

WHO 2010 Revised Recommendations

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

Towards the elimination of MTCT

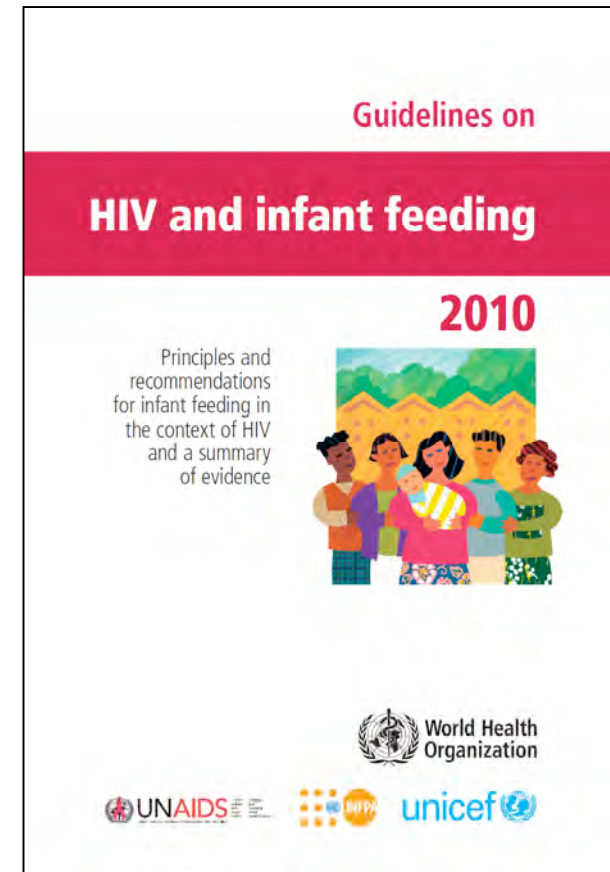
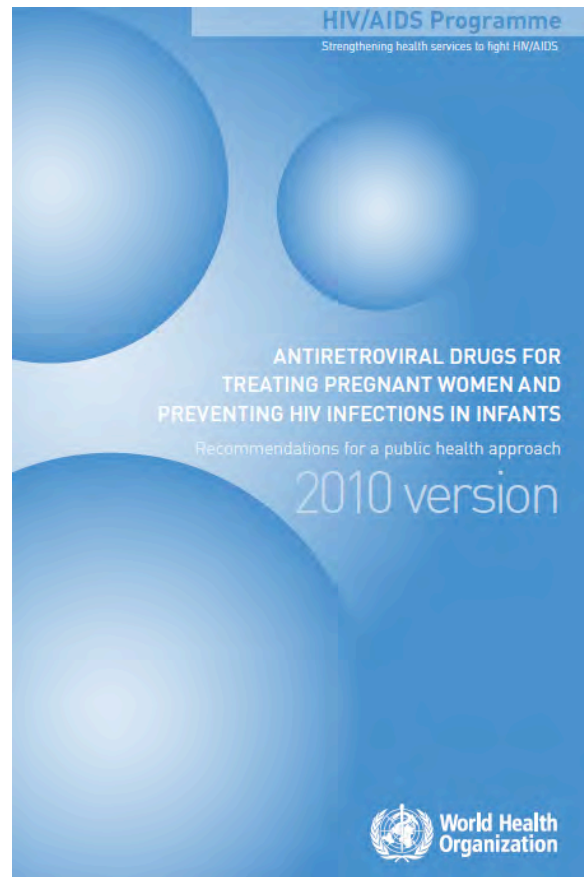
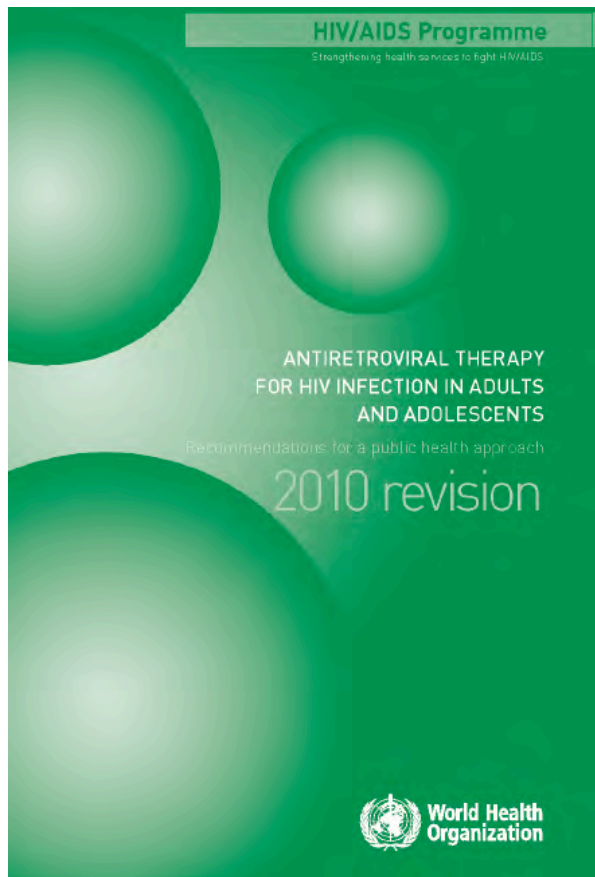
Nathan Shaffer, PMTCT Team Leader, HIV Dept, WHO

