

SCENARIO D: PREGNANT WOMAN WHO DOES NOT REQUIRE HAART FOR HER OWN HEALTH

Though she does not require ART for her own health, ART in some form is indicated to reduce the risk of MTCT. Several options exist, but two are generally favoured:

Option 1: AZT Boosted by SD NVP

This regimen is now favoured by the World Health Organisation (WHO) based on results of the PHPT-2 trial, because it was associated with an MTCT rate of just 2% in a non-breastfeeding population – a rate similar to transmission rates seen in mothers who receive HAART during pregnancy. Mothers who take this regimen are at risk for developing NVP resistance, which may or may not compromise their response to future NNRTI-based HAART regimens (*see Appendix C for details*). However, the WHO endorses this as a preferred PMTCT regimen for resource-constrained settings because it offers a potent, simple, and relatively inexpensive intervention, and the true clinical impact of prior SD NVP-exposure on the response to future NNRTI-based regimens remains controversial. If available, administration of AZT/3TC for 7 days postpartum after receipt of single dose NVP may reduce the risk of development of NVP resistance in the mother. Furthermore, the risk of NVP resistance is greatest among women with higher viral loads and lower CD4+ T cell counts who would likely require HAART for their own health; the risk of NVP resistance is lower in women who do not require antiretroviral therapy for their own health.

Mother

- AZT starting at twenty-eight weeks gestational age (or as soon as possible thereafter) plus AZT during labour plus SD NVP during labour.
- Consider giving seven day ‘tail’ of AZT/3TC following delivery to reduce risk of NVP resistance (*see Appendix C for details*).

Infant

- SD NVP (within seventy-two hours of birth) plus AZT for one week.*

Option 2: HAART

Treating the mother with HAART is attractive because it offers effective reduction of the risk of MTCT (with HAART the risk is estimated to be 1% to 2% in women who do not breastfeed), while minimising the risk that she may develop resistance to any ARVs, thereby preserving her future options for HAART. Drawbacks chiefly include the expense and the risks of adverse effects both for the mother and for the infant. Additionally, the design of the HAART regimen for a relatively healthy pregnant woman is complicated by four factors: 1) the risk of severe NVP toxicity in pregnant women with CD4+ T cell counts of >250 cells/mm³ is high; 2) EFV should not be used in the first trimester; 3) PI-based HAART may not be easily obtainable; and 4) data on the pharmacokinetics of PIs in pregnancy are limited [the greatest experience is with nelfinavir (NFV) (1,250mg twice daily) or saquinavir (SQV) with low-dose ritonavir (RTV)-boosting [e.g. 800mg SQV/100mg RTV twice daily]].

Mother

- Unless specifically contra-indicated, the HAART regimen should consist of AZT plus 3TC plus (PI or NVP).
- AZT is favoured due to its proven efficacy in preventing MTCT, but if the mother cannot take this agent (e.g. severe anaemia or other toxicities), d4T or another NRTI can be substituted.
- The risk of severe NVP toxicity in pregnant women with CD4+ T cell counts of >250 cells/mm³ is high; hence a PI-based regimen is preferred for these women.
- If NVP is used, the woman should have close monitoring for liver toxicity during the first 12 weeks of therapy.

* Extend infant’s course of AZT to four weeks if the mother received less than four weeks of ART prior to delivery.

- The HAART regimen should be continued intrapartum.
- The HAART regimen should be discontinued after delivery if the mother does not require continued therapy for her own health. If the HAART regimen contained NVP and is discontinued after delivery, consider giving seven day ‘tail’ of AZT/3TC following delivery to reduce risk of NVP resistance (*see Appendix C for details*).

Infant

Options include:

- SD NVP; or
- AZT for one week;* or
- SD NVP plus AZT for one week.*

Other Options (*these represent valid options that have also been demonstrated to significantly reduce the risk of HIV transmission to the infant*)

1. AZT Monotherapy: The PACTG 076 protocol of oral AZT started in the second trimester, intravenous (IV) AZT during labour, and six weeks of AZT for the infant following delivery was associated with a 66% reduction in the rate of HIV transmission in a non-breastfeeding population. Simpler AZT regimens (e.g. oral AZT prepartum, oral AZT in labour, and one to six weeks of AZT for the infant following delivery) have been associated with a roughly 50% reduction in the rate of HIV transmission.

2. SD NVP. SD NVP administered to the mother during labour and another dose administered to the infant following delivery has been associated with an approximately 42% reduction in the rate of HIV transmission, even in breastfeeding women. The risk of NVP resistance is greatest among women with higher viral loads and lower CD4+ T cell counts; that is, women who would likely require HAART for their own health. Thus, the risk of development of NVP resistance would be less among women who do not require HAART for their own health. Nevertheless, one may consider giving a seven day ‘tail’ of AZT/3TC following delivery to reduce risk of NVP resistance (*see Appendix C for details*).

3. AZT plus 3TC Dual Therapy. The PETRA trial, conducted among a population of breastfeeding women in South Africa, found that AZT/3TC administered antepartum, orally intrapartum, and postpartum to the infant reduced the rate of transmission to approximately 6% at six weeks postpartum. The potential for developing resistance to 3TC remains a concern with this regimen. Additionally, the efficacy of this regimen was significantly diminished at age eighteen months with breastfeeding.

4. AZT plus 3TC Boosted by SD NVP. This regimen, combined with SD NVP and one week of AZT for the infant following delivery, was associated with an HIV transmission rate of approximately 5% in a mixed breast- and bottle-feeding population in Côte d’Ivoire. This regimen may be inadvisable given that it does not appear to offer more efficacy than the AZT monotherapy boosted by SD NVP regimen described above, yet could in theory promote the development of resistance to 3TC in the mother’s strain of HIV.

*Extend infant’s course of AZT to four weeks if the mother received less than four weeks of ART prior to delivery.