WHO 2010 Revised Recommendations

Use of Antiretroviral Drugs for Treating Pregnant Women and Preventing HIV Infection in Infants (PMTCT ARV Guidelines)

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Updating Estimates of MTCT Rates
IATT M&E Working Group, Washington, Sept 1-2, 2010

World Health Organization

Key Messages and Outline

- New 2010 WHO guidelines are a major paradigm shift for PMTCT and HIV and infant feeding
- Provide the normative basis for the virtual elimination of vertical transmission
- *New challenges for implementation, monitoring and modeling*

Outline

- *Highlights of new guidelines*
- *Key differences between 2006 and 2010*
- *Common terminologies to group regimens*
- *Considerations for modeling*

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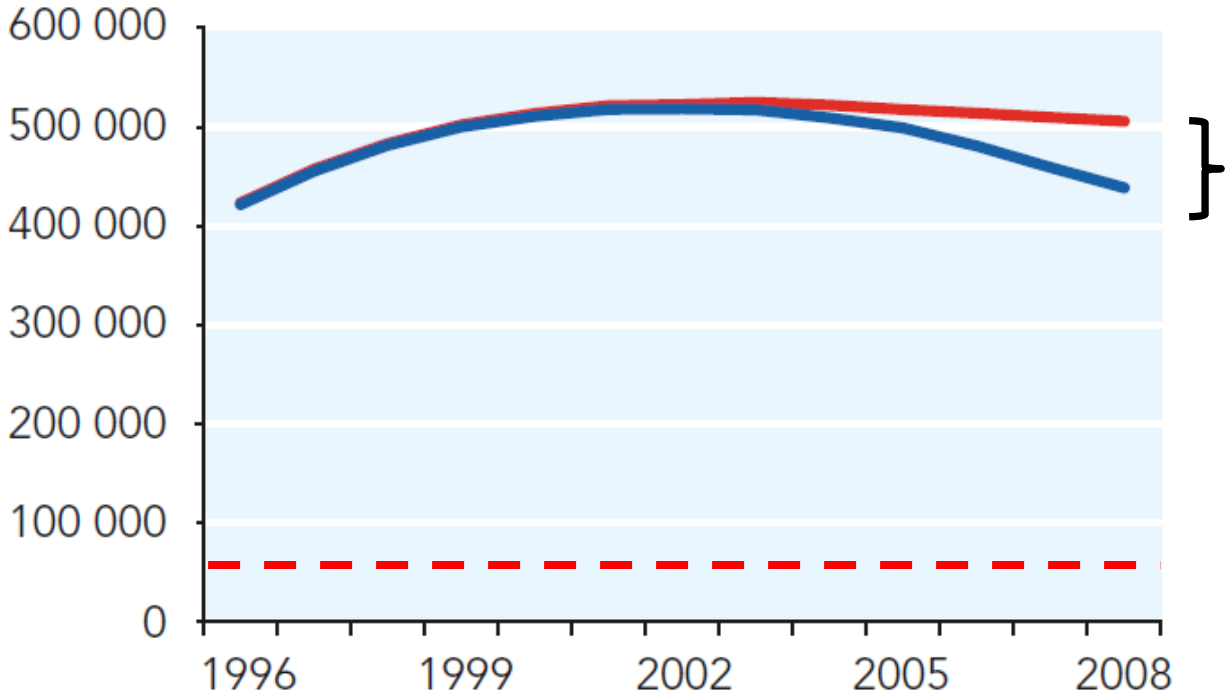
Estimated number of new pediatric infections with and without PMTCT prophylaxis globally, 1996-2008



70,000 infections averted in 2008

UNAIDS, *AIDS Epidemic Update*2009

No prevention of mother-to-child transmission

At current levels of antiretroviral prophylaxis

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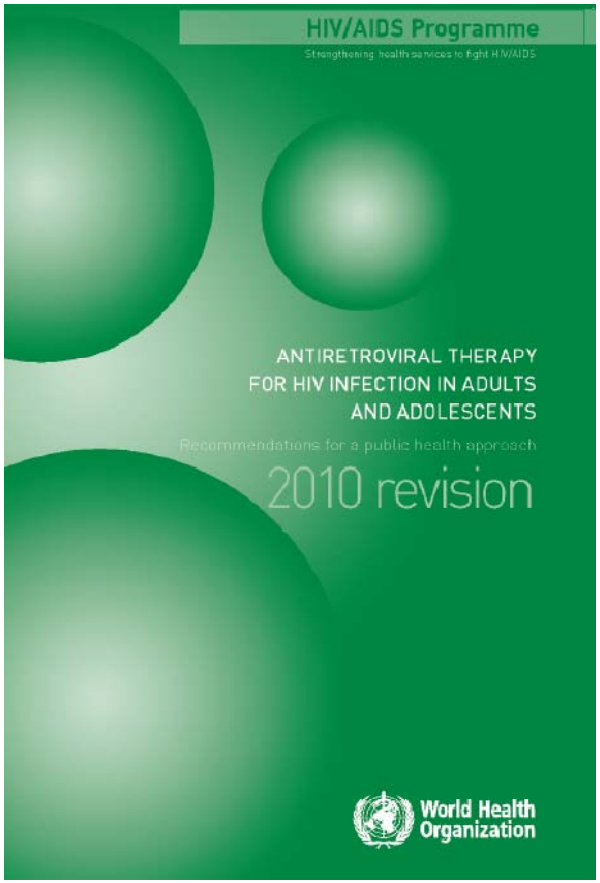
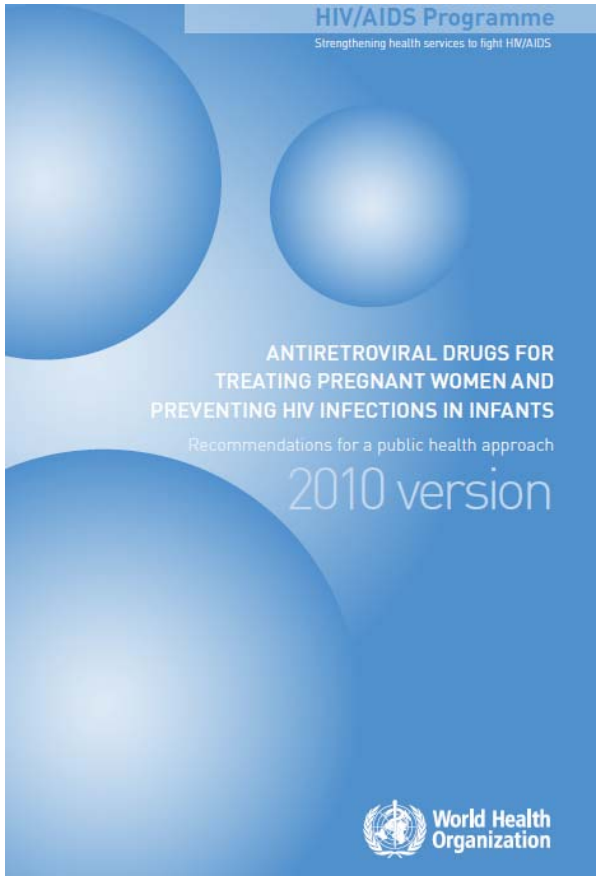
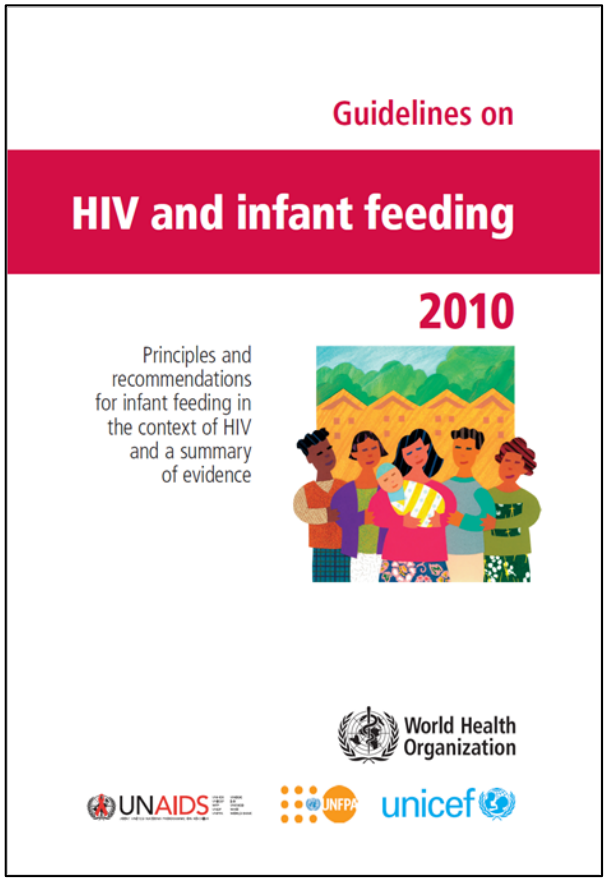
New 2010 WHO Guidelines

Adult ART; PMTCT; HIV and Infant Feeding







http://www.who.int/hiv/en/

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PMTCT ARV Recommendations Refer to Two Key Approaches

1. Lifelong ART for HIV-positive pregnant women in need of treatment
2. Prophylaxis, or short-term provision of ARV's, to prevent HIV transmission from mother to child
   - During pregnancy
   - During breastfeeding (if breastfeeding is the best infant feeding option)

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1. ART for HIV+ Pregnant Women

- Mothers in need of ART for their own health should get lifelong treatment
- Initiate ART in pregnant women with CD4 ≤350 regardless of clinical stage
- Initiate ART in clinical stage 3 and 4 if CD4 not available
- Start ART as soon as feasible
- Importance and critical need of CD4 for decision-making on ART eligibility

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ART for mother and prophylaxis for exposed infants

Mother

- AZT + 3TC + NVP or
- AZT + 3TC + EFV or
- TDF + XTC + NVP or
- TDF + XTC + EFV

(note: XTC = 3TC or FTC)

Lifelong treatment, beginning as soon as possible during pregnancy

Infant

For all exposed infants (regardless of infant feeding):

- AZT for 4-6 weeks OR
- NVP for 4-6 weeks

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Benefit and Impact of Providing ART to Eligible Pregnant Women

Pregnant women with CD4 ≤350:

- About 40% of HIV+ pregnant women
- Account for >75% of MTCT risk
- Account for >80% of postpartum transmission
- Account for 85% of maternal deaths within 2 years of delivery
- Strong benefit from initiating ART for maternal health and PMTCT during pregnancy, labour and delivery and breastfeeding

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2. ARV Prophylaxis to Prevent MTCT

For women not eligible for ART or unknown eligibility

Begin as early as 14 weeks gestation (2nd trimester) or as soon as possible thereafter

2 equivalent options:

A) Maternal AZT, or

B) Maternal triple ARV prophylaxis

And for the breastfeeding mother:

- Provision of ARVs to the child OR the mother to reduce risk of HIV transmission during breastfeeding (if breastfeeding is best infant feeding option)

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ARV Prophylaxis Options

Option A	Option B
Mother • Antepartum AZT (from 14 weeks) • sd-NVP at onset of labour* • AZT + 3TC during labour & delivery* • AZT + 3TC for 7 days postpartum*	**Mother** • Triple ARV (from 14 wks until one wk after all exposure to breast milk has ended) – AZT + 3TC + LPV-r – AZT + 3TC + ABC – AZT + 3TC + EFV – TDF + 3TC or FTC + EFV
Infant **Breastfeeding population** • Daily NVP (from birth until one wk after all exposure to breast milk) **Non-breastfeeding population** • AZT or NVP for 4-6 weeks	**Infant** **For all exposed infants** • AZT or NVP for 4-6 weeks

**sd-NVP and AZT+3TC can be omitted if mother receives > 4 wks AZT antepartum*

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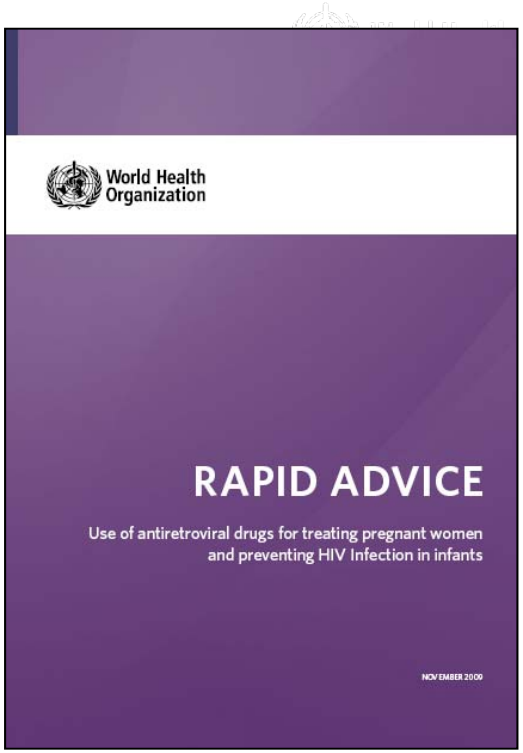
Option A or Option B?

"Both recommended options A and B provide significant reduction of the MTCT risk.

There are advantages and disadvantages of both options, in terms of feasibility, acceptability and safety for mothers and infants, as well as cost.

The choice for a preferred option should be made at a country level, after considering these advantages and disadvantages."



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Key Differences 2006 and 2010
ART for Eligible Women

2006

criteria

- CD4 <200 (350?)
- Clinical stage 3,4

start

- As soon as feasible (28 w)

regimens

- AZT+3TC+NVP

infant prophylaxis

- AZT 7 days

2010

criteria

- CD4 ≤350
- Clinical stage 3,4

start

- As soon as feasible (14 w)

regimens

- AZT+3TC+NVP (or EFV)
- TDF+3TC+NVP (or EFV)

infant prophylaxis

- NVP or AZT or 4-6 w

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Key Differences 2006 and 2010

ARV Prophylaxis

2006

start

- 28 w

regimens - mother

"Combination ARV"

AZT during pregnancy

sd NVP

(AZT+3TC 1 wk during L&D)

infant

sd NVP + AZT 7d

2010

start

- 14 w

regimens - mother

- Option A – Combination ARV (pregnancy)
- Option B – triple ARV prophylaxis (pregnancy + BF)

infant

- Option A – NVP during BF (4 w NVP or AZT if no BF)
- Option B – 4 w NVP or AZT

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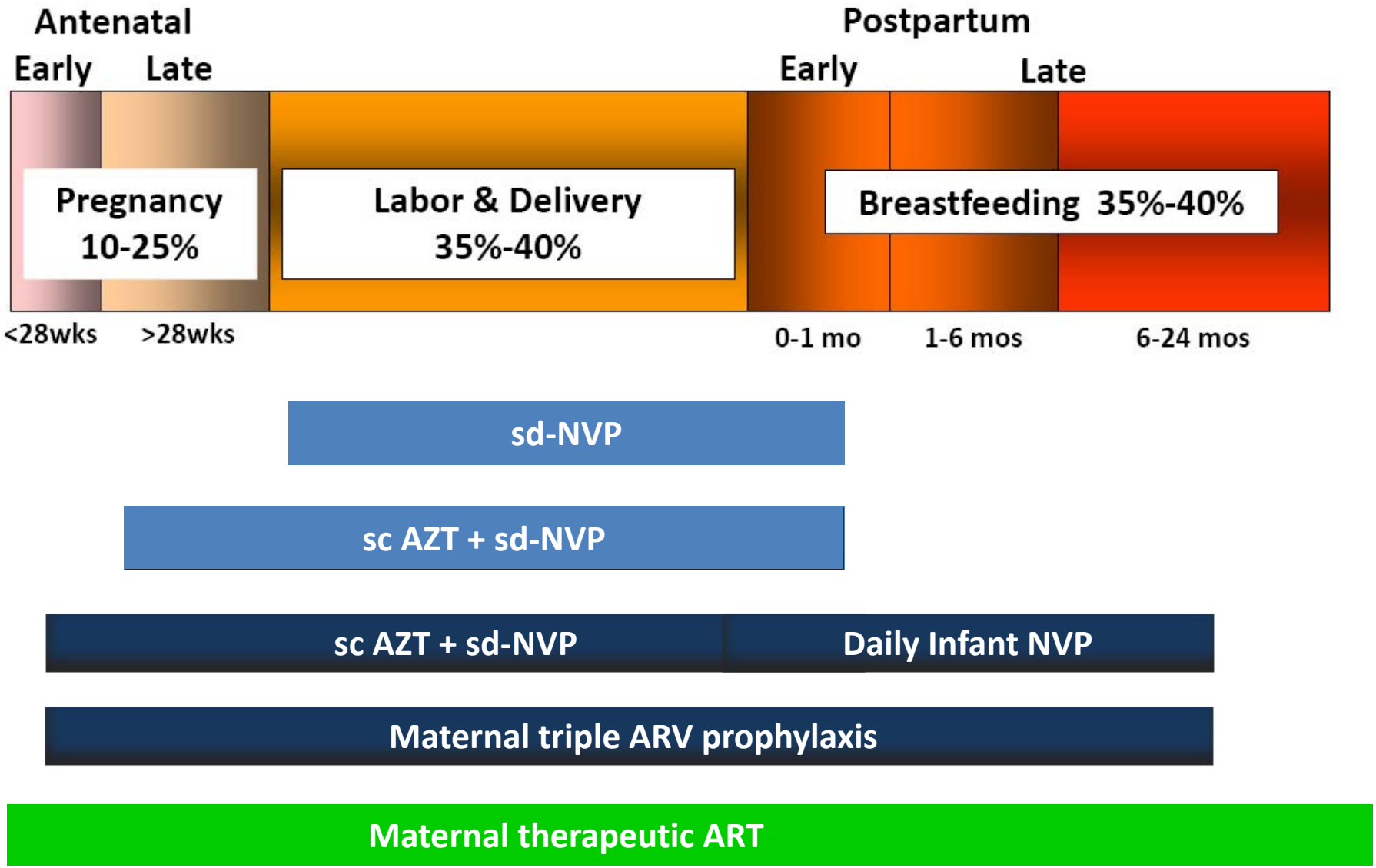
Duration, timing and complexity of ARV regimens to reduce MTCT



Summary Issues for Modeling

- How to account for the different tx risk for mothers with high and low CD4?
- Are the current regimen groups adequate?
  - None, sd NVP, combination ARV, HAART/ART
  - How to account for new approaches (eg. "B+")
- Duration of intervention
  - How important and how to account?
- Range of estimates?
- Denominator?

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