Key Messages

- New 2010 WHO guidelines are a major paradigm shift for PMTCT and HIV and infant feeding
- New standard of quality care and interventions for low and middle income countries
- Provide the normative basis for the elimination of vertical transmission
- *Challenge is to implement and scale-up new highly effective regimens*

New 2010 WHO Guidelines

Adult ART; PMTCT; HIV and Infant Feeding



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



Rationale for Development of New 2010 PMTCT Recommendations

Since 2006 guidelines, new evidence on:

- Optimal timing and eligibility for ART initiation
- Benefits of earlier initiation of ARV prophylaxis for PMTCT during pregnancy
- Effectiveness of different ARV prophylaxis strategies
- Effectiveness of ARV prophylaxis to mother or infants in reducing risk of HIV transmission during breastfeeding

Risk of Mother-to-Child HIV Transmission

Background transmission risk: 15-45%

15-30%

Risk during pregnancy and delivery

10-20%

**Additional risk postpartum via
breastfeeding**

Transmission risk with interventions:

20-30%

No breastfeeding

15-25%

Short-course ARV + breastfeeding

5-15%

Short-course ARV, no BF

<5%

2010 interventions, BF

<2%

2010 interventions, no BF

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)

Special Concerns of Drugs for PMTCT

- NVP toxicity in women with high CD4
- Ongoing concerns of NVP resistance
- AZT and anaemia
- EFV teratogenicity in first month of gestation
- Limited experience of new drugs during pregnancy
- Coordination with adult ART first and second line drugs and availability
- Interactions between prophylaxis and treatment
- Cost

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

Antiretroviral therapy (ART)

| CD4 cell count available | | WHO clinical stage | |
|--|---|--------------------|-----------------|
| CD4 \leq 350 cell/mm ³ | CD4 > 350 cell/mm ³ | Stage 1 | ARV prophylaxis |
| ART Regardless of clinical stage | ART If symptomatic (stage 3 or 4) | Stage 2 | ARV prophylaxis |
| | | Stage 3 | ART |
| | | Stage 4 | ART |

Start ART as soon as feasible regardless of gestational age

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

Benefit and Impact of Providing ART to Eligible Pregnant Women

Pregnant women with CD4 \leq 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

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 possible 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)

ARV Prophylaxis Options

| Option A | Option B |
|---|--|
| <p>Mother</p> <ul style="list-style-type: none">• Antepartum AZT (from 14 weeks)• sd-NVP at onset of labour*• AZT + 3TC during labour & delivery*• AZT + 3TC for 7 days postpartum* <p>Infant</p> <p>Breastfeeding population</p> <ul style="list-style-type: none">• Daily NVP (from birth until one wk after all exposure to breast milk) <p>Non-breastfeeding population</p> <ul style="list-style-type: none">• AZT or NVP for 4-6 weeks | <p>Mother</p> <ul style="list-style-type: none">• Triple ARV (from 14 wks until one wk after all exposure to breast milk has ended)<ul style="list-style-type: none">– AZT + 3TC + LPV-r– AZT + 3TC + ABC– AZT + 3TC + EFV– TDF + 3TC or FTC + