the highest in the world, and ranges up to 6,500 in remote rural districts (which, again, is among the highest ever recorded anywhere in the world). The lifetime risk of maternal death is estimated to be one in 8.
Factors associated with both high fertility and maternal mortality include early pregnancy (i.e. among adolescents), births spaced too closely, and too many pregnancies – all of these factors could be improved with better knowledge of and access to contraception, saving many mothers’ lives.

Other factors associated with maternal death alone include poor general maternal health status (especially anaemia, which the 2000 MICS estimated as affecting 55%-91% of pregnant women in Eastern and South Eastern Afghanistan) and attendance of the birth by someone other than a trained health worker (see Section 5.1.3, Antenatal and delivery care context in Afghanistan).

All of these factors also represent significant challenges to us in preventing unintended pregnancies in PLHIV.

### 4.1.4 Opportunities to prevent pregnancy in HIV-infected women

#### Strategic rationale –

If an HIV-infected woman becomes pregnant, the risk of transmission of HIV to her child can be reduced to 2% or less using a combination of ARV prophylaxis during pregnancy, safer delivery practices and the complete avoidance of breast feeding (see also Chapters 5 and 6).

Optimally, these interventions work best when the mother’s HIV status is known before conception so that the pregnancy can be carefully planned and counselling, support and medical interventions can be put in place as early as possible in the pregnancy.

The strategic approaches at different levels are summarised in Table 4.1. Well orientated, trained and motivated health care workers and reaching more vulnerable or already HIV-infected women in time to offer family planning support and counselling are the essential cornerstones of the strategy.

Opportunities to reach and prevent unintended pregnancy in vulnerable or HIV-infected women include during attendance at health facilities for other reasons, and when women or couples present seeking advice on family planning or other aspects of SRH.

#### Health care seeking behaviour –

Among the 56,500 household members covered by the 2006 Afghanistan Health Survey, 15% (8,475 individuals) reported an injury or illness in the preceding 30 days. Among these, 75.9% sought care outside the home, equating to 1.37 visits per capita per year (which is relatively low by international standards).

#### Contraception –

The proportion of married Afghan women who use modern contraceptive methods has been increasing, from an estimated 5.1% in the 2003 MICS to 10.4% in the 2005 National Risk and Vulnerability Assessment (NRVA) and 15.5% in the 2006 AHS (Figure 4.1).

The most commonly used methods are oral contraceptive pills (8.1%), followed by injectable methods (5.4%). About 3.2% of women rely on the lactational amenorrhoea method – more than for male condoms (2.2%).
Almost one-third of women know about a full range of modern methods (female sterilization, the intra-uterine contraceptive device [IUUD], oral contraceptive pill [OCP], contraceptive injection, and male condoms). Knowledge increases to around 50% among women who have received some education or who are in the top wealth quintile.

The unmet need for contraception among Afghan women is not known. The AHS gives an indication of those women who are more likely to be reached through existing primary care and SRH services and, conversely, those who will be more difficult to reach. Older, wealthier, educated women living not too far from a facility are more likely to know about and use modern forms of contraception, while younger, uneducated, poorer women living further from health facilities are least likely to know about or use modern forms of contraception.

Even among those who are more likely to access SRH services or use contraception, the uptake rates are extremely low by international standards.

### 4.2 Reproductive Decision-Making for PLHIV

#### 4.2.1 Counselling

To avoid unintended and unplanned pregnancies among HIV infected women, careful reproductive health and family planning counselling is essential for all PLHIV.

HIV-affected couples should be able to make informed choices, free of coercion and have access to quality services to implement these choices. Discussion should:

- balance the desire for pregnancy against the risks, consequences and choices related to an unplanned, unintended pregnancy,
- take into account the woman’s and couple’s previous and current contraceptive practices and preferences, and
• consider the concept of “dual protection” – i.e. the importance of protecting sexual health in parallel with contraception (see Section 4.3.2).

4.2.2 Considerations in choice of contraceptive method
Counselling should help women or couples with HIV to examine a number of factors, which may influence their choice of contraceptive method:

• The safety of the method
• Its effectiveness in preventing pregnancy
• Whether it is appropriate for short-term or long-term use, or whether it is likely to be permanent
• Possible side effects of the method, including side effects related specifically to the woman being infected with HIV
• How easy it will be to use
• Whether it is affordable, with easy access to future supplies
• If a woman is postpartum, what effect the method may have on breast feeding
• How it may interact with other, concurrent medical conditions
• How it may interact with medications, especially ARVs
• Whether it provides protection against transmission of HIV and STIs
• Whether partner involvement or negotiation are required.

4.3 Modern Contraceptive Methods for PLHIV

4.3.1 Effectiveness of different methods
Note: This section should be read in conjunction with the National Standards for Reproductive Health Services manual, Family Planning for Birth Spacing (December 2003), and any subsequent revisions.

The range of contraceptive options available to women infected with HIV is similar to those for women who are HIV negative, and include:

• barrier methods (male and female condoms, diaphragms, spermicides);
• hormonal methods (oral, injectable or implantable);
• the intra-uterine contraceptive device;
• female and male sterilisation (tubal ligation and vasectomy);
• the lactational amenorrhoea method; and
• fertility awareness-based methods.

Contraceptive effectiveness is the most important consideration for most PLHIV, and not all methods are equally effective.

Figure 4.2 compares the pregnancy rate (sometimes called the “failure” rate) associated with different methods when they are used “perfectly” (i.e. “correctly”) and under typical use. The red bars show how often a method fails when it is used correctly and consis-
tently. The blue bars show pregnancy rates for “typical” use, reflecting real life situations (when it may not always be used correctly and consistently).

Failure during “typical” use depends on user characteristics and behaviour, the adequacy of counselling, and access to re-supply. The difference between “correct” and “typical” use is greater for “client-controlled” methods (e.g. combined oral contraceptives, barrier methods and spermicides) than for “provider-controlled” methods (e.g. sterilisation, IUD and injectable contraception).

Note that women who use no method at all may have a risk of pregnancy as high as 85% over a one year period.

Figure 4.2  
Effectiveness of Different Modern Methods of Contraception, comparing “Perfect” and “Typical” use


4.3.2 Male or female condom

Male (or female) condoms are the only contraceptive methods that have the ability to prevent transmission of STIs and HIV in addition to preventing pregnancy – called “dual protection”. Condoms are less effective for pregnancy prevention than some other methods (see Figure 4.2), but other methods provide no protection at all against HIV or STIs.

The female condom gives women more control over the initiation of barrier contraception and can be inserted hours before intercourse. Their widespread use is currently limited by their higher cost than male condoms.

The effectiveness of “dual protection” depends greatly on condoms being used correctly and consistently. If used correctly every time a couple has intercourse, the male condom
is associated with a pregnancy rate as low as 2%, while the female condom has a pregnancy rate of about 5%. However, in common – or “typical” – use, their pregnancy rates are much higher: around 15% for the male condom and 21% for the female condom.

“Typical” condom use results in an 80% reduction in HIV transmission, i.e. the protection it provides against HIV is slightly less effective its protection than against pregnancy.

With consistent condom use, HIV infection rates among uninfected partners can be less than 1% per year. They would also be expected to prevent “HIV super-infection” – i.e. transmission of one sub-type of HIV to a person who is already infected with another sub-type.

However, inconsistent condom use has been shown to be just as risky as not using condoms at all – 13.3% HIV transmission among inconsistent users compared with 14.4% among non-users.

Condoms are most effective in preventing those STIs that are transmitted through body fluids (e.g. HIV, gonorrhoea, Chlamydia). Because a condom may not cover the entire affected area, it is less effective against STIs that are transmitted through direct skin-to-skin contact (e.g. genital herpes and warts).

**Recommendations –**

- Condoms are highly recommended for family planning for PLHIV – either alone or, preferably, in combination with another contraceptive method.
- Counselling of clients or couples should focus on strengthening their ability to consistently and correctly use condoms, and should include a demonstration and advice on lubrication, storage and handling.
- Emergency contraception (see Section 4.3.9) should always be available as a back-up.

Dual protection includes not only condom use (i.e. together with another effective family planning method, which is called “dual use”), but also mutual monogamy and use of an effective family planning method, abstinence and/or delay of sexual activity.

### 4.3.3 Spermicides

When used on their own, spermicides have lower contraceptive efficacy than other barrier methods. Pregnancy rates range from 18% when used consistently and correctly to 29% with “typical” use.

Spermicides containing nonoxynol-9 (N-9) do not protect against HIV infection or other STIs. When used frequently, N-9 can cause inflammation of the vaginal epithelium (the skin lining the vagina) and this may actually increase the risk of HIV infection.

**Recommendation –**

- Spermicides are not recommended for HIV-negative women at risk of infection.

### 4.3.4 Diaphragm

Like the female condom, the diaphragm has the advantage of being controlled by the woman, and can be inserted several hours before intercourse.
Diaphragms offer contraceptive protection similar to other barrier methods but, in order to achieve this, it is recommended that they are used together with a spermicide. With “typical” use, they are associated with relatively high failure rates of around 20%

It is possible that diaphragms may offer some “barrier” protection against STIs, including HIV. However, because diaphragms are generally used concurrently with spermicides to improve their contraceptive effectiveness, the protection against HIV transmission may be reduced.

**Recommendations –**

- The use of diaphragms and N-9 containing spermicides by HIV negative women at risk of infection is not recommended.
- If a woman infected with HIV is seeking reliable pregnancy protection, she should consider other, more effective methods of contraception.

### 4.3.5 Oral contraceptive (combined hormonal) pills

Used correctly, oral contraceptive pills provide highly effective pregnancy prevention – provided the woman remembers to take her pills on time, failure rates are around 1%

Although subject to ongoing research, available evidence also indicates that hormonal contraceptives are safe for women to use in the presence of HIV infection, and also for uninfected women with positive partners. However, we need to consider the possibility of interactions between hormonal contraceptives and ARVs:

**Effect of ARVs on Hormonal Contraceptives –**

The protease inhibitors (PIs; particularly ritonavir, atazanavir and nelfinavir) and the non-nucleoside reverse transcriptase inhibitors (NNRTIs; nevirapine [NVP], efavirenz [EFV]) can affect liver enzymes, either speeding up or slowing down the metabolism of contraceptive hormones. Lower blood oestrogen levels can – theoretically – reduce the effectiveness of OCPs, while higher concentrations could increase hormone-related side effects.

**Effect of Hormonal Contraceptives on ARVs –**

Contraceptives may reduce the efficacy of some PI ARVs – but not all. Hormonal contraceptive use may also increase shedding of HIV-infected cervical cells, thereby increasing the risk of HIV transmission to an uninfected male partner.

**Recommendations –**

- Women with HIV infection can use hormonal OCPs without any restriction.
- OCPs may not be the best choice for HIV infected women on ART. If a woman on ART decides to start or continue hormonal OCP use, a **low dose pill with very careful attention to taking the pill at the correct time each day** is the best choice.
- The consistent use of condoms must be recommended to prevent HIV and other STI transmission or HIV super-infection, and may also compensate for any possible reduction in the effectiveness of the hormonal contraceptive.
- Back-up contraception should be available if a woman:
is taking medication that increases the metabolism of OCPs, including rifampicin (for TB) and any anticonvulsant medication other than sodium valproate (e.g. Epilim®, Depa®, Orlept®);  
o is taking medication that reduces the absorption of OCPs, including broad spectrum antibiotics and other anti-infective agents, e.g. ampicillin, amoxycillin, tetracycline or griseofulvin; or  
o has severe diarrhoea, which can also reduce the absorption of OCPs.

4.3.6 Injectable (progestogen-only) contraceptives

Pregnancy rates for injectable contraceptives are less than 0.5% under both “perfect” and “typical” use. They are easy to use as they require very little action on the part of the client other than to remember to return for repeat injection every three months. Although all hormonal methods are reversible, fertility may take somewhat longer to return after ceasing injectable contraception than after other methods.

NVP has been found to reduce serum progesterone levels by about 20%, but without reduced contraceptive efficacy.

Injectable progestogen-only contraception has been associated with an increased risk of cervicitis – both non-specific and due to Chlamydia – and so there may be an increased risk of viral shedding and hence an increased risk of transmission of HIV to an uninfected male partner.

Research into its effect on ARV levels has been inconclusive.

**Recommendations** –

- Injectable progestogen is a suitable form of contraception for women with HIV infection, including those on ART.
- The consistent use of condoms must be recommended to prevent HIV and other STI transmission.

4.3.7 Progestogen implants

Progestogen-only implants offer pregnancy protection for up to 5 years. They are one of the easiest forms of contraception for the client to use, but staff require some additional training and skills to become proficient at insertion.

Pregnancy rates and interactions with ARVs are similar to those seen with injectable progestogen.

**Recommendations** –

- Progestogen-only implants are a suitable form of contraception for women with HIV infection, including those on ART.
- The consistent use of condoms must be recommended to prevent HIV and other STI transmission.
4.3.8 Intra-uterine contraceptive devices

The IUCD (e.g. the Copper T 380A available in Afghanistan) is a highly effective, long-term method of contraception with a failure rate of less than 1%. It can remain in place for up to 10 years – possibly longer. Its effectiveness is similar to that of sterilisation but, unlike sterilisation, it is reversible.

Studies have confirmed that IUCDs are safe for PLHIV, with no impact on disease progression or clinical well-being.

A theoretical concern about IUCD use by women with HIV is that the slightly higher menstrual flow and irritation of the cervix by the “string” could increase shedding of HIV, thus increasing the risk of transmission to an HIV-negative sexual partner. However, studies in Africa did not demonstrate increased viral shedding.

Another theoretical risk is that advanced immunosuppression could increase the risk of IUCD-related complications (e.g. pelvic inflammatory disease and other genital tract infections).

Recommendations –

- The IUCD may be either initiated or continued in HIV-infected women who are clinically well (either WHO Stage I or II, or already on ART).
- A woman who develops symptomatic illness (WHO Stage III or IV) while using an IUCD can continue to use the device provided she is stable on ART.
- HIV-infected women who are not clinically well should generally not have an IUCD inserted unless other methods are not available, acceptable or feasible.
- The consistent use of condoms must be recommended to prevent HIV and other STI transmission.

4.3.9 Emergency Contraception

Emergency contraceptive pills (ECPs) are the most common method of emergency contraception after unprotected intercourse. (Insertion of an IUCD may also be used for this purpose, provided the woman meets the medical eligibility criteria; see Section 4.3.8, above).

ECPs are available as progestogen-only or combined oestrogen-progestogen tablets; they are taken as a single dose (see guidelines in Appendix 3: Emergency Contraception, in the MOPH Family Planning for Birth Spacing manual). The sooner ECPs are started, the more effective they are. If taken within 120 hours (i.e. 5 days) of unprotected intercourse, ECPs reduce the risk of pregnancy by at least 75%; the progestogen-only tablets are slightly more effective than the combined regimen.

There are no data on interactions between ECPs and ARVs. ECPs contain a higher dose of hormones than regular OCPs, so their effectiveness in pregnancy protection may not be significantly affected by ARV drugs. Estrogen-associated nausea from combined ECP tablets may worsen nausea associated with some ARVs (e.g. zidovudine; ZDV).

Like other hormonal contraception, ECPs do not provide any protection from STI or HIV transmission.
Recommendations –

- For HIV-infected women who have unprotected sex and may be at risk of an unwanted pregnancy, access to emergency contraception is essential.
- Providers who offer emergency contraception should also help women to choose a regular contraceptive method and counsel them about how to use the method correctly and when to begin using it.

4.3.10 Male or Female Sterilisation

For women and couples with HIV who already have children and have decided to have no more, female or male sterilisation is often a popular option.

Both forms of sterilisation are considered permanent, and both are very effective. The pregnancy rate following female sterilisation is about 0.5% during the first year, increasing to 1.85% over 10 years. Male sterilisation is associated with pregnancy rates between 0.1 and 0.15% during the first year.

Recommendations –

- Sterilisation is highly recommended for family planning for PLHIV.
- Informed voluntary choice is essential.
- Careful infection control is essential during the procedure, especially if the man or woman is immunocompromised.
- The consistent use of condoms must still be recommended to prevent HIV and other STI transmission.

4.4 Traditional Contraceptive Methods for PLHIV

4.4.1 Lactational Amenorrhoea Method

The lactational amenorrhoea method is a temporary option that can be used by women who are: a) in the first 6 months following delivery, b) fully breast feeding, and c) continue to have no menstruation. Provided a woman meets all three of these criteria, she has only a 1% to 2% chance of becoming pregnant.

Women infected with HIV need to know that their child may also become infected during breast feeding (see Section 1.2.1 and Chapter 6).

HIV-infected mothers who do not breast feed will not be able to rely on lactational amenorrhoea. If they do not use appropriate family planning methods, they may have a shorter interval between births and an increased risk of an early subsequent pregnancy. It is therefore important to ensure that contraceptive advice for HIV-infected women is linked to and provided at the same time as counselling on infant feeding, and that women have access to appropriate services within 6 weeks of delivery.

For women who are HIV negative during pregnancy but who become infected with HIV while breast feeding, the risk of HIV transmission to the baby will be very high (up to 29%). All HIV negative lactating mothers need careful counselling on HIV prevention.
Recommendations –

- HIV infected women must receive careful counselling regarding the advantages and disadvantages of:
  - different methods of infant feeding (see Section 6.2.3)
  - relying on lactational amenorrhoea for family planning.
- HIV negative women who do not want to have children should be counselled to consider other, more reliable methods of contraception (which can be used at the same time as breast feeding, e.g. condoms; IUCD; or oral, injectable or implantable pregestogen-only hormonal methods).
- The consistent use of condoms must be recommended to prevent HIV and other STI transmission.
- As most HIV-infected women will discontinue exclusive breast feeding by 6 months postpartum (see Section 6.3), family planning must be re-assessed prior to discontinuation of breast feeding to avoid unplanned pregnancy.

4.4.2 Methods Based on Fertility Awareness

Fertility awareness-based methods involve the identification of the fertile days of the menstrual cycle, either by observing signs of fertility (e.g. cervical secretions, basal body temperature) or by counting the days of the cycle.

These methods require extremely high motivation, discipline and diligence.

Pregnancy rates with “perfect” use are 2-5%, but are typically between 12% and 22%.

Recommendations –

- PLHIV who do not want to have children should be counselled to consider other, more reliable methods of contraception.
- The consistent use of condoms must be recommended to prevent transmission of HIV and other STIs.

4.5 Termination of Pregnancy

Termination of pregnancy during the first trimester is legal in Afghanistan on certification by three legally qualified medical practitioners that a woman’s life or health is in danger from the pregnancy.

Termination must be voluntary and accompanied by counselling, and should follow the procedures of the appropriate national guidelines and legislation.

HIV infection alone is not an indication for termination of pregnancy.

If a woman who is infected with HIV is concerned about transmission to her unborn baby, she should be counselled about the options and risks associated with available PPTCT interventions, and the generally excellent outcomes if these interventions are followed.
4.6 Special Considerations for Discordant Couples

4.6.1 Definition
If one partner is infected with HIV and the other is not, the couple is said to be discordant (or sero-discordant).

4.6.2 HIV Prevention
In discordant couples, the correct and consistent use of male condoms is the only method that can effectively prevent HIV transmission.

They should be used even when another method is chosen to prevent pregnancy.

4.6.3 Contraception
All the above limitations and recommendations for different methods of contraception in PLHIV (Sections 4.3 and 4.4) apply to discordant couples.

4.6.4 Conception
If, after careful consideration and counselling, a discordant couple wishes to have a baby, very careful planning of the pregnancy is essential.

If the woman is infected with HIV and the male partner is not –
Artificial insemination using the male partner’s sperm may be available in a specialist centre in Kabul. It is essential that the woman is in good health and, if blood tests are available (e.g. total lymphocyte or CD4 count or viral load assays), that these indices are satisfactory and stable.

If the woman is already taking ART and her regimen contains EFV, that drug should be stopped several weeks before attempting to conceive as it is teratogenic during the first trimester. It may be replaced with NVP or a PI.

From the second trimester, either EFV may be resumed or the replacement drug may be continued.

If the man is infected with HIV and the female partner is not –
In this situation, the couple’s options are very limited.

If the couple have the resources to travel to a specialist centre in India, Iran or elsewhere, “sperm washing” may be an option (i.e. to remove HIV from a specimen of semen). This then makes artificial insemination with the man’s “washed” semen an option.

If the infected male partner is on HAART, a low viral load (or a CD4 count that is stable and high) will reduce the risk of transmission to the woman during unprotected sex.

Options relevant to both types of discordant couple –
Other options require unprotected intercourse for conception to occur. This should be guided by very careful counselling and advice, including by keeping number of occasions of unprotected sex to a minimum.
The couple should be provided with cycle-based advice about the woman’s fertility and the likely timing of ovulation during the menstrual cycle (approximately mid-cycle). To limit the risk to the uninfected partner while maximising the likelihood of pregnancy, attempts to conceive should only take place around the time of ovulation and with a minimum number of unprotected contacts.

Recent evidence suggests that circumcision in HIV negative males may reduce the risk of acquiring HIV from an infected partner by up to 60% where unprotected contact occurs. Treatment of any active STIs in either partner may reduce the risk of HIV transmission and should take place prior to any unprotected contact.

### 4.7 Priority Actions

The fundamental strategy is to increase uptake of reproductive health and family planning counselling among HIV infected women and their partners to enable informed choice with regard to potential future pregnancy. Condoms are the most valuable family planning tool available to PLHIV as they offer effective “dual protection” against pregnancy and HIV and STIs.

Strategies at different levels are summarised in Table 4.1.

#### 4.7.1 National, Provincial and District

In consultation with the NACP and MOPH Department of Women and Reproductive Health, the IEC Directorate will have the responsibility for ensuring that training materials on SRH and family planning include appropriate guidance on the needs of PLHIV.

The NACP and IEC Directorate will support the production of IEC materials addressing the SRH needs of PLHIV.

The Regional and Provincial levels are responsible for coordination and management of integrated training in family planning and SRH for the districts, and for monitoring and mobilising family planning resources.

#### 4.7.2 Health facility and community

In collaboration with NGO partners, health facilities must identify strategies that will increase early diagnosis and detection of HIV infection, especially among:

- women engaged in high risk behaviours,
- spouses and sex partners of high risk groups or individuals,
- men in high risk groups or with high risk behaviours, and encouraging their female partners and spouses to get tested, and
- increasing VCCT acceptability through client initiated or provider initiated mechanisms, and increased general awareness

They should develop referral linkages with centres offering VCCT and providing clinical services for PLHIV and MARPs (including STI and TB programs), and emphasise the importance of careful family planning for these populations.
They will be responsible for identifying CHWs and other community level health workers, establishing their training needs and conducting training in SRH and family planning, including for PLHIV and MARPs. This will increase knowledge of family planning among health volunteers and within MNCH programs, and in centres offering VCCT and providing clinical services for HIV infected women, and stimulate awareness-raising and case finding among MARPs by CHWs and other community level partners (e.g. NGOs).

Table 4.1
Prevention of Unintended Pregnancies in HIV-Infected Women
Integrated Summary of Strategic Components

<table>
<thead>
<tr>
<th>COMMUNITY and LOCAL</th>
<th>HEALTH FACILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Promote active family planning awareness-raising and case finding among MARPs by community health workers</td>
<td>• Help women plan or avoid pregnancies – Identify the “family planning element” in every clinical contact</td>
</tr>
</tbody>
</table>
| • Establish partnerships and linkages to NGOs / CBOs  
  o Community-based organisations  
  o NGOs serving needs of MARPs (e.g. IDUs, CSWs, sexual minorities)  
  o NGOs promoting family planning or SRH  
  o Faith-based initiatives and organisations | • Ensure strong links and inter-referral with STI and TB programs and groups supporting MARPs |
| • Facilitate access to and utilisation of family planning counselling and support services | • Train and orientate MNCH staff on risk assessment and VCCT to increase timely identification of HIV infected status in pregnant women |
| • Provide long term linkages, care and support through coordination with home based care programs, income generating activities, NGOs, CBOs, FBOs, PLHIV support groups, etc | • Encourage prevention, and promote dual protection |
| • Help women plan or avoid pregnancies – Identify the “family planning element” in every clinical contact | • Provide STI screening and treatment |
| • Ensure strong links and inter-referral with STI and TB programs and groups supporting MARPs | • Encourage involvement of partner and family |
| • Increase VCCT acceptability through client initiated or provider initiated mechanisms | • Initiate HAART if indicated, and adjust as necessary if pregnancy is planned or occurs |
| • Resource mobilisation and harmonisation, ensuring access through HIV services for HIV+ women | • Adjust partner’s HAART regimen if unable to negotiate protection |
| • Develop linkages between VCCT services and HIV services for HIV+ women | • Offer all elements of essential ANC package if pregnancy occurs |
| • Monitor and evaluation | • Coherent strategies to increase early diagnosis and detection of HIV infection |
| • Coherent strategies to increase early diagnosis and detection of HIV infection | • Training (family planning, counselling) |
| • Training (family planning, counselling) | • Resource mobilisation and harmonisation for family planning |
| • Resource mobilisation and harmonisation for family planning | • Ensure strong integration across MNCH, family planning and other programs |
| • Ensure strong integration across MNCH, family planning and other programs | • Ensure strong links and inter-referral with STI and TB programs and groups supporting MARPs |
| • Ensure strong links and inter-referral with STI and TB programs and groups supporting MARPs | • Monitoring and evaluation, including the outcome of planned and unplanned pregnancies among PLHIV |

They will be responsible for identifying CHWs and other community level health workers, establishing their training needs and conducting training in SRH and family planning, including for PLHIV and MARPs. This will increase knowledge of family planning among health volunteers and within MNCH programs, and in centres offering VCCT and providing clinical services for HIV infected women, and stimulate awareness-raising and case finding among MARPs by CHWs and other community level partners (e.g. NGOs).
4.8 Further Reading


Chapter 5: Prevention of HIV Transmission from Infected Mothers to their Infants

5.1 Strategic Overview

5.1.1 Available interventions and their timing

The three elements of PPTCT during pregnancy, labour and post-partum are:

- providing **ARV prophylaxis** (or therapy) during pregnancy, labour and in some cases post-partum to the mother, and to the baby following delivery
- implementing **safer delivery practices**
- providing ongoing counselling and support on **safer infant feeding** methods

The timing of these interventions ranges from before conception, during the antenatal period, during labour, and following delivery (Table 5.1).

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART during pregnancy (if available)</td>
<td>Antenatal</td>
</tr>
<tr>
<td>ARV prophylaxis for mother (if available)</td>
<td>✓</td>
</tr>
<tr>
<td>Interventions during delivery that are known to ↓PTCT</td>
<td>(discuss)</td>
</tr>
<tr>
<td>ARV prophylaxis for infant (within 72 hours after birth)</td>
<td>(discuss)</td>
</tr>
<tr>
<td>Counselling and support for safer infant feeding</td>
<td>(discuss)</td>
</tr>
<tr>
<td>Provision of (or referral to) prevention and CT&amp;S services for women infected with HIV, their infants and their families</td>
<td>✓</td>
</tr>
<tr>
<td>Provision of (or referral to) prevention and support services for women who test negative to help them stay uninfected</td>
<td>✓</td>
</tr>
</tbody>
</table>


5.1.2 Practical considerations in choosing ARV regimens for PPTCT

Practical considerations in establishing PPTCT services, including selecting which ARV regimens to use, include:

- access to and the availability of HIV counselling and testing services;
- functionality of referral networks between community-based VCCT centres and centres providing ART and medical PPTCT interventions;
• access to antenatal care, and the proportion of women using ANC services;
• the timing of the first antenatal visit, which affects the stage of pregnancy each woman is diagnosed;
• the proportion of HIV-infected women who are aware of their status;
• the frequency of antenatal visits, which affects follow-up care and counselling, and monitoring adherence to ARV prophylaxis;
• the quality of ANC available;
• the proportion of births occurring in health care facilities or attended by a skilled birth attendant;
• the proportion of health facilities with ARVs available and universal precautions in place
• acceptability and ease of ARV dosage schedules;
• efficacy and safety of different ARV drug regimens, including their potential to compromise future treatment options; and
• access to early HIV-related care postpartum, including in community settings.

Patterns of breast feeding and the prevalence of infectious and nutritional illnesses during childhood will all influence our strategic choices and approaches to infant feeding, and are discussed in detail in Chapter 6.

Ongoing prevention, care, treatment and support for affected families after delivery are discussed in Chapter 7.

**5.1.3 Antenatal and delivery care context in Afghanistan**

Figure 5.1 shows that there has been an increase in both skilled ANC and delivery with a skilled birth attendant in Afghanistan since 2003.

Nevertheless, the AHS defines skilled ANC as at least one ANC visit with a doctor, midwife, nurse or trained CHW. More than half (51.1%) of the women surveyed did not seek any skilled antenatal care during their last pregnancy within the two years preceding the survey, while 16.7% saw a traditional birth attendant (TBA).

Skilled ANC is most strongly associated with the travel time the woman takes to reach a health facility (Table 5.2). There is also a strong association between ANC and female education and higher wealth status, but no clear age pattern in ANC-seeking behaviour.

There is evidence of a threshold effect for institutional delivery when the woman lives less than 3 hours’ travel time from the facility.

The majority (85.4%) of babies are born at home or outside a health facility. Most women who delivered in the two years preceding the survey delivered in their own or a relative’s or neighbour’s home. Only 14.6% of women delivered in an institution and, among these, hospitals were very strongly favoured; there was low utilisation of BHC, CHC or private birthing facilities.

Women aged less than 20 years, educated women and wealthier women are more likely to deliver in a health facility.
Figure 5.1
Trends in skilled ANC and birth attendance, married Afghan women aged 15–49 years, 2003-06

![Graph showing trends in skilled ANC and birth attendance](image)

Source: Afghanistan Health Survey (2006)

Table 5.2
Antenatal and Delivery Care Indicators by time to travel to health care facility, Afghanistan, 2005-06

<table>
<thead>
<tr>
<th>Maternity Care Indicator</th>
<th>Time to Health Facility</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;2 hours</td>
</tr>
<tr>
<td>Antenatal care from a skilled attendant (% of women)</td>
<td>39.3%</td>
</tr>
<tr>
<td>Delivery care from a skilled birth attendant (% of live births)</td>
<td>25.8%</td>
</tr>
<tr>
<td>Institutional births (% of births in the last 2 years)</td>
<td>20.2%</td>
</tr>
</tbody>
</table>

Source: Afghanistan Health Survey (2006)

There are no data available on postnatal or neonatal care within 2, 7 or 28 days of birth. However, with such low rates of ANC and facility-based or supervised delivery, it is likely that the majority of mothers receive no postnatal care at all.

Early neonatal mortality (i.e. death of the baby in the first 7 days of life) is estimated at 70.2 per 1,000 live births, while neonatal mortality (death of the baby between birth and 4 weeks of age) is estimated at 121 per 1,000 live births. These figures are consistent with very poor access to and utilisation of postnatal care. The majority of maternal deaths are reported to be caused by ante-partum haemorrhage and obstructed labour (i.e. before the postnatal period).
5.1.4 Antiretroviral prophylaxis and its effectiveness

The reason for providing antenatal ARV prophylaxis (or treatment) to an HIV-infected mother is to reduce viral replication in order to reduce the risk of transmission to the fetus during pregnancy, labour and delivery.

**Women with indications for HAART –**

To eliminate HIV infection in infants and young children, all pregnant women eligible for HAART must be started on treatment. Some ARVs (e.g. efavirenz) are teratogenic and are best avoided in the first trimester of pregnancy (see Section 5.3.2), but can be introduced from the second trimester (see Section 5.2.2).

However, maternal health and well being generally take precedence over fetal considerations.

**Women without indications for HAART –**

Pregnant women who do not yet need HAART must be given highly effective ARV prophylaxis to prevent PTCT. The most commonly used drugs are the nucleoside reverse transcriptase inhibitors (NRTIs) zidovudine and lamivudine (3TC), and the NNRTI, nevirapine, prescribed either alone or in combinations of two or three drugs.

Many different prophylactic regimens have been trialled and evaluated. In resource limited settings, they have been shown to reduce PTCT from around 30% to around 12-14% for the simplest, single-drug approaches, e.g. single-dose nevirapine (sdNVP) at the onset of labour; to around 6% for multi-drug protocols starting during the last 4-8 weeks of pregnancy; and to around 2% for multi-drug protocols commencing no later than the start of the third trimester.

In general, the more drugs the mother takes and the longer she takes them, the more effective the regimen. However, the length of the prophylactic regimen and the choice of drugs may vary according to the stage of pregnancy a woman is identified as infected with HIV and her clinical condition.

**ARV prophylaxis for the newborn infant –**

Providing additional ARV prophylaxis for the newborn infant is intended to “mop up” circulating virus that may have been transmitted in spite of maternal ARV prophylaxis or treatment.

The simplest prophylaxis for the baby is sdNVP given no later than 72 hours following delivery. Other infant protocols include ZDV, either alone or in combination with other ARVs, for between one and 4 weeks.

**Risk of ARV drug resistance –**

Viral drug resistance is potentially a problem for HIV positive women following short-term exposure to ARVs for PTCT – especially single- and two-drug regimens – and for infants who become infected. This is a particular risk for NVP and 3TC, where a single mutation can lead to high-level resistance; on the other hand, multiple mutations are needed to confer resistance to ZDV.
NVP has a long half-life, and can be detected in the woman’s blood for up to 21 days after a single dose. It is this prolonged exposure to non-suppressive drug levels that can give rise to resistance, which is seen in up to 60–89% of women receiving sdNVP.

NVP resistance is more common in women whose plasma viral load and/or CD4 cell count indicate that she is eligible for full HAART, and less common in women who do not have indications for HAART. NVP (and 3TC) resistance are also less common when the drug is given in combination with other ARVs.

When sdNVP is used, WHO now recommends that, where feasible, two NRTI drugs should also be given intrapartum and for a short period postnatally (to suppress viral replication). A study in South Africa showed that giving ZDV + 3TC during labour (concurrently with sdNVP) and for 4-7 days postpartum reduces the incidence of NVP resistance from 60% to about 10%.

(Although NVP may persist for longer than 4-7 days post-partum, continuing ZDV + 3TC for longer than this carries the risk of promoting resistance to 3TC).

5.1.5 Safer delivery practices

Normal vaginal delivery –

The greatest risk of PTCT occurs intrapartum (i.e. during delivery), when the fetus comes into contact with maternal blood or cervical secretions, and fetal and maternal blood mix after the placenta separates from the uterus.

The risk is further increased by prolonged rupture of the membranes or STIs, which can cause inflammation of the lower genital tract, and by operative or manipulative delivery, which increase the risk of mixing of fetal and maternal blood (see Table 1.2, Factors that may increase the risk of PTCT of HIV).

Most published studies of successful PPTCT strategies in resource limited settings allow women to deliver normally. However, to reduce PTCT during normal delivery, it is important to minimise both the duration of labour and obstetric interventions (including artificial rupture of the membranes); strategies are summarised in Section 5.6 and Tables 5.10 and 5.12.

Published studies do not provide precise guidelines on how long to allow an HIV-positive mother to labour. However, if labour is not established quickly, augmentation of labour as per national obstetric guidelines should be initiated. If delivery is not imminent within four hours of rupture of the membranes or establishment of labour and operative facilities are available, caesarean section performed before the onset of

Operative vaginal delivery –

Operative or manipulative vaginal delivery (i.e. forceps or vacuum extraction, breech extraction and manipulations during vaginal delivery of multiple pregnancy) increase the risk of mixing of fetal and maternal blood. They should be avoided.

Caesarean Section –

In the absence of any ARV prophylaxis, caesarean section performed before the onset of
labour or rupture of the membranes may reduce the risk of PTCT by up to 50%.

For women with a low viral load (HIV RNA < 1,000 copies/ml) and a CD4 count >500/mm³ (or a total lymphocyte count [TLC] >3,000/mm³) approaching the time of delivery, any theoretical benefit of caesarean section is outweighed by an observed increased risk of complications in HIV infected women. This includes where adequate viral suppression has been achieved through antenatal and/or intrapartum ARV prophylaxis or through HAART prescribed for maternal indications.

The cost and limited access to surgical facilities and a safe blood supply in Afghanistan mean that delivery by caesarean section is seldom feasible for women being managed outside major provincial centres. Caesarean section also carries a higher risk of post-operative sepsis and other complications in HIV infected women, and these are likely to be more difficult to manage in a resource-limited setting.

5.1.6 Integration with existing MNCH services

Good maternal health care helps women with HIV infection stay healthy longer and care for their children better.

Since most elements of PPTCT services parallel a safe motherhood program (i.e. quality ANC, safe labour and delivery, prevention and management of obstetric complications, postpartum care, family planning, and infant feeding support), integration of PPTCT activities with broader MNCH services can logically be achieved in parallel with those services being rolled out and strengthened at the sub-provincial and community level.

Improving services for HIV-infected mothers (whose HIV status will most likely not yet be known when they present for care) will improve services for all pregnant women and their babies. By strengthening existing services and integrating PPTCT into the different stages of MNCH care – pre-pregnancy care, antenatal care, labour and delivery, and infant feeding and support – all mothers and babies will benefit, including those vulnerable to or living with HIV.

For the successful implementation of PPTCT programs, the following elements should be included as part of ANC:

- Health information and education
- Education about safer sex practices and HIV
- Education about injection safety
- HIV counselling and testing
- Male partner involvement, including HIV counselling and testing
- Interventions to reduce the risk of PTCT
- Infant feeding counselling and support
- Counselling and support for safe motherhood and maternal wellbeing – including malaria and TB prophylaxis and treatment
- Diagnosis and treatment of STIs
- Discussion of family planning choices to be used following delivery
With some additional resources and training, current MNCH personnel can implement all PPTCT activities in existing facilities, including strengthening the availability and quality of PITC in antenatal and labour ward settings (see also Chapters 3 and 8).

5.1.7 Tightly coordinated and supervised antenatal care

ANC for women living with HIV includes the basic services recommended for all pregnant women. However, obstetric and medical care will also need to be expanded to address the specific needs of women infected with HIV.

When HIV status is known, mothers can be evaluated for ARV eligibility (Section 5.2.1) and offered ART (Section 5.2.2) and prophylaxis against OIs (Section 5.2.3). If full ART is not yet needed, they should be offered ARV prophylaxis for PPTCT (Section 5.4). Individualised, flexible care and support should be provided by a Community Midwife or CHW, with medical officer support and obstetrician back-up as necessary.

Antenatal care is strengthened considerably by the additional involvement of a treatment “buddy” at home and a community-based (e.g. CHW) or volunteer support person (e.g. working for an involved NGO). The “buddy” would jointly supervise adherence to home-based ART or ARV prophylaxis, and support attendance for targeted follow-up antenatal care and health facility-based delivery.

Careful counselling regarding options for infant feeding should also commence during the antenatal period (Chapter 6).

5.2 Assessment of Women found to be infected with HIV during Pregnancy

5.2.1 Clinical and immunological assessment

Treatment for a pregnant woman with medical indications to commence HAART not only addresses her own health and well-being but also reduces the risk of PPTCT, especially if she is at an advanced clinical stage of disease.

Treatment decisions should be based primarily on their need and eligibility for ART and secondarily on the well-being of the fetus. Other considerations include the gestational age of pregnancy and potential side-effects, particularly those related to pregnancy.

All women found to be infected with HIV during pregnancy should be assessed according to the National Clinical Protocol on Antiretroviral Therapy (2008). This will include:

- All routine pregnancy-related examinations and investigations
- Clinical staging according to WHO criteria
- Baseline haematological and biochemical investigations
- CD4 T lymphocyte count (if available, or total lymphocyte count if not)
- Viral load (if available)
5.2.2 Indications for commencing HAART

**Criteria for commencing HAART**

The criteria for commencing HAART in pregnant women are:

- WHO Stage IV disease, irrespective of CD4 cell count or TLC; or
- WHO Stage III disease with CD4 < 350/mm³ (or, if CD4 cell count not available, treat irrespective of TLC); or
- WHO Stage I or II disease with CD4 < 250/mm³ (and, if CD4 cell count not available, consider commencing treatment if TLC < 1,500/mm³)*

All pregnant women who meet these criteria should commence HAART if it is available. Because of the risk of ARV resistance, they should **not** use the short-course PPTCT protocols described in Section 5.4, unless the full range of HAART drugs is unavailable.

**First-line ARV regimen**

The recommended first-line ARV regimens for treating pregnant women and prophylaxis for their infants is ZDV + 3TC + NVP twice daily from diagnosis, through labour and continuing post-partum (Table 5.3).

NVP is the NNRTI drug of choice for ART in pregnancy; it should be introduced gradually, to enable careful monitoring for toxicity (including hepatitis, skin rash).

NVP reactions may be more common in women starting NVP-containing ART with a CD4 cell count between 250 and 350 cells/mm³ (or TLC between 1,200 and 2,100/mm³). In this case, close monitoring should continue for the first 12 weeks of treatment.

Table 5.3

Recommended First-Line HAART Regimen for treating Pregnant Women, and Prophylactic Regimen for Infants

<table>
<thead>
<tr>
<th>Recipient</th>
<th>Timing</th>
<th>ARV(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mother</strong></td>
<td>Start ASAP in pregnancy and continue throughout pregnancy, labour and delivery and postpartum, for life</td>
<td>ZDV 300mg + 3TC 150mg twice a day + NVP 200mg once a day for 14 days If no reaction, continue ZDV + 3TC and increase NVP to 200mg twice a day after 14 days</td>
</tr>
<tr>
<td><strong>Baby</strong></td>
<td>Neonatal</td>
<td>Infant ZDV 4 mg/kg twice a day for 7 days If the mother has received less than 4 weeks of HAART, infant ZDV should be continued for 4 weeks</td>
</tr>
</tbody>
</table>

*Note: This is slightly higher than the CD4 level recommended for initiation of HAART for adults in the National Clinical Protocol on ART (< 200/mm³). Initiating HAART in pregnant women at this slightly higher CD4 count means that more babies and women will be protected, yet the mother will be less likely to experience the NVP reactions that may occur with the alternative, higher CD4 levels that are being introduced for non-pregnant adults in some countries (e.g. < 350/mm³).
Where fixed dose combinations of ZDV + 3TC + NVP (Trizivir®) or ZDV + 3TC (Combivir®, Duovir®) are available, this will reduce the pill burden, simplify treatment and improve adherence to treatment.

**Laboratory monitoring** –

If available, full blood count (FBC) and liver function tests (LFTs) should be monitored at baseline and then two-weekly for the first month after initiating HAART, then monthly for two months, then three-monthly if stable.

If available, CD4 cell count should be monitored six-monthly.

**Strategies to avoid nevirapine reactions** –

For women with WHO stage III or IV disease and CD4 count above 250/mm³, if alternative first-line and second-line ARVs are available, EFV (in the second or third trimester) or PI may be substituted for NVP in the first-line HAART regimen.

If alternative first-line and second-line ARVs are not available, the only feasible options will be to:

- Defer commencing the primary ZDV + 3TC + NVP first-line ART until the woman’s CD4 count reaches 250/mm³ (TLC 1,500/ mm³)
- Initiate the primary ZDV + 3TC + NVP first-line ART regimen, but with very close monitoring for adverse reactions (including LFTs, where available) for the first 12 weeks of treatment and immediate referral to a regional centre with alternative first-line and second-line ARVs if problems occur.

**Alternative first-line ARV regimens** –

Where alternative ARVs are available, regimens and approaches to avoid NVP reaction include:

- A triple NRTI regimen, e.g.
  ZDV + 3TC + abacavir (ABC) 300mg twice daily
- PI-based HAART, e.g.
  when available, ZDV + 3TC + ritonavir-boosted lopinavir (LPV/r) 400/100mg twice daily
  From the second trimester:
  ZDV + 3TC twice daily + EFV 600mg once daily

**5.2.3 Prophylaxis and Treatment for Opportunistic Infections**

Subject to the precautions listed in Table 5.4, the risk of life-threatening infections among pregnant women with a low CD4 count or clinical features of immunosuppression means that prophylaxis should also be provided against OIs.
Co-trimoxazole prophylaxis for Pneumocystis and toxoplasmosis –

Women who fulfil the following criteria for co-trimoxazole (trimethoprim-sulphamethoxazole) prophylaxis for Pneumocystis pneumonia (PCP) and toxoplasmosis should commence and remain on co-trimoxazole for the entire duration of their pregnancy and be reassessed after delivery:

- WHO Stage III or IV disease, irrespective of CD4 cell count or TLC; or
- WHO Stage I or II disease with CD4 < 350/mm³ (or, if CD4 cell count not available, provide TMP-SMX for anyone with WHO Stage II disease)

The dose is one double strength tablet (800/160mg) daily.

Table 5.4
Considerations for Prophylaxis and Treatment of Opportunistic Infection in Pregnant Women

| Pneumocystis pneumonia (PCP) | - TMP-SMX prophylaxis should be implemented according to standard criteria for non-pregnant PLHIV  
| Fungal infection | - Dapsone and aerosolized pentamidine are also considered safe in pregnancy  
| Fungal infection | - Fluconazole has been associated with fetal deaths and fetal abnormalities in animal studies, but potential benefits outweigh the risks from treatment.  
| Fungal infection | - Itraconazole shows embryotoxicity and teratogenicity in pregnant animals.  
| Fungal infection | - Amphotericin B is preferred when fungal infection therapy is needed.  
| Hepatitis B | - Hepatitis B immunoglobulin should be given to a susceptible pregnant woman after exposure  
| Herpes simplex | - Use of acyclovir is controversial but experience has shown that it is safe  
| Influenza vaccine | - Safe in pregnancy  
| Mycobacterium avium complex (MAC) | - Clarithromycin is teratogenic in animals and must be used in pregnancy with caution.  
| Mycobacterium avium complex (MAC) | - Rifabutin has had limited experience in pregnancy.  
| Mycobacterium avium complex (MAC) | - For secondary MAC prophylaxis – use azithromycin and ethambutol.  
| Toxoplasmosis | - Delay primary prophylaxis with pyrimethamine (risk cannot be excluded but potential benefits may outweigh risk) containing regimens owing to risk associated with this drug and low probability of toxoplasmosis.  
| Toxoplasmosis | - Secondary prophylaxis – Most could continue pyrimethamine because of high rate of relapse when drug is stopped.  
| Tuberculosis | - Chest X-ray should be done with the appropriate lead aprons for pelvic protection  
| Tuberculosis | - Diagnosed cases should be treated according to National TB program following directly observed treatment short-course (DOTS) protocols  
| Varicella zoster | - Zoster immune globulin is not contraindicated in pregnancy and should be given to a susceptible pregnant woman after exposure.  
| Varicella zoster | - Acyclovir is considered safe in pregnancy for severe or disseminated herpes zoster  

Although trimethoprim is hypothetically teratogenic to the baby during the first trimester of pregnancy, the protective benefits against OIs in the mother far outweigh the very small risk of adverse effects on the fetus; co-trimoxazole prophylaxis should commence irrespective of the gestational age.

Sulphonamides can displace bilirubin from plasma albumin, and are associated with an increased risk of jaundice and kernicterus in the newborn baby. Co-trimoxazole should not be discontinued prior to delivery if required for maternal health, but the baby will need to be monitored carefully for jaundice for several days after delivery.

If needed (and available), dapsone and aerosolized pentamidine are considered to be safe alternatives in pregnancy.

Guidelines for other agents used for OI prophylaxis –

Table 5.4 provides guidance on the use of other anti-infective agents for OI prophylaxis in pregnancy.

Isoniazid prophylaxis for TB should be in accordance with national Guidelines for Tuberculosis Control Program in Afghanistan (2005); other OI prophylaxis should be guided by the relevant section in the National Clinical Protocol on ART.

5.3 Women who become Pregnant while taking HAART

5.3.1 Clinical and immunological assessment

Clinical assessment will be the same as that for women found to be infected with HIV during pregnancy.

Additional considerations include the gestational age of the pregnancy, the clinical findings and the ART regimen being used.

5.3.2 If Pregnancy is recognised during the first trimester

Continue HAART in almost all cases –

In general, current recommendations are to continue ART even during the first trimester of pregnancy. Discontinuing ART during pregnancy has been associated with viral rebound and CD4 decline, possibly compromising a woman’s health and increasing the risk of transmission of HIV to the baby.

Considerations regarding nausea and hyperemesis associated with zidovudine –

Nausea is commonly associated with ZDV and, in pregnant women infected with HIV, may aggravate pregnancy-related nausea or provoke hyperemesis gravidarum. If nausea and vomiting are intolerable, appear to be aggravated by ZDV and are not amenable to medication, consider as a last resort a brief cessation of ART (or, in consultation with an HIV physician, a temporary switch from ZDV to stavudine [d4T] while continuing the other HAART drugs).

Considerations regarding efavirenz –

The main concern with EFV is fetal abnormalities. EFV should only be used during the first trimester if the potential benefit to the mother exceeds the potential risk to the fetus.
(e.g. if previous adverse reactions to ARVs rule out other therapeutic options).

If pregnancy is planned and the mother is already taking EFV, consider switching to a non-EFV containing regimen (e.g. ZDV + 3TC + NVP) several weeks prior to attempting to conceive.

If the woman conceives while taking an EFV-containing regimen, alternative regimens and approaches to avoid that drug include:

- ZDV 300mg + 3TC 150mg twice daily + NVP 200mg twice daily, but with close monitoring of women who originally started ART with a CD4 cell count between 250 and 350 cells/mm³ (or TLC between 1,200 and 2,100/mm³) for the first 12 weeks of treatment.

- A triple NRTI regimen, e.g. ZDV + 3TC + ABC 300mg twice daily

- PI-based HAART, e.g. ZDV + 3TC + LPV/r 400/100mg twice daily

If the alternative ARVs are not available or tolerated, the primary ZDV + 3TC + EFV first-line ART should be continued. Temporarily discontinuing EFV alone or EFV-based HAART until the second trimester is associated with virological and immunological deterioration and increased risk of PPTCT, and is not recommended.

Exposure to EFV during the first trimester is not an indication for termination of pregnancy.

5.3.3 If Pregnancy is not recognised until the second or third trimester

Women who are taking HAART (including EFV-containing regimens) and are in the second or third trimester of pregnancy can continue their current HAART regimen.

5.3.4 Neonatal prophylaxis

Timely commencement of HAART with adequate maternal response –

If the mother is well, has been taking HAART for at least four weeks and has presumed (or confirmed) good viral suppression and/or immune function, there is no need to give the baby sdNVP postpartum. The baby should receive infant ZDV 4 mg/kg twice a day for 7 days following delivery, as per Table 5.3.

HAART commenced late or with sub-optimal response –

If the mother has been on HAART for less than four weeks and/or shows a sub-optimal clinical, immunological or virological response to treatment, infant ZDV should be continued for four weeks. On HIV physician and paediatrician advice, sdNVP within 72 hours of delivery may also be considered for the baby.
5.4 Antiretroviral Prophylaxis to Prevent HIV Infection in Infants

5.4.1 ARV prophylaxis for HIV-infected women seen during the antenatal period

Women diagnosed during the antenatal period and their newborn babies should be provided with one of the following prophylactic ARV regimens for PPTCT.

_Single dose nevirapine: the minimum standard of perinatal PPTCT prophylaxis –_

The absolute minimum standard regimen for PPTCT in community settings is sdNVP for mother and baby (Table 5.5). Community settings include home delivery and delivery at a Health Sub-Centre or BHC, or at a CHC or District Hospital with limited ART or PPTCT capability. This may be administered by health care workers, including community based health workers (e.g. Community Midwife, CHW), who have successfully completed training in PPTCT.

No significant clinical or laboratory toxicity has been observed with the use of this regimen in pregnant women and infants in clinical trials. Contraindications to NVP include known allergy to NVP or to benzodiazepine derivatives.

This regimen has a reported “failure” rate (i.e. incidence of HIV infection in the baby) of about 13% at 6 weeks of age. It also carries the risk of NVP resistance emerging in the mother (see Section 5.1.4, above).

| Table 5.5 |

| Delivery at Home or at a Health Sub-Centre, BHC, or a CHC or District Hospital with limited facilities |

<table>
<thead>
<tr>
<th></th>
<th>Minimum Standard PPTCT Protocol = Single Dose Nevirapine for Mother and Baby</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Recipient</th>
<th>Timing</th>
<th>ARV(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother</td>
<td>Intrapartum</td>
<td>NVP 200mg once at the onset of labour. If woman presents in established labour, give NVP as soon as possible in the first stage of labour</td>
</tr>
<tr>
<td>Baby</td>
<td>Neonatal</td>
<td>Infant NVP 2 mg/kg as soon as feasible (preferably within 12 hours, but no later than 72 hours following delivery)</td>
</tr>
</tbody>
</table>

_The recommended PPTCT protocol –_

Where HIV infection is diagnosed no later than during the second trimester of pregnancy, antenatal follow-up and support are available, and delivery takes place in a hospital or other health facility with trained staff and ARVs available, HIV-infected pregnant women should be offered the WHO recommended regimen from 28 weeks’ gestation (Table 5.6).

The mother commences ZDV at 28 weeks, is given ZDV + 3TC and sdNVP during labour. A one-week “tail” of ZDV + 3TC is prescribed for the mother to prevent NVP resistance (due to the long half-life of NVP; see Section 5.1.4, above).

The baby receives sdNVP plus a one-week course of infant ZDV.
Table 5.6
Hospitals and other Health Facilities with an Established PPTCT Program
Recommended Standard PPTCT Protocol

<table>
<thead>
<tr>
<th>Recipient</th>
<th>Timing</th>
<th>ARV(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mother</strong></td>
<td>Antepartum</td>
<td>ZDV 300mg twice daily from 28 weeks’ gestation</td>
</tr>
<tr>
<td></td>
<td>Intrapartum</td>
<td>ZDV 300mg at the onset of labour and 3-hourly until delivery plus 3TC 150mg at the onset of labour and 12-hourly until delivery plus NVP 200mg once at the onset of labour</td>
</tr>
<tr>
<td></td>
<td>Postpartum</td>
<td>ZDV 300mg + 3TC 150mg twice daily for 7 days</td>
</tr>
<tr>
<td><strong>Baby</strong></td>
<td>Neonatal</td>
<td>Infant NVP 2 mg/kg as soon as feasible (preferably within 12 hours, but no later than 72 hours following delivery) plus Infant ZDV 4 mg/kg twice daily for 7 days</td>
</tr>
</tbody>
</table>

Provided adherence to antenatal ARV prophylaxis is good and all intra-partum and all postnatal medications are completed, “failure” rates of around 2% in the baby are likely to be achieved, with the added advantage of reduced risk of NVP resistance.

**Mothers presenting or diagnosed with HIV infection during pregnancy, but after 28 weeks’ gestation**

Where an HIV-positive mother presents for antenatal care after 28 weeks’ gestation or HIV infection is confirmed in a pregnant woman after 28 weeks, standard antenatal prophylaxis should commence as soon as possible. The baby should receive neonatal sdNVP as usual, but the duration of postnatal ZDV prophylaxis should be extended to four weeks if the mother has received less than 4 weeks of ZDV during pregnancy (Table 5.7).

Table 5.7
Hospitals and other Health Facilities with an Established PPTCT Program
Alternative PPTCT Protocol after 28 Weeks’ Gestation

<table>
<thead>
<tr>
<th>Recipient</th>
<th>Timing</th>
<th>ARV(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mother</strong></td>
<td>Antepartum</td>
<td>ZDV 300mg twice daily from as soon as possible after 28 weeks’ gestation</td>
</tr>
<tr>
<td></td>
<td>Intrapartum</td>
<td>ZDV 300mg at the onset of labour and 3-hourly until delivery plus 3TC 150mg at the onset of labour and 12-hourly until delivery plus NVP 200mg once at the onset of labour</td>
</tr>
<tr>
<td></td>
<td>Postpartum</td>
<td>ZDV 300mg + 3TC 150mg twice daily for 7 days</td>
</tr>
<tr>
<td><strong>Baby</strong></td>
<td>Neonatal</td>
<td>Infant NVP 2 mg/kg as soon as feasible (preferably within 12 hours, but no later than 72 hours following delivery) plus Infant ZDV 4 mg/kg twice daily for 7 days (Extend infant ZDV to 4 weeks if the mother has received less than 4 weeks of antenatal ZDV)</td>
</tr>
</tbody>
</table>
This approach is likely to achieve “failure” rates in the baby of 5-8%, depending on how soon after 28 weeks the mother commences taking antenatal ZDV prophylaxis.

### 5.4.2 HIV-infected women who are in labour and have not received antenatal ARV prophylaxis

Where the mother is known to be infected with HIV but has not received antenatal PPTCT prophylaxis, or is diagnosed for the first time in labour (see Section 3.6), there are two preferred options for management.

**Women delivering where full PPTCT interventions are not available** –

If other ARVs are not available or the mother is delivering at home, a trained health care worker (including a CHW with PPTCT training) can supervise the “minimum standard” sdNVP for both mother and baby (i.e. as per Table 5.5).

**Women delivering at health facilities with full PPTCT interventions available** –

Commence the WHO recommended regimen in labour and continue postpartum (Table 5.8), with the duration of neonatal ZDV extended to 4 weeks. Enlist community based (e.g. CHW) postnatal assistance and supervision for the mother and baby to support adherence to ART and follow-up.

PTCT “failure” rates in the baby will be around 8-9%.

### Table 5.8

<table>
<thead>
<tr>
<th>Recipient</th>
<th>Timing</th>
<th>ARV(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother</td>
<td>Intrapartum</td>
<td>ZDV 300mg at the onset of labour and 3-hourly until delivery plus 3TC 150mg at the onset of labour and 12-hourly until delivery plus NVP 200mg once at the onset of labour</td>
</tr>
<tr>
<td>Baby</td>
<td>Neonatal</td>
<td>Infant NVP 2 mg/kg as soon as feasible (preferably within 12 hours, but no later than 72 hours following delivery) plus Infant ZDV 4 mg/kg twice a day for 4 weeks</td>
</tr>
</tbody>
</table>

### 5.4.3 Infants born to HIV-infected mothers who have not received antenatal or intrapartum ARV prophylaxis

**Infant brought to the health facility within 72 hours of birth** –

Where the baby is born to an HIV positive mother who has not taken any antenatal or intrapartum ARV prophylaxis, the neonatal component of the WHO recommended regimen can be given.

PTCT “failure” rates of 14-16% may be expected.
Table 5.9
Infant-Only Regimen for PPTCT where the mother has not taken any ARVs

<table>
<thead>
<tr>
<th>Recipient</th>
<th>Timing</th>
<th>ARV(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baby</td>
<td>Neonatal</td>
<td>Infant NVP 2 mg/kg as soon as feasible (preferably within 12 hours, but no later than 72 hours following delivery) plus Infant ZDV 4 mg/kg twice a day for 4 weeks</td>
</tr>
</tbody>
</table>

Infant brought to the health facility more than 72 hours after birth –

There is limited information about the effectiveness of “late-start” neonatal regimens, i.e. where a baby is born to an HIV positive mother in settings where PPTCT care and support are not available and is brought to a health worker or health facility more than 72 hours following delivery.

There is a high risk that HIV infection would be established in the baby already, and there is currently no evidence for the effectiveness of neonatal ZDV prophylaxis starting more than 72 hours following delivery.

In this situation, it is very important to initiate co-trimoxazole prophylaxis promptly as per the National Clinical Protocol on ART, starting by four weeks of age and continuing until there is no further risk of HIV transmission and HIV infection has been excluded; careful follow-up of both mother and baby is essential.

5.4.5 Special Situations

Anaemia –

ZDV may be associated with haematological toxicity (anaemia and neutropenia).

Pregnant women with severe anaemia (haemoglobin <7 g/dl) or neutropenia (neutrophil count < laboratory reference range) should be carefully investigated as usual for any other underlying causes (e.g. blood loss, nutritional deficiency, soil transmitted helminths) and haematinics (i.e. iron and folic acid) prescribed.

If there are indications for commencing HAART, other NRTI drugs (e.g. d4T or ABC) should be substituted for ZDV.

There are no published recommendations for non-ZDV protocols for PPTCT prophylaxis in anaemic women. In particular, there is limited experience of the use of d4T-only antenatal prophylaxis (and no evidence of its efficacy), while d4T + 3TC given in combination for a period of weeks or months carries a risk of mitochondrial toxicity and lactic acidosis.

Until clearer guidance is available, it is reasonable to omit antenatal prophylaxis in severely anaemic women, and to substitute d4T for ZDV in the maternal component of the standard intrapartum and post-partum protocols (Tables 5.6, 5.7 and 5.8). The recommended dose of d4T is 30mg twice daily, regardless of maternal body weight.

Neonatal sdNVP and ZDV should be provided to the baby as usual (Tables 5.6, 5.7 and 5.8).
Prior single dose of nevirapine earlier in pregnancy –

If sdNVP is administered earlier in pregnancy (e.g. for an episode of threatened premature labour), subsequent exposure of the mother to sdNVP is associated with an extremely high risk of NVP resistance. NRTI-only (e.g. ZDV alone or ZDV + 3TC) regimens should be used for maternal prophylaxis for PPTCT.

Infants are thought to acquire NVP resistance only in the neonatal period (i.e. when there has been a failure of PPTCT and circulating virus in the baby is exposed to neonatal sdNVP). NVP may therefore be prescribed as usual for the baby, with 4 weeks of infant ZDV (see Table 5.8).

Active tuberculosis –

All PLHIV with a cough for more than 2–3 weeks should be screened for active TB. In pregnant women with TB-HIV co-infection, the first priority is to treat the TB. Timing of the commencement of HAART will depend on the woman’s CD4 cell count, her tolerance of TB treatment and her clinical condition.

If necessary, TB and HAART can be prescribed together but the risk of adverse reactions and drug interactions is high. If the woman is taking rifampicin for TB, the risk of liver toxicity with NVP and PI ARVs is significant; an EFV-based regimen is recommended for first-line treatment for individuals with TB and HIV (with the usual precautions about EFV; see Section 5.3.2).

If ABC or tenofovir (TDF) is available, one of these drugs given with both ZDV and 3TC should be considered for women in the first trimester of pregnancy needing both rifampicin and ART.

Injecting drug use –

IDU with contaminated equipment is the most common mode of HIV transmission in Afghanistan. Health workers and lay counsellors should always ask pregnant women living with HIV about their alcohol or drug use, and that of the baby’s father.

Injecting drug-using pregnant women may take methadone as opioid substitution therapy (OST) in combination with ARV prophylaxis or HAART. Drug interactions can potentially result in decreased methadone levels or in increased ARV levels, increasing the risk of ARV-related side-effects.

NNRTIs reduce methadone levels and can precipitate withdrawal symptoms. In pregnant woman taking NNRTI- (NVP- or EFV-) based HAART, the dose of methadone must be increased.

There are limited data available on buprenorphine OST or naltrexone withdrawal therapy in pregnancy. Neither are currently available in Afghanistan anyway.

HIV-2 infection –

All documented HIV infection in Afghanistan is due to HIV-1. However, infection with HIV-2 has been documented in India and Iran.

NNRTI ARVs are relatively ineffective against HIV-2 infection, but NRTIs like ZDV are very effective. In a pregnant woman with known HIV-2 infection (e.g. returning home from
abroad with documented laboratory confirmation of HIV-2 infection) PPTCT prophylaxis may be based on ZDV only, while HAART should use triple NRTI regimens.

**Primary HIV infection during pregnancy** –
Primary HIV infection during pregnancy is associated with high viral loads and increased risk of PTCT. All pregnant women should be counselled about HIV prevention (Chapter 2).

5.5 Implementing Safer Delivery Practices

5.5.1 Management of labour and delivery

Procedural recommendations that can reduce the risk of PTCT are summarised in Table 5.10 (refer also to the MOPH Reproductive Health guidelines).

<table>
<thead>
<tr>
<th>Table 5.10 Management of Labour and Delivery to Reduce Risk of PTCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ensure continuous support for the mother during labour</td>
</tr>
<tr>
<td>• Ensure good infection control</td>
</tr>
<tr>
<td>• Provide regular monitoring of vital signs</td>
</tr>
<tr>
<td>• Active management of labour using parograph</td>
</tr>
<tr>
<td>o avoid early, artificial or prolonged rupture of membranes or prolonged labour</td>
</tr>
<tr>
<td>o consider using oxytocin to shorten labour when appropriate</td>
</tr>
<tr>
<td>• Provide ARVs to mother according to agreed protocol</td>
</tr>
<tr>
<td>• Minimise vaginal examinations</td>
</tr>
<tr>
<td>o Perform cervical examination only when absolutely necessary, and with appropriate clean technique</td>
</tr>
<tr>
<td>• Use non-invasive foetal monitoring to assess need for early intervention</td>
</tr>
<tr>
<td>• Treat signs of infection in the mother</td>
</tr>
<tr>
<td>• Minimise episiotomies, tears, and instrumental delivery</td>
</tr>
<tr>
<td>• Minimise risk of postpartum haemorrhage</td>
</tr>
<tr>
<td>o Actively manage the third stage of labour</td>
</tr>
<tr>
<td>o Give oxytocin immediately after delivery</td>
</tr>
<tr>
<td>o Use controlled cord traction</td>
</tr>
<tr>
<td>o Perform uterine massage</td>
</tr>
<tr>
<td>o Repair genital tract lacerations carefully and promptly</td>
</tr>
<tr>
<td>o Carefully remove all products of conception</td>
</tr>
<tr>
<td>• Provide proper cord care – do not “milk” cord blood towards baby</td>
</tr>
<tr>
<td>• Provide immediate newborn care, taking great care with suction to avoid trauma of upper airway</td>
</tr>
<tr>
<td>• Consider elective caesarean section, but only where adequate providers and facilities exist</td>
</tr>
<tr>
<td>• Provide postpartum care for mother, with careful monitoring for infection</td>
</tr>
</tbody>
</table>
Continuous support from a health worker or a female relative during the first stage can shorten labour and minimise the need for obstetric interventions.

Normal vaginal delivery with minimal intervention is recommended; alternative approaches will be guided by specific obstetric indications.

To minimise environmental contamination with HIV-infected material, it is important to take specific and active steps to avoid postpartum haemorrhage.

5.5.2 Caesarean section

Elective caesarean section –

Elective caesarean section should be reserved for HIV infected women who have failed to achieve adequate viral suppression through ARV prophylaxis or treatment by 38 weeks’ gestation.

In women approaching term with a known high or rising viral load (or evidence of sub-optimal immunological response where HAART has been initiated), consideration should be given to the benefits and risks of vaginal delivery versus elective caesarean section. The decision should take into account the surgical and anaesthesia facilities, the availability of safe blood transfusion, standards of postoperative and neonatal care, and the attitude of the woman and her family towards birth by caesarean section.

Emergency caesarean section –

The need for emergency caesarean section (or transfer to a centre with suitable facilities) would be guided by the usual obstetric indications.

5.5.3 Immediate newborn care of infants who are HIV-exposed and infants with unknown exposure status

The immediate care of the newborn exposed to HIV follows standard practice.

Regardless of the mother’s HIV infection status, all infants should be kept warm after birth and handled with gloves until maternal blood and secretions have been washed off.

Immediate newborn care includes the following:

- Maintaining universal precautions throughout care and treatment:
  - wear gloves when giving injections;
  - clean all injection sites with surgical spirits;
  - dispose of all needles according to facility policy.
- Wiping infant’s mouth and nostrils with gauze when the head is delivered.
- Clamping the cord immediately after birth
  - avoid “milking” the cord towards the baby;
  - cover the cord with gloved hand or gauze before cutting.
- Using suction only when meconium-stained liquid is present
  - use either mechanical suction at less than 100 mm Hg pressure, or
  - bulb suction, rather than mouth-operated suction.
• Wiping the infant dry with a towel.
• Determining the mother’s infant feeding choice
  o if she is breast feeding, place the infant on the mother’s breast;
  o if she is using breast milk substitute, place the infant on her body for skin-to-skin contact and provide help with the first feeding;
• Administering vitamin K, silver nitrate eye ointment and BCG vaccine according to national guidelines.
• Administering ARV prophylaxis according to the protocol selected in Section 5.4.

5.5.4 Postpartum care of women who are HIV-infected and women with unknown HIV status

When providing postpartum care to women infected with HIV, health care workers may follow routine protocols, but several areas require additional attention:

Newborn feeding –

• Ensure that the mother has decided on her feeding option before she leaves the facility or hospital after delivery (see also Chapter 6), and support that choice
• Provide training and observe proper feeding technique prior to discharge.

Postpartum care of women with unknown HIV status –

Women whose HIV status is unknown should receive the same standard of postpartum care as women with HIV infection, as per the National Standards for Reproductive Health Services: Postpartum Care Services (2003). They should be counselled regarding HIV and offered testing as appropriate, and be supported to follow national recommendations for infant feeding.

5.5.5 HIV Prevention in health care settings

Infection control in labour ward, operating theatre and postnatal ward settings should follow National Policy for Infection Prevention and Control in Hospitals and Health Centers (2005) and Blood Transfusion Policy (2007). Universal precautions should be used at all times, and should include: use of personal protective equipment; safe use and disposal of “sharps”; sterilisation of all equipment; and safe disposal of contaminated materials.

Occupational exposure to potentially HIV contaminated material should be managed according to current national Post-Exposure Prophylaxis Guidelines (in Procedures Manual for Infection Prevention and Control in Hospitals and Health Centers, 2005).

5.6 Summary of Strategic Steps and Priorities

Table 5.11 summarises the steps that will be necessary, at different levels, to introduce coordinated PPTCT services during the antenatal period.

Table 5.12 summarises the strategic approaches to PPTCT during labour and delivery.
### Table 5.11
PPTCT during Antenatal Care
Integrated Summary of Strategic Components

<table>
<thead>
<tr>
<th>COMMUNITY and LOCAL</th>
<th>HEALTH FACILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Encourage all pregnant women to attend ANC</td>
<td>• Promote mother-friendly, continuous care</td>
</tr>
<tr>
<td>• Facilitate follow-up antenatal visits and support</td>
<td>• Provide counselling, services and support on PPTCT</td>
</tr>
<tr>
<td>• Engage family and community in birth and emergency transport planning</td>
<td>• Counsel on adherence to antenatal ARV prophylaxis, and provide ARVs</td>
</tr>
<tr>
<td>• Awareness raising, IEC materials and other information on PPTCT and availability of VCCT</td>
<td>• Initiate HAART if indicated</td>
</tr>
<tr>
<td>• Ensure community-based adherence support (through community health worker or “buddy”)</td>
<td>• Counsel on ARV prophylaxis during delivery, if appropriate, and provide ARVs</td>
</tr>
<tr>
<td>• Ensure implementation of policies, with due regard for “on-the-ground” realities</td>
<td>• Refer to community-based health workers and support systems, and to higher level facilities as needed</td>
</tr>
<tr>
<td>• M&amp;E</td>
<td>• Encourage involvement of partner and family</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PROVINCIAL</th>
<th>NATIONAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Establish a coordination team to provide technical and programmatic support for PPTCT interventions at district levels and below</td>
<td>• Monitor international evidence on antenatal ARV prophylaxis</td>
</tr>
<tr>
<td>• Ensure implementation of policies, with due regard for “on-the-ground” realities</td>
<td>• Develop optimal recommendations on ARV prophylaxis, bearing in mind the variation in capacity of health care facilities, feasibility, safety and acceptability of the recommendations</td>
</tr>
<tr>
<td>• M&amp;E</td>
<td>• Training</td>
</tr>
</tbody>
</table>

### Table 5.12
Strategic Approach to PPTCT during Labour and Delivery

<table>
<thead>
<tr>
<th>COMMUNITY and LOCAL</th>
<th>HEALTH FACILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Identify and train community birth attendants on PPTCT and, if appropriate, administration of ARVs (e.g. sdNVP) to mother and baby</td>
<td>• Ensure continuous support for the mother during labour</td>
</tr>
<tr>
<td>• Supply home Community Midwives with hygienic delivery kits, including disposable “sharps”</td>
<td>• Ensure good infection control</td>
</tr>
<tr>
<td>• Plan emergency transport system for all community members</td>
<td>• Provide regular monitoring of vital signs</td>
</tr>
<tr>
<td>• Link with health facilities</td>
<td>• Active management of labour using partograph – avoid early or prolonged rupture of membranes or prolonged labour</td>
</tr>
<tr>
<td>Following careful evaluation and training:</td>
<td>• Minimise vaginal examinations</td>
</tr>
<tr>
<td>• Supply ARVs through Community Midwives or CHWs once they have received proper training</td>
<td>• Treat signs of infection</td>
</tr>
<tr>
<td>• Consider elective caesarean section, but only where adequately skilled providers and adequate facilities exist</td>
<td>• Minimise episiotomies, tears, and instrumental delivery</td>
</tr>
<tr>
<td>• Provide proper cord care – do not “milk” cord blood towards baby</td>
<td>• Provide immediate newborn care, taking great care with suction to avoid trauma of upper airway</td>
</tr>
<tr>
<td>• Provide postpartum care for mother, with careful monitoring for infection</td>
<td>• Provide postpartum care for mother, with careful monitoring for infection</td>
</tr>
</tbody>
</table>
With appropriate training, CHWs are in an ideal position to help with sdNVP provision to mother and baby during and after home delivery. They would work in conjunction with Community Midwives, who would call them to assist when labour started. They could also assist at BHC or CHC levels to provide support during labour for a woman from their community, and to administer NVP to the mother and baby.

5.7 Further Reading

Chapter 6: Counselling and Support on Infant Feeding Methods

6.1 Strategic Overview

6.1.1 Risks associated with different methods of infant feeding

PTCT of HIV through breast feeding has been well documented. The cumulative attributable risk of HIV transmission over a period of two years' breast feeding is about 16%, with about three-quarters of all breast feeding transmission occurring during the first 6 months. The mode of infant feeding is therefore an important factor in PTCT.

Maternal factors associated with risk of transmission through breast feeding include her viral load in plasma and breast milk, her HIV-related immune status, her nutritional status and the presence of breast conditions like mastitis, abscess or cracked and bleeding nipples.

Infant factors include conditions that damage the oral mucous membrane, such as thrush or other sores in the mouth. One South African study found that girls were 40% less likely to become infected during breast feeding than boys.

Exclusive artificial feeding obviously eliminates the risk of PTCT through breast feeding. However, when done under unsafe conditions, artificial feeding exposes the infant to a much higher risk of malnutrition, diarrhoeal illness and acute respiratory infection than in breast fed infants, and overall mortality rates are increased compared to breast fed babies – of particular importance in Afghanistan where up to 90% of the rural population (and even 40% of urban residents) lack access to a safe water supply (see also Table 6.2).

Mixed feeding (i.e. a combination of breast and artificial feeding) is associated with much higher rates of HIV transmission than either exclusive breast feeding or exclusive artificial feeding during the first 6 months of life.

The choice of infant feeding is difficult, and many cultural and contextual factors need to be considered. The choice a mother makes regarding infant feeding must be informed and supported, and will ultimately depend on her individual circumstances. This was affirmed by WHO in the recommendations of its Consensus Statement on HIV and Infant Feeding (2007), which are presented in Table 6.1.

6.1.2 Environmental health context in Afghanistan

The MICS (2003) and AHS (2006) provide the most recent data on environmental sanitation, infant feeding and nutrition, child morbidity and survival, and utilisation of primary child care services in Afghanistan (Table 6.2). These provide essential background information for decisions regarding infant feeding in the context of HIV infection.

Water and sanitation –

Almost 40% of the urban population and almost 70% (ranging up to 93%, by province) of the rural population lacks access to an improved water supply (defined as a public tap or standpipe, pump or protected spring).
Table 6.1
Recommendations of the
WHO Consensus Statement on HIV and Infant Feeding, 2007

- The most appropriate infant feeding option for an HIV-infected mother should continue to depend on her individual circumstances, including her health status and the local situation, but should take greater consideration of the health services available and the counselling and support she is likely to receive.

- Exclusive breast feeding is recommended for HIV-infected women for the first 6 months of life unless replacement feeding is acceptable, feasible, affordable, sustainable and safe (AFASS) for them and their infants before that time.

- When replacement feeding is acceptable, feasible, affordable, sustainable and safe, avoidance of all breast feeding by HIV-infected women is recommended.

- At six months, if replacement feeding is still not acceptable, feasible, affordable, sustainable and safe, continuation of breast feeding with additional complementary foods is recommended, while the mother and baby continue to be regularly assessed. All breast feeding should stop once a nutritionally adequate and safe diet without breast milk can be provided.

- Whatever the feeding decision, health services should follow-up all HIV-exposed infants, and continue to offer infant feeding counselling and support, particularly at key points when feeding decisions may be reconsidered, such as the time of early infant diagnosis and at six months of age.

- Breast feeding mothers of infants and young children who are known to be HIV-infected should be strongly encouraged to continue breastfeeding.

- Governments and other stakeholders should re-vitalize breast feeding protection, promotion and support in the general population. They should also actively support HIV-infected mothers who choose to exclusively breastfeed, and take measures to make replacement feeding safer for HIV-infected women who choose that option.

- National programs should provide all HIV-exposed infants and their mothers with a full package of child survival and reproductive health interventions with effective linkages to HIV prevention, treatment and care services. In addition, health services should make special efforts to support primary prevention for women who test negative in antenatal and delivery settings, with particular attention to the breast feeding period.

- Governments should ensure that the package of interventions referenced above, as well as the conditions described in current guidance, is available before any distribution of free commercial infant formula is considered.

- Governments and donors should greatly increase their commitment and resources for implementation of the Global Strategy for Infant and Young Child Feeding and the UN HIV and Infant Feeding Framework for Priority Action in order to effectively prevent postnatal HIV infections, improve HIV-free survival and achieve relevant UNGASS goals.
Table 6.2
**Key Infant Feeding and Infant and Child Health Indicators informing PPTCT Strategies, Afghanistan, 2003-06**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Urban</th>
<th>Rural</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Infant Feeding</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of children receiving any breast feeding</td>
<td>—</td>
<td></td>
<td>97.6%</td>
</tr>
<tr>
<td>Proportion of children aged 0-5 months exclusively breast fed</td>
<td>—</td>
<td></td>
<td>83.0%</td>
</tr>
<tr>
<td>Proportion of children still breast feeding at 12-15 months</td>
<td>85.9%</td>
<td>93.2%</td>
<td>91.5%</td>
</tr>
<tr>
<td>Proportion of children still breast feeding at 20-23 months</td>
<td>51.6%</td>
<td>55.2%</td>
<td>54.2%</td>
</tr>
<tr>
<td><strong>Water Supply</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to improved drinking water source (% of population)</td>
<td>37%</td>
<td>17%</td>
<td>22%</td>
</tr>
<tr>
<td><strong>Sanitation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to improved sanitation facilities (% of population)</td>
<td>45%</td>
<td>25%</td>
<td>30%</td>
</tr>
<tr>
<td><strong>Infant and Child Nutrition</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prevalence of stunting (height-for-age 2 SD or more below reference population), children aged &lt;5 years, Kabul Province (K) and nationally (N)</td>
<td>—</td>
<td></td>
<td>K: 39.9% N: 53.7%</td>
</tr>
<tr>
<td>Prevalence of wasting (weight-for-height 2 SD or more below reference population; % of children aged &lt;5 years, Kabul Province (K) and nationally (N))</td>
<td>—</td>
<td></td>
<td>K: 12.4% N: 8.7%</td>
</tr>
<tr>
<td>Prevalence of anaemia (% of children aged 6-59 months with Hb &lt; 11 g/dl)</td>
<td>—</td>
<td></td>
<td>38.0%</td>
</tr>
<tr>
<td><strong>Infant and Child Health</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children with diarrhoea during the last 15 days</td>
<td>29.6%</td>
<td>29.8%</td>
<td>29.7%</td>
</tr>
<tr>
<td>Proportion of children with diarrhoea given ORT</td>
<td>69.5%</td>
<td>69.2%</td>
<td>69.2%</td>
</tr>
<tr>
<td>Children with symptoms of ARI during the last 15 days</td>
<td>18.9%</td>
<td>19.0%</td>
<td>19.0%</td>
</tr>
<tr>
<td>Proportion of children with ARI taken to health worker</td>
<td>31.7%</td>
<td>26.6%</td>
<td>28.1%</td>
</tr>
<tr>
<td>Children fully immunised (age 12-23 months)</td>
<td>—</td>
<td></td>
<td>27.1%</td>
</tr>
</tbody>
</table>


Two-thirds of households in Afghanistan have some type of toilet facility available, but only half of households in rural areas have a designated place for disposal of faeces.

The limited access to safe water and sanitation also limits the safety of replacement (artificial) feeding as a PPTCT strategy during infancy and early childhood.

**Breast Feeding** –

Breast feeding is almost universal in Afghanistan, with 97.6% of mothers starting to breast feed their babies after birth; 36.7% of mothers initiate breast feeding within the first hour of birth, over 90% continue up to 12 months, and almost 55% continue up to two years. The duration of continuous breast feeding is significantly lower for girls.
WHO, UNICEF and the Basic Package of Health Services all recommend exclusive breastfeeding for the first 6 months of life, with the gradual introduction of complementary foods (in addition to continued breast feeding) thereafter. Eighty-three percent of children aged less than 6 months are exclusively breast fed in Afghanistan, and mixed feeding is still common (91.5%) at 12-15 months of age.

**Poverty**

The MOPH does not currently provide free breast milk substitutes for children born to PLHIV. From the demographic profile of MARPs (Section 1.1.2), many PLHIV in Afghanistan may be expected to have low incomes and would struggle to afford breast milk substitutes without financial assistance.

**Mortality Rates**

The ‘true’ infant mortality rate (IMR) and under-five mortality rate (USMR) in Afghanistan is unknown, but is almost certainly among the highest in the world.


The 2003 MICS and 2006 AHS found slightly lower estimates. The AHS provides the most recent estimates, with the IMR lying in the range 129-140 per 1,000 and the USMR in the range 191-209 per 1,000.

This means that at least one in every 5 children born in Afghanistan dies before reaching the age of 5 years.

The 2003 MICS estimated that both IMR and USMR were between one-quarter and one-third higher in the rural provinces than in the urban areas.

**Infant and Childhood Nutrition**

Malnutrition is still common in Afghanistan. More than half the children aged less than five years are stunted, almost 40% are underweight, and about one in 10 shows signs of wasting.

Worldwide, malnutrition is the underlying cause of death in about 60% of children under 5 years of age. Although there are no data from Afghanistan, it is likely that the situation is similar or that malnutrition is an even larger cause or contributing cause of child death, considering the high prevalence of childhood malnutrition and the high USMR.

**Childhood Illness**

During the two weeks leading up to the 2003 MICS, almost one in three children aged less than 5 years had diarrhoea, and almost one in five had symptoms of ARI.

Most (69.2%) children with diarrhoea were treated with pre-packaged or home-made oral rehydration therapy (ORT), but only around one-quarter of children with ARI (28.1%) were taken to a health worker for assessment.
6.2 Recommendations for Infant and Young Child Feeding

6.2.1 Counselling and informed choice
Counselling and support for infant feeding can improve feeding practices and, in turn, prevent malnutrition and reduce the risk of death in children.

Infant feeding counselling for women who are infected with HIV is an integral part of PPTCT.

The delicate balance between the health benefits of breast feeding and the risk of HIV transmission makes good counselling even more important to help PLHIV to select and practice the safest infant feeding strategy for their individual situation.

One-on-one counselling gives counsellors valuable insights into women's realistic feeding options. To ensure that women have enough time to make informed infant feeding decisions, counselling should commence during the antenatal period, and preferably over several sessions. If possible, it should be initiated some time after post-test counselling, **but not immediately after the mother learns her test results.**

A woman who is HIV-positive should receive information and counselling that addresses the following topic areas:

- Information about the risk of HIV transmission through breast feeding (Sections 1.2.1 and 6.1.1)
- Information about possible feeding options (Sections 6.2.2 and 6.2.3)
- Advantages and disadvantages of each infant feeding option, especially the increased risk of infections and other illnesses with replacement feeding
- Guidance in selecting and adhering to the option most suitable for her situation
- Respect for local customs, practices and beliefs when discussing infant feeding choices
- Demonstrations and/or opportunities to practise safe storage, preparation and feeding, including cup feeding
- Encouragement of partner or family involvement in infant-feeding decisions
- Management of mastitis, cracked nipples, and sores in the baby’s mouth
- Strategies for discontinuation of breast feeding and the introduction of replacement feeds (Section 6.3)

The chosen method should be confirmed again after delivery.

The final decision about a woman's infant feeding strategy should be hers alone, and she must receive support for her choice.

6.2.2 Infant feeding recommendations for mothers whose HIV status is unknown or who have been tested and found to be HIV negative

These mothers should breast feed exclusively for the first 6 months of life, according to the infant feeding guidelines in the national Basic Package of Health Services.
• Exclusive breast feeding means that the mother only feeds her infant breast milk;  
  o the only exceptions are for drops or syrups containing vitamin or mineral  
    supplements or medicines;  
  o the child receives no food or drink other than breast milk – not even water.  

• The mother should initiate breast feeding within one hour of birth, and help  
  the newborn baby become well attached at the breast. She should continue to  
  breast feed frequently, day and night. After the infant stops feeding from the  
  first breast, she should offer the second breast.  

• The mother should continue breast feeding when either she or the infant is sick.  

• If she will be away from her infant for an extended period (e.g. to work during  
  the day), she should expresses her breast milk and a care giver can feed the  
  expressed breast milk using a cup and spoon.  

• After the infant reaches 6 months of age, complementary foods that provide  
  sufficient calories and micronutrients and are safe should be introduced accord-  
  ing to national guidelines and the BPHS.  

• Breast feeding should continue for up to 2 years or longer.  

6.2.3 Infant feeding recommendations for mothers who have been tested for  
HIV and found to be infected  

Mothers who are known to be HIV-infected have five infant feeding options available;  
these are summarised in Figure 6.3.

![Figure 6.3](image_url)  

**Figure 6.3**  
Infant Feeding options for HIV-positive women  
during the first 6 months

Breast milk: the first group of options –

Breast milk options include:

- **Option 1 – Exclusive breast feeding** for 6 months (or until the AFASS criteria are met), with relatively rapid transition from breast feeding to replacement feeding at 6 months of age, or

- **Option 2 – expressed, heat-treated breast milk (EBM), or**

- **Option 3 – surrogate breast feeding by a known HIV-negative lactating woman ("wet nursing").**

Exclusive breast feeding follows the guidelines in Section 6.2.2, with **strict avoidance of any replacement feeds, i.e. mixed feeding.**

A woman who is taking HAART for their own health can still breast feed her baby and should continue her ARV regimen without any need for adjustment.

To heat-treat expressed breast milk, the mother brings the EBM to a boil and then cools it immediately by standing the container in cold water. Once the EBM has been heat-treated, it should be used within an hour. The mother or care giver can then feed the EBM to the infant from a cup. Infants must be fed using clean utensils and with clean hands.

The mother and family should only consider surrogate breast feeding when the wet nurse voluntarily accepts HIV counselling and testing and is confirmed as HIV negative. The wet nurse should practise all aspects of exclusive breast feeding outlined in Section 6.2.2, and should receive ongoing information and support about practising safe sex and avoiding other risk behaviours to ensure that she remains HIV negative (Chapters 2 and 4).

Breast milk substitutes (replacement feeding): the second group of options –

When replacement feeding is acceptable, feasible, affordable, sustainable, and safe ("AFASS"; see Table 6.3), UNAIDS and its partner agencies recommend that HIV-infected women avoid breast feeding to prevent PTCT.

Options include:

- **Option 4 – Commercial infant formula if AFASS criteria are met**

- **Option 5 – Home-modified animal milk**

If replacement feeding is chosen, **the infant must not receive any breast milk.**

Commercial formula is less easily digested than breast milk, lacks its protective immune factors, and its proteins and fats are inferior to those in breast milk. However, it contains adequate micronutrients and is the preferred breast milk substitute.

Home-modified animal milk may be considered if commercial infant formula is not readily available or is too expensive for the family, and supplies of animal milk are reliable and affordable. However, preparation is somewhat complex. Rates of hospital admission with diarrhoea and dehydration are higher than with other types of replacement feeding,
and the essential fatty acid, vitamin and other micronutrient content is lower — this option may therefore not be feasible for all families.

The basic technique is a 2:1 mixture of animal (cow, goat or camel) milk and boiled water, with 1g of sugar added for every 10ml of animal milk. A few drops of vegetable oil and multivitamin and mineral drops are also needed to boost the essential fatty acid and micronutrient content.

*Many women in Afghanistan will have limited capacity to fully comply with the criteria for replacement feeding. With the present infant morbidity and mortality, correct and updated information and counselling is important for the mother to make the safest infant feeding choice for her infant.*

Mothers and caregivers should never use sweetened condensed milk, skimmed milk, fruit juices, sugar water, or diluted porridges for replacement feeding as they do not provide enough energy or micronutrients.

Coffee creamer has no nutritional value and virtually no energy value, and must never be used for infant feeding.

Many studies have identified what is called a “spill-over effect”, where the promotion of replacement feeding for the children of HIV-infected mothers leads to a reduction in breast feeding in the wider community and associated increases in infant morbidity and mortality. *It is essential to maintain IEC programs for the promotion of breast feeding* in parallel with infant feeding information that specifically targets PLHIV.

### Table 6.3

**Definitions of the “AFASS” Criteria for Replacement Feeding of Infants born to HIV Infected Mothers**

**Acceptable:** The mother perceives no significant barrier(s) to choosing a feeding option for cultural or social reasons or for fear of stigma and discrimination

**Feasible:** The mother (or other family member) has adequate time, knowledge, skills, and other resources to prepare feedings and to feed the infant as well as the support to cope with family, community, and social pressures

**Affordable:** The mother and family, with available community and/or health system support, can pay for the costs of the replacement feedings - including all ingredients, fuel and clean water - without compromising the family’s health and nutrition spending.

**Sustainable:** The mother has access to a continuous and uninterrupted supply of all ingredients and commodities needed to implement the feeding option safely for as long as the infant needs it.

**Safe:** Replacement foods are correctly and hygienically stored and prepared in nutritionally adequate quantities; infants are fed with clean hands using clean utensils, preferably with cups.
6.2.4 Postnatal support and follow-up

During each postnatal visit, clinic staff should review progress with infant feeding, reinforcing information from the antenatal feeding counselling sessions and focusing on the issues most relevant to the mother.

Reinforcing essential and relevant information supports optimal infant nutrition, growth and development while minimising risks.

In some cultures, women who bottle- or cup-feed their infants are starting to be labelled as HIV-infected and discriminated against. Community- and health centre-based PPTCT workers should address this stereotype during antenatal and postnatal counselling and educational sessions, and emphasise the importance of selecting infant feeding practices on the basis of safety and reducing the risk of PTCT of HIV.

Additional support may be required during special high-risk periods, such as:

- when the child is sick
- when the mother is sick
- when the mother returns to work
- when the mother decides to change feeding methods

To support continued care and referrals, networks and linkages should be strengthened with Safe Motherhood programs, and with NGOs and other sectors working in MNCH, infant nutrition or HIV.

6.2.5 Areas subject to Ongoing Research

Maternal ART for PPTCT during breast feeding –

Just as it reduces viral load in the blood, maternal ART may reduce the viral load in breast milk and inhibit transmission to the breast feeding baby. This is the subject of ongoing research.

Reports of initial studies are very encouraging, but maternal ART during the postnatal period for the specific purpose of PPTCT is not currently officially recommended by WHO. However, women requiring ART for their own health should be encouraged to exclusively breast feed their infants for 6 months if they choose this method of infant feeding.

Most ARVs are excreted in breast milk in sub-therapeutic concentrations. This has the potential to lead to the development of drug resistance in breast fed infants who acquire (or have already acquired) HIV infection, and may have an impact on options for possible future ART regimens.

6.3 Transition from Breast to Replacement Feeding

6.3.1 Transition to replacement feeding at about 6 months of age

“Transition” describes the period and process used to accustom the infant and mother to new feeding patterns, after which all breast milk is replaced with breast milk substitutes.

It is currently recommended that transition to replacement feeding in infants of positive mothers should take place at about 6 months of age; it can take between 2-3 days and 2-3
weeks for replacement feeding to be established – the quicker the better.

To help the transition from breast feeding to replacement feeding, the mother can use the following techniques:

- Accustom the infant to cup feeding by introducing expressed breast milk by cup well before transition (e.g. between regular breast feeds) – this will help the baby to get used to cup feeding
- Once the infant accepts cup feeding of EBM, then eliminate one feeding at the breast at a time and replace with EBM given by cup
- At around 6 months of age, once the infant is taking all feeds of EBM by cup, switch quickly to breast milk substitutes.
  - If the breasts become engorged during this process, express the breasts and discard the milk
  - Use cold compresses to reduce the inflammation due to engorgement
- Avoid recommencing breast feeding after completing the transition to replacement feeding.
  - Resist the temptation to breast feed at night or when the child needs comforting.

An open cup, rather than a bottle with a nipple (which is difficult to clean), should be used for transitional and replacement feeding.

6.3.2 Approaches to replacement feeding during the early months following transition from breast feeding

Children who successfully transition to replacement feeding at 6 months of age cease to be exposed to maternal HIV in breast milk but also lose the benefit of ongoing breast feeding. Recent studies from Africa suggest that early abrupt weaning may be associated with a higher mortality rate compared to traditional weaning practices, especially in infants who have already become infected with HIV in spite of PPTCT interventions.

To minimise the risk of malnutrition and associated infections in the child, parents need to be counselled on how to prepare adequate and appropriate breast milk substitutes and semi-solid foods to ensure the infant's ongoing growth, health and development.

At 6 months of age, this requires more than milk to satisfy nutrient needs: the infant is developmentally ready for soft and semi-solid foods, and these must be adequate in quantity and quality, safely prepared and properly stored.

6.4 Feeding the HIV Infected Child

At present, only antibody-based testing is available in Afghanistan, and this may not give a reliable diagnosis or exclusion of HIV infection in the infant until 18 months of age (see Section 7.3).

If virologic testing (polymerase chain reaction; PCR) becomes available at the CPHL and a child is diagnosed early as being HIV infected (i.e. not just HIV exposed, with persistent
maternal HIV antibodies), it is better for that child to continue breast feeding even while complementary feeds are being added after 6 months of age. Parents and care givers will need additional explanation, counselling and support for this as it deviates from the message given to parents of children exposed and not yet infected or of unknown infection status.

6.5 Summary of Strategic Priorities

Table 6.4 summarises the strategic approaches and responsibilities at different levels that support PPTCT during infancy and early childhood through counselling on infant feeding.

Table 6.4
Counselling and Support on Infant Feeding Methods for PPTCT
Integrated Summary of Strategic Components

<table>
<thead>
<tr>
<th>COMMUNITY and LOCAL</th>
<th>HEALTH FACILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Promote exclusive breast feeding or, if AFASS, exclusive replacement feeding</td>
<td>• Provide counselling on infant feeding, adapting information and supporting choices according to local and/or family situation</td>
</tr>
<tr>
<td>• Promote condom use to avoid acute HIV infection during lactation</td>
<td>• Adapt IMCI and feeding guidelines to local situation</td>
</tr>
<tr>
<td>• Provide supervision for infant feeding and “transitional” feeding, including e.g.:</td>
<td>• Strengthen growth monitoring programs</td>
</tr>
<tr>
<td>o Accustom the infant to cup feeding early by introducing occasional feeds of expressed breast milk by cup</td>
<td>• Promote Baby Friendly Hospital Initiative measures</td>
</tr>
<tr>
<td>o Once the infant accepts cup feeding, gradually eliminate feeding at the breast and replace with EBM given by cup.</td>
<td>• Provide training on infant feeding, cessation / weaning to health workers</td>
</tr>
<tr>
<td>o Avoid reinitiating breast feeding after completing the transition to replacement feeding</td>
<td>• Refer mothers to local support networks</td>
</tr>
<tr>
<td>• Provide training on treatment of breast infections and management of other breast feeding problems to community health workers</td>
<td>• Promote condom use and provide HIV prevention counselling to avoid acute HIV infection during lactation</td>
</tr>
<tr>
<td>• Provide home visits and ongoing support for exclusive breast or replacement feeding</td>
<td>• Maintain promotion of breast feeding for HIV-negative mothers and mothers with unknown HIV status – avoid “spill-over” effect</td>
</tr>
<tr>
<td>• Organise local support systems and groups for mothers</td>
<td>• Monitor infant feeding trends in areas or communities with known HIV infections or prevalence of risk behaviours</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PROVINCIAL</th>
<th>NATIONAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Provide technical and programmatic support for infant feeding, including interventions in the context of maternal HIV infection, at district level and below</td>
<td>• Develop and promote optimal recommendations on infant feeding practices, bearing in mind the variation in capacity of health care facilities, feasibility, safety and acceptability of the recommendations</td>
</tr>
<tr>
<td>• Ensure implementation of national infant feeding policies, with due regard for “on-the-ground” realities</td>
<td>• Develop training materials on infant feeding, including in the context of maternal HIV infection</td>
</tr>
<tr>
<td>• Assist with data collection for M&amp;E</td>
<td>• Monitor international research and recommendations on maternal ART during lactation to prevent PPTCT during breast feeding</td>
</tr>
<tr>
<td></td>
<td>• Resource mobilisation and harmonization</td>
</tr>
<tr>
<td></td>
<td>• M&amp;E</td>
</tr>
</tbody>
</table>
6.6 Further Reading


Chapter 7: Provision of Care, Treatment and Support to HIV-Infected Parents and Families and HIV-Exposed Infants

7.1 Strategic Overview

7.1.1 Community and multi-sectoral partnerships

PPTCT needs the involvement of multidisciplinary and multi-sectoral partners. Linkages with various stakeholders are very important for ensuring adequate resources – human, financial and material – are available and allocated to PPTCT services. Related sectors like education, health, population and environment, law and justice, women and children, and social welfare should all be engaged in HIV awareness and prevention, including PPTCT.

Linkages can be fostered in many ways:

- Integrating PPTCT services and community-based aspects of HIV CT&S into existing MNCH and community health services.
- Identifying community-based organisations that can support necessary referrals, and follow up to ensure families and individuals have ready access to services.
- Identifying community workers, including lay counsellors and volunteers, who can guide women through the testing and counselling process, monitor adherence to ARV or OI prophylaxis, and assist them in accessing CT&S services.

To ensure that NGO and private sector partners supplement and complement the expansion of PPTCT services, these Guidelines should be the core reference document for all partners.

A monitoring mechanism will be established to ensure that the linkages are in place and active.

7.1.2 Establishing linkages between community-based health care and clinical HIV services

The Basic Package of Health Services is an important entry point for accessing PPTCT interventions, and for supporting the CT&S of HIV-infected women, their infants and other family members.

A certain amount of training (for CHWs, Community Midwives and clinic staff) and systems development will be necessary to properly integrate PPTCT into the BPHS. Training on HIV-related care is an integral part of training on strengthening reproductive health services more broadly, and close communication will be needed between the NACP and the IEC and Reproductive Health Departments.

Children born to HIV-infected women need close follow up and appropriate care. With appropriate training and orientation, CHWs can be supported and encouraged to monitor attendance for clinical follow-up, supervise and support adherence to any prescribed treat-
ment (e.g. ART, prophylaxis against OIs), and provide information on staying healthy and how to continue to access CT&S services.

Specialists in HIV who care for adults and children, provide clinical supervision and ART, and guide the ongoing management of HIV infection need to be aware of community level support that may be in place, and to factor that support into their follow-up care for affected families.

7.1.3 **Linkages with other health programs for special needs**

Some programs provide services that commonly need to be accessed by PLHIV, including family planning, treatment of STIs, or assistance with substance abuse.

Women who are HIV-infected and their families may also need to access disease-specific programs, such as those for management and follow-up of tuberculosis (which is a common co-infection in PLHIV).

Nutritional support programs are especially important for HIV-infected mothers and their children.

7.1.4 **Linkages to community-based AIDS service organisations**

Linkages to community-based organisations can provide the resources to help women who are HIV-infected and their families cope with the isolation, social stigma, and the emotional pressures that often accompany a diagnosis of HIV. They may also provide women infected with HIV a way to become involved in voluntary or paid HIV-related work.

NGOs, faith-based organisations and similar agencies increasingly provide HIV related and non-HIV care and support services for IDUs, sex workers and other members of MARPs, and are a valuable resource for mothers who are HIV-infected and their families. Where such NGOs exist, linkages with health services and CHWs have the potential to greatly strengthen patient care, supervision and support.

NGOs are increasingly active in education about HIV prevention and safer sex, peer education, support groups and networking for PLHIV, and referral for counselling and testing or monitoring. They may have established linkages with (or be able to help women gain access to) programs for preventing and treating malaria or TB, or to programs that offer nutritional support needed services.

PLHIV organisations are potentially one of the most important sources of support for mothers diagnosed with HIV infection in PPTCT programs and for their families. Their role includes helping PLHIV with referral to specific services (e.g. housing, transportation, food assistance, legal assistance and advice) and income-generating activities. To date, such organisations have not had a prominent presence or role in Afghanistan.

If CBOs provide support services for PLHIV, they must ensure that the confidentiality of women and affected families is respected at all times.
7.2 Postnatal Care and Support of Mothers with HIV Infection

7.2.1 Immediate postpartum care

CHWs should ensure that HIV-infected women who have given birth – whether in a health facility or at home – return for postpartum appointments or are visited by a Community Midwife at home.

As a minimum, women should be evaluated 1 week after the birth and again at 6 weeks. More frequent monitoring at home will assist in adherence to neonatal prophylaxis (especially if the baby is on an extended four-week course of ZDV; see sections 5.4.2 and 5.4.3) and/or to HAART and/or to co-trimoxazole for the mother (if prescribed). Extra support for infant feeding is essential during the first weeks of life: questions or difficulties may arise, regardless of whether the mother is exclusively breast feeding or providing replacement feeding.

Include the following during visits:

**Maternal Assessment** –

Undertake a full physical and emotional assessment of the mother (following national Reproductive Health and Postpartum Care guidelines). This includes

- Check perineal or caesarean section wound healing
- Monitor uterine involution
- Monitor for signs of puerperal infection
- Monitor lochia and any signs of secondary postpartum haemorrhage
- Monitor for signs of anaemia
- Counsel as appropriate, including on diet and nutrition
- Refer for midwife or medical care as necessary

**Infant feeding support** –

- Assess progress with and adherence to the selected method infant feeding
- Assist the mother to safely implement her chosen feeding option, ensuring strict avoidance of mixed feeding
- Assess family support for the chosen infant feeding option, identify any risk factors for mixed feeding, and counsel and manage as appropriate
- For women who have elected to breastfeed, ensure that they use a good breast feeding technique to prevent abscesses, nipple fissures and mastitis – if fever or other signs of breast infection or inflammation are present, advise or refer them promptly for treatment

**Address sexual and reproductive health aspects of the postpartum period** –

- Discuss resumption of sexual activity and contraception (refer to Chapter 4)
- Discuss the importance of safer sex to prevent the spread of HIV and other STIs.
• Discuss the health needs of the male partner, including support for referral if necessary
• Discuss condom use as “dual protection”
• Provide ongoing support for the mother’s choice of contraceptive method
• Provide advice regarding early STI symptom recognition and where to go for STI assessment and treatment
• Answer any questions the woman may have about safer sex behaviours

7.2.2 Related services for HIV care, treatment and support

The postpartum period is an ideal time to link the woman who is HIV-infected to comprehensive care that will support her health, prevent complications and improve her ability to live with HIV. The range of services that should be provided, either directly or by referral, includes:

Prevention and treatment of opportunistic infections –
OIs are a major concern in people with advanced HIV infection. Prophylaxis, treatment and health education for opportunistic and other infections must be provided to help a woman stay healthier and preserve her immune system, according to national Guidelines (see also Section 5.2.3).

Antiretroviral treatment –
In the course of their management for PPTCT, women should also have been linked to treatment services for themselves and their families. If HAART is indicated, ensure that it is being administered according to National ART Guidelines, and that any side effects are being monitored and managed appropriately.

Management of symptoms and palliative care –
PLHIV may experience symptoms related to their HIV infection or treatment that can limit their participation in family and community activities. Health care interventions that focus on managing symptoms and relieving discomfort can improve a woman’s quality of life.

Simple symptomatic management of common HIV- or ARV-related symptoms (including nausea, vomiting, fatigue and skin problems) can ease discomfort.

Referral for assessment by an HIV clinician and management of more complex issues such as pain, weight loss and wasting resulting from disease progression can help identify ways to improve comfort, function and emotional well-being.

Nutritional counselling, care and support –
PLHIV often have digestive symptoms that make eating and even food preparation difficult. Women receiving HIV-related medications require counselling on specific dietary practices and nutritional needs, in order to successfully manage side effects and avoid nutrition-related complications.

Some PLHIV find that their appetite increases greatly following commencement of HAART,
and need strategies and support for managing their increased nutritional demands.

**Personal and environmental hygiene** –

PLHIV are especially vulnerable to bacterial infections while their immune systems are weakened. Emphasise the importance of good hygiene during food preparation and storage.

Adequate nutrition, exercise, rest, good hygiene practices, and abstinence from harmful habits such as smoking, alcohol and drug use support overall health and improve immune function.

**Social and psychosocial support** –

In many communities, PLHIV face stigma and discrimination and women who are HIV-infected may be reluctant to disclose their status to partners, family or friends.

The following support services should be offered, either directly or by referral:

- Counselling and support to help the woman come to terms with her diagnosis and consider her options for disclosure
- Support and counselling to assist women who are HIV-infected with disclosure issues – to their partners (if they haven’t discussed the diagnosis already) and to other family members
- Specific psychosocial support and education for the mother whose infant has been exposed to HIV but whose HIV status is uncertain, or when a positive diagnosis is made
- Community support, including referrals to CBO and FBO programs
- Peer group counselling and support from health agencies or NGOs

**Faith-based support** –

Faith-based involvement can provide mothers who are HIV-infected with spiritual and psychosocial support. It may also provide them with an important sense of belonging to a larger community that offers them compassionate care.

Religious leaders are important members of their community, and should be engaged in discussion about care and support for PLHIV as a priority.

**Home-based care** –

Home-based care for PLHIV and people living with other chronic conditions is in its infancy in Afghanistan. Home based care can assist PLHIV throughout the continuum of their HIV infection and can assist following delivery, during times of illness, around the initiation or continuation of HAART, for follow-up after hospitalisation, or during the terminal stages of the disease. The advantages of home-based care for patients and families, and for communities and the healthcare system include:

- Care is provided in a familiar, supportive environment that allows for continued participation in family life
• Medical and transportation expenses for affected individuals and their family are reduced
• Closer and more frequent follow-up by a community-based health care worker may be possible, especially for those living far from health facilities
• The local community may be involved in care for the PLHIV and encouraged to provide support for other family members, especially children, and this may help counter myths, misconceptions, stigma, discrimination and rejection
• The demands on the health care system are reduced

Together, health care workers and PLHIV should explore the prospects for innovative approaches to home based care.

7.3 Assessment, Care, ART and Support for Infants and Young Children Exposed to HIV

7.3.1 Approaches to follow-up of HIV-exposed infants

PPTCT interventions reduce, but do not eliminate, the risk of HIV infection in the infant. Regular follow-up care is essential for infants born to mothers with HIV, and for infants whose mothers’ HIV status is unknown.

Facility based PPTCT sites should consider the best, most efficient option for follow-up CT&S. In the early stages of providing HIV-related care in Afghanistan, there will be many advantages in enrolling all HIV infected pregnant women for care in a more centralised (national, regional or provincial) ART clinic that is staffed by carers who have undergone specific training in HIV medicine, PPTCT and ART (see Section 8.1, Phased Introduction of PPTCT Services).

7.3.2 Benefits of early diagnosis or exclusion of HIV infection in the baby

Early confirmatory testing for HIV infection in infants and children:

• enables the early identification of exposed infants who have become infected with HIV, and are therefore candidates for commencing ART (see Sections 7.4.2 and 7.4.3);
• helps to identify exposed infants who are not yet infected, enabling follow-up care and prevention measures that will help to ensure that they remain uninfected;
• assists in the effective use of scarce resources by targeting ART to children who need treatment;
• improves the emotional well-being of families and children by removing uncertainty about the diagnosis; and
• provides a firmer basis for life and family planning for parents of exposed children.

The definitive diagnosis of HIV infection in children at any age requires diagnostic testing that confirms the presence of HIV.
7.3.3 Definitive diagnosis of HIV infection in infancy

WHO recommends that routine testing for the definitive diagnosis or exclusion of HIV infection be performed on exposed infants using a virological test (see below) at the age of 6 weeks, or at any time subsequent to that.

Antibody-based testing is currently the only type of HIV test available in Afghanistan.

The use of dried blood spot (DBS) specimens sent to an international referral laboratory for virological diagnosis is currently being explored.

The different methods of HIV testing in infancy are described in Annex II.

7.3.4 Approach to antibody-based testing for HIV infection in infancy

In Afghanistan, only antibody-based testing for HIV infection is currently available.

Provided there has been no breast feeding for a minimum of 6 weeks (and preferably three months), antibody-based testing of the infant may be commenced from 9 months.

An early non-reactive test will allow the parents to be informed much earlier than 18 months that their child is not infected.

- If the test is negative at 9 months, the infant is not infected.
- If the 9 months test is positive, it should be repeated at 12 months; if negative, the infant is not infected.
- If the test at 12 months of age is positive, the child is probably HIV infected (as 94.5% of HIV-infected infants would have seroconverted by the age of 12 months). However, there is a possibility that it may represent persistent maternal antibody and not HIV infection, and the test should be repeated at 18 months.
- If the antibody-based test is still reactive at 18 months of age, the child is infected with HIV.

When virological testing becomes available (either in-country or through DBS referral; see Annex II), a screening antibody-based test should be performed first on the same blood specimen. A negative screening antibody test would mean that there is no need to send the specimen for virological testing.

7.4 Initiation of ART, Care and Support for HIV-Infected Infants and Young Children

7.4.1 Commencement of co-trimoxazole prophylaxis in the baby

Co-trimoxazole prophylaxis against OIs like PCP and bacterial infection is essential.

It should commence around 6 weeks of age (or at the baby’s first post-natal contact with the health care system) according to the National Clinical Protocol on ART, and continue until HIV infection has been definitively excluded (see Section 7.3).

If a more centralised ART clinic is being used as the single point of care, treatment and support for a family affected by HIV, it may be preferable to provide co-trimoxazole prophylaxis, HIV testing and long-term follow-up for exposed children through that clinic.
7.4.2 Commencement of HAART in HIV-infected infants

Exposed babies would be followed up at the same clinic until HIV infection is confirmed or definitively excluded.

If HIV infection is confirmed, HAART would be initiated according to the protocols in the National Clinical Protocol on ART.

7.4.3 Early commencement of ART in asymptomatic HIV-infected infants

Early results of ongoing South African trials suggest that early diagnosis of HIV infection by virological testing (PCR) and commencement of ART for any infected infant – regardless of growth, psychomotor development, clinical symptoms or immune function – may be associated with increased child survival.

Further research on this intervention is needed, but early results are encouraging and it is likely that WHO will recommend early commencement of ART in HIV-infected infants, even before there is evidence of immune dysfunction.

7.5 Summary of Strategic Priorities

Table 7.1 summarises the strategic approaches and responsibilities at different levels that support ongoing CT&S of affected families and children.

Table 7.1
Ongoing Care and Support of Families and Children living with HIV
Integrated Summary of Strategic Components

<table>
<thead>
<tr>
<th>COMMUNITY and LOCAL</th>
<th>HEALTH FACILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Increase awareness of HIV; dispel local myths</td>
<td>• Maintain intra-sectoral partnerships and linkages</td>
</tr>
<tr>
<td>• Mobilise community leaders</td>
<td>o Linkages between MNCH and HIV services</td>
</tr>
<tr>
<td>• Encourage involvement of male partners</td>
<td>o Linkages between Reproductive Health and HIV services</td>
</tr>
<tr>
<td>• Identify, mobilise, orientate, train and supervise Community Health Workers</td>
<td>o Linkages with other health programs for special needs: e.g. TB, harm reduction for IDUs</td>
</tr>
<tr>
<td>• Establish and maintain partnerships and linkages to NGOs and community based organisations</td>
<td>• Ensure good communication and referral linkages between District / CHC / BHC facilities</td>
</tr>
<tr>
<td>• Establish and maintain partnerships and linkages to NGOs and community based organisations</td>
<td>between community-based health workers (CHWs, Community Midwives)</td>
</tr>
<tr>
<td>• Ensure good communication and referral linkages between community-based health workers (CHWs, Community Midwives) and District / CHC / BHC facilities</td>
<td>• Involve CHWs in facility-based follow-up of PLHIV and their children</td>
</tr>
<tr>
<td>• Ensure community-based ART and OI adherence and support (through CHW or “buddy”)</td>
<td>• Provide training to health workers on early engagement and follow-up of HIV-infected mothers after delivery</td>
</tr>
<tr>
<td>• Engage CHWs, PLHIV families and community in birth and emergency transport planning</td>
<td>• Refer HIV-infected mothers to local support networks (where available)</td>
</tr>
<tr>
<td>• Organise local support systems and groups for mothers</td>
<td>• Maintain promotion of exclusive breast feeding and “dual protection” among HIV-negative mothers and mothers with unknown HIV status</td>
</tr>
</tbody>
</table>
7.6 Further Reading


Chapter 8: Implementation Strategy and Site Requirements

8.1 Pilot Phase for PPTCT Services

8.1.1 Phased roll-out in parallel with counselling and testing and ART

Phase I –

It is proposed that the introduction of PPTCT services will take an incremental, stepwise approach, in parallel with the initiation of HAART.

Antenatal PITC would be implemented in the first two national and regional pilot sites offering HAART, i.e. Kabul and Herat – described to in the National Clinical Protocol on Antiretroviral Therapy as HUB (i.e. HIV Urban Base) centres.

The HUB centres would progressively develop strategic linkages with centres currently offering antenatal PITC and specialised (i.e. “stand-alone”) VCCT centres within their population catchment areas; these strategic linkages would be for patient referral and technical support.

Phase II –

Where feasible, and based partly on demand (e.g. the diagnosis of HIV-infected pregnant women), PPTCT services might be extended to other provincial centres offering VCCT (PITC and CITC), i.e. Jalalabad (Nangarhar Province), Mazar-e-Sharif (Balkh) and Feyzabad (Badakhshan).

This would require close supervision and support from the Kabul HUB, with technical support as necessary from UNICEF and WHO.

8.1.2 Evaluation to inform further roll-out

Network uptake, effectiveness, the outcomes of affected pregnancies and adherence to ongoing CT&S would be evaluated towards the end of 2010, using some or all of the indicators proposed in Chapter 9.

Based on the results of that evaluation, antenatal PITC might then be expanded to other Provincial, District Hospital and CHC levels as proposed in the 2009 revision of the BPHS.

These Guidelines would also be revised and updated as necessary at that time.

8.1.3 Clinical algorithms and flow charts

Clinical algorithms for Testing and Referral and Labour Ward Management during the pilot phase are included at Annex II and IV, respectively.

8.2 Site Requirements for Full PPTCT Services and Support

The proposed minimum standards for sites offering full PPTCT services are as follows:
8.2.1 Human resources and capacity

A core team, trained on all aspects of PPTCT, consisting of

- 1 doctor trained in clinical HIV medicine
- 1 midwife-coordinator, with ready access to an HIV clinician, obstetrician / gynaecologist and paediatrician
- 1 - 2 trained counsellors (according to the case load)
- 1 laboratory technician (or other health worker trained and accredited to perform rapid testing)

Community-based health workers are an essential part of the PPTCT team.

The team should also support and encourage the involvement of Community Midwives and CHWs serving the PLHIV’s community (who will also receive training) and, eventually, NGOs and CBOs from those communities.

8.2.2 Infrastructure

Space –

- An appropriate room for counselling, offering audible and visual privacy and containing basic furniture to sit and talk comfortably
- An additional room to accommodate one-on-one and couples counselling, as well as small group pre-test counselling
- Space and facilities as usual for providing routine antenatal, intrapartum and postnatal care

Equipment and supplies –

- Appropriate equipment, test kits and supplies for HIV testing
- Essential drugs for ART and PPTCT services
- Health education materials, condom supplies and a penis model
- Standard materials for providing routine antenatal, intrapartum and postnatal care
- Supplies for infection control (universal precautions)
- Refrigerator for storing test kits that require a “cool” chain, with appropriate back-up energy source and temperature monitoring

Record keeping and communication –

- Appropriate record keeping, monitoring and evaluation forms (see Chapter 9)
- Updated list of technical support for advice or referral (including contact name, eligibility requirements, location, hours of operation, telephone number and transportation arrangements).
8.3 Requirements for Community Based PPTCT Services and Support

Although community-based PPTCT services are not envisaged at the present time, the management of individual mothers and families living far from a designated ART / PPTCT pilot site may necessitate offering basic PPTCT services in a community setting on an ad hoc basis. If this is feasible and recommended following antenatal and PPTCT-related assessment of the mother, the following minimum requirements should be met:

8.3.1 Human Resources and Capacity

A community based health worker (Community Midwife and/or CHW) who:

- is trained on all community aspects of PPTCT, including administering minimum standard (sdNVP) prophylaxis for mother and baby, and
- is actively supported by and involved in the antenatal care provided to the mother though the local Health Sub-Centre, BHC, CHC or District Hospital, and
- is known and trusted by the woman and her family, and
- where possible, has also participated in the PPTCT assessments and ANC for the mother through the designated ART / PPTCT pilot site.

8.3.2 Infrastructure

Equipment and supplies –

- Essential drugs for delivering the “Minimum Standard” PPTCT Protocol (sdNVP; Table 5.5)
  - NVP 200mg tablets
  - NVP paediatric suspension 50mg/5ml
- Access to a refrigerator for storing NVP paediatric suspension (which requires a “cool” chain), with appropriate back-up energy source and temperature monitoring
- A cool box (“vaccine carrier” or similar) for transporting medications to the home
- All routine equipment and supplies for community-based primary care
- Health education materials, condom supplies and a penis model
- Supplies for infection prevention (universal precautions)
- After hours contact details for supervising primary health care facility or hospital including contact name, telephone number and location of residence.
Chapter 9: PPTCT Program Monitoring

9.1 Overview of Monitoring and Evaluation

Since PPTCT is a new program in Afghanistan, operational research and careful monitoring and evaluation will be necessary to understand the effectiveness, efficiency, costs, acceptability, sustainability and other characteristics of various packages of intervention, and to develop a strong evidence base for future adjustments of PPTCT policies and strategies.

9.1.1 What is monitoring?

Monitoring is regular tracking of key program elements. Monitoring of the PPTCT program will help to:

- Assess program performance
- Detect and correct performance problems
- Make more efficient use of PPTCT program resources

9.1.2 What is evaluation?

Evaluation is measuring the changes in a situation resulting from an intervention. A periodic formal evaluation of the PPTCT program will demonstrate to what it has contributed to changes in the indicators. Formal evaluations should try to determine the ways in which the PPTCT program is causing these changes.

The first formal evaluation will be of the pilot phase in Kabul, Herat and possibly other regional centres, and is expected to take place around late 2010.

9.2 Monitoring and Evaluation of the PPTCT Program

Monitoring information is used for decision-making about PPTCT programs at local, national and global levels.

WHO, UNICEF and UNAIDS are currently revising the international guidelines for M&E of PPTCT programs; the new guidelines are expected to be available later in 2009. The following sections describe the current approaches to M&E.

Data collection forms will need to be developed for use at pilot PPTCT centres.

9.2.1 The annual PPTCT Report Card

The implementation of the pilot PPTCT program should be monitored against national PPTCT strategies and targets, which should reflect the UNGASS targets (Section 1.3).

Towards the end of 2010, a survey should be undertaken to assess utilisation and performance of pilot centres to provide information on the status of implementation of the national program. This can be compiled into a PPTCT and Paediatric HIV Care Report Card.
The objectives of the survey would be:

- To measure population coverage and trends in coverage of PPTCT services
- To measure the uptake of PPTCT interventions, i.e. HIV-related counselling and testing, ARV prophylaxis, and infant feeding counselling
- To identify major challenges and gaps in PPTCT program implementation, including advocacy, resource mobilisation, planning and implementation.

9.2.2 Monitoring progress towards Universal Access to PPTCT services

To reach the national and UNGASS goals and targets for PPTCT, adequate coverage levels must be met for PPTCT-related interventions.

The following program interventions will reflect progress towards Universal Access to PPTCT services at the national level, and can be measured at pilot sites:

- Provision of information on PPTCT to pregnant women attending antenatal care
- Provider-initiated HIV testing for pregnant women attending ANC, including those previously confirmed to be infected with HIV
- Provision of ARV prophylaxis for pregnant women living with HIV, to reduce the risk of PTCT
- Provision of HAART for eligible pregnant women living with HIV, for their own health and to reduce the risk of PTCT
- Provision of co-trimoxazole prophylaxis for infants born to women living with HIV
- Infant feeding counselling and support at the first infant follow-up visit for mothers living with HIV
- Referral and enrolment of women living with HIV into comprehensive CT&S at HUB centres
- Virological HIV testing (when available, including through referral of DBS specimens to a regional reference laboratory) within two months of birth for infants born to women living with HIV

To monitor progress in the implementation of all four “prongs” of the UN comprehensive approach to preventing HIV infection among infants and young children, additional coverage indicators and targets are needed for primary prevention and family planning.

Examples of interventions for which additional data may be collected through pilot service delivery points include:

- Provision of HIV testing and counselling for male partners of HIV-infected and non-infected women accessing PPTCT services
- Provision of family planning services (either on site or through referrals) for women living with HIV enrolled in PPTCT and care and treatment services
9.2.3 Using monitoring information for national decision-making

Data collected from routine monitoring and the proposed evaluation of PPTCT pilot sites should be reviewed by the national PPTCT Working Group to assess program performance and guide its possible expansion to other provincial and service levels.

9.3 PPTCT Program Performance Indicators

9.3.1 Annual PPTCT Report Card indicators

*Facility coverage –*

- Total number of health facilities in the country
- Total number of facilities nationally providing antenatal care services
- Total number of facilities nationally providing ANC services, which also provide HIV PITC for pregnant women
- Total number of facilities nationally providing ANC services, which also provide HIV PITC for pregnant women and ARVs for PPTCT
- Total number of antenatal facilities providing CD4 testing on-site, or with a system for collecting and transporting blood samples for CD4 testing for pregnant women
- Total number of facilities nationally providing HAART
- Total number of facilities nationally providing ARVs for both PPTCT and HAART
- Total number of facilities nationally providing paediatric HAART
- Total number of health facilities that provide virological testing services (e.g. by PCR) for infant diagnosis of HIV infection, either on-site or using dried blood spot methods
- Total number of facilities that have the laboratory capacity to perform CD4 testing on-site
- Total number of Districts that have CD4 testing services available

During the PPTCT pilot phase, these services will obviously only be available at pilot sites. The following more detailed operational indicators should also be monitored at the pilot sites:

*Pregnant women –*

- Total number of pregnant women tested for HIV
- Total number of pregnant women tested for HIV and who receive their test results
- Total number of male partners of pregnant women tested for HIV
- Total number of pregnant women who tested HIV positive
• Total number of HIV-infected pregnant women who received ARVs to reduce the risk of PTCT of HIV
  o sdNVP (the “minimum standard”)
  o a combination of three ARVs (the “recommended standard”)
  o HAART for eligible pregnant women
• Total number of HIV-infected pregnant women assessed for HAART eligibility (CD4 cell count and/or clinical staging)
• Total number of HIV-infected pregnant women who received HAART for their own health
• Total number of HIV-infected women attending HIV care and treatment services with unmet need for family planning

Infants born to HIV-infected pregnant women –
• Total number of infants born to HIV-infected women receiving any ARVs for PPTCT
• Total number of infants born to HIV-infected women started on co-trimoxazole prophylaxis within two months of birth
• Total number of infants born to HIV-infected women receiving a virological test for HIV diagnosis within two months of birth
• Total number of infants born to HIV-infected women tested for HIV (antibody or virological test) by 12 months of age
• Total number of infants born to HIV-infected women assessed for and whose infant feeding practices were recorded at three and 6 months of age and, among them,
  o Total number reporting exclusive breast feeding at 6 months of age
  o Total number reporting exclusive replacement feeding at 6 months of age
  o Total number reporting mixed breast and replacement feeding at 6 months of age

HIV-infected children –
• Total number of HIV-infected children receiving HAART

PPTCT Program components –
• Is there a national PPTCT scale-up or expansion plan?
• Is there a national paediatric HIV care and treatment scale-up plan?
• Are there national PPTCT indicators?
• Are there national paediatric HIV care and treatment indicators?
• What is the most commonly used ARV regimen for PPTCT?
• Is PITC routinely offered at antenatal care facilities that provide HIV testing?
• What is the most common HIV testing method used in antenatal settings?
• Is DBS technology available for use in the PPTCT and paediatric HIV programs?
• Is there a national policy on offering routine HIV testing for children? In which settings?
• What are the three major gaps and challenges in PPTCT implementation?
• What are the three major gaps and challenges in paediatric HIV care and treatment?

9.3.2 Universal Access indicators

• Percentage of antenatal facilities that provide both HIV testing and ARVs for PPTCT
  o Numerator = number of antenatal facilities that provide both HIV testing and ARVs for PPTCT on-site
  o Denominator = total number of antenatal facilities

• Percentage of HIV-infected pregnant women who received ARVs to reduce the risk of PTCT
  o Numerator = number of HIV-infected pregnant women who received ARVs during the last 12 months to reduce the risk of PTCT
  o Denominator = estimated number of HIV-infected pregnant women during the last 12 months

• Percentage of infants born to HIV-infected women who receive an HIV test within 12 months
  o Numerator = number of infants born to HIV-infected women during the last 12 months who received an HIV test within 12 months
  o Denominator = estimated number of HIV-infected pregnant women who gave birth during the last 12 months

• Distribution of feeding practices (exclusive breast feeding, replacement feeding, or mixed breast and replacement feeding) for infants born to HIV-infected women
  o Numerators = number of infants born to HIV-infected women during the last 12 months who are a) exclusively breast fed, b) exclusively replacement fed, and c) mixed breast and replacement fed
  o Denominator = number of HIV-exposed infants whose feeding practice was assessed (through the mother) at or before 6 months of age

• Percentage of HIV-infected infants born to HIV-infected mothers in the preceding 12 months
  o Numerator = number of infants born to HIV-infected women during the last 12 months in whom HIV infection was subsequently confirmed by virological or immunological testing
Denominator = estimated number of HIV-infected pregnant women who gave birth during the last 12 months

9.4 Further Reading


Annex I: Rapid Diagnostic Testing Algorithm

Diagnostic testing in Afghanistan uses a serial,* 3-step antibody-based HIV RDT algorithm.†

Assay 1 (A1) is a highly sensitive test; Assay 2 is a highly specific test that uses different antigens and/or a different testing platform from A1; and Assay 3 should again use different antigens and/or testing platforms from A1 and A2.

If possible, the third test should be performed at the initial testing site to take full advantage of rapid testing and same-day provision of results. However, depending on local factors such as specimen throughput, experience of technicians, availability of A3 test kits and proximity or accessibility of referral laboratories, A3 may be provided at a reference laboratory or another site.

* WHO and UNAIDS recommend serial testing in most low prevalence, resource-limited settings because it is cheaper and a second test is only required when the initial test is reactive.

† In populations with an HIV prevalence of 5% or more, two positive test results are considered adequate to indicate a true positive result. However, in low prevalence settings like Afghanistan, the positive predictive value of two reactive tests remains too low and a third, confirmatory test is required – individuals can only be diagnosed as HIV-infected after three serial RDTs have been performed, all of which are reactive.
After 2 reactive tests (i.e. when an HIV-positive result is likely), if the third test is not performed at the screening VCCT site, extensive intra-test counselling is required to motivate the individual to return for the confirmatory test result and to take the necessary precautions in his/her daily life.

A positive HIV result is confirmed after 3 positive tests. The client should be counselled about the meaning of this result according to the usual post-test counselling procedures.

In addition, WHO suggests that a second blood specimen may be obtained from individuals newly diagnosed with HIV infection in order to ensure that no mix-up of specimens has occurred.
Annex II: Types of Testing for HIV Infection in Exposed Infants

Antibody-based testing –

Antibody-based testing is currently the only type of HIV test available in Afghanistan.

This type of test identifies the presence of HIV antibodies. In children aged 18 months or older, HIV antibody tests (including RDTs) can be used to diagnose HIV infection reliably in the same way as they are used for confirmatory diagnosis in adults.

Tests based on HIV antibody detection cannot be used to reliably diagnose HIV infection in infants born to HIV-infected mothers if they are younger than 18 months. This is because maternal antibody is transferred passively to the fetus during pregnancy, and a reactive HIV antibody test cannot distinguish between maternal and fetal HIV antibodies. Although it usually clears by 9-12 months, maternal antibody may be detected beyond the first 12 months of life (and sometimes for as long as 18 months). Antibody testing therefore cannot be used to diagnose HIV infection definitively in infants less than 18 months of age.

However, it can be useful for identifying uninfected infants as early as 9 to 12 months of age, as most uninfected HIV-exposed infants will lose maternal HIV antibody by that age. Antibody-negative results suggest that the infant is either unexposed and/or uninfected.

Remember, if the infant is breast feeding and the mother is known to be HIV infected, the risk of acquiring HIV continues throughout the entire period of breast feeding.

Virological testing –

In order to diagnose HIV infection definitively in children aged less than 18 months, assays that detect the virus or its components (i.e. virological tests) are required. These tests include HIV RNA or HIV DNA by PCR, heat-denatured p24 antigen or viral culture.*

By 4 weeks of age, the sensitivity of virological testing is around 98%.

None of these tests are currently available in Afghanistan (although real time PCR may be introduced at the CPHL).

Referral of dried blood spot specimens for virological testing –

HIV DNA and RNA can also be detected reliably using dried blood spot (DBS; heel-prick or venous) specimens referred to a regional reference laboratory (e.g. in Pakistan, India or Iran).

DBSs can be obtained by using blood from a finger- or heel-prick. They have a smaller biohazard risk than liquid samples because they do not require venepuncture. They are

* HIV DNA PCR is a qualitative test (i.e. it gives a yes/no diagnosis for HIV infection). HIV RNA provides additional quantitative information on virological status, and the same technology and equipment can be used to monitor the response to ART and hence possible therapeutic failure.
stable at room temperature for long periods of time and are easier to ship, facilitating centralised specimen processing as well as off-site testing.

**Clinical diagnosis** –

If virological testing is only performed after children have become unwell, the results are accurate but the diagnosis of HIV is delayed.

Clinical algorithms are not reliable and have poor predictive value in young children, especially during the first year of life.

In experienced hands, clinical algorithms used in combination with CD4 assays appear to provide more accurate diagnosis. In Afghanistan, CD4 counting is not yet available and clinical experience of HIV infection in the paediatric age groups is limited.
* Indications for HAART in WHO Stage I, II and III may be adjusted once CD4-testing is available in Afghanistan (refer Section 5.2.2)
Annex IV: Perinatal Management Algorithm (Pilot Phase)

* Depending on duration of maternal ARV prophylaxis – increase postnatal infant ZDV to 4 weeks if mother received less than 4 weeks of antenatal ZDV (refer Table 5.7, page 64)
Second Draft for Final Consultation

Prevention of Parent-to-Child Transmission of HIV in Afghanistan

NATIONAL STRATEGY AND GUIDELINES
2009-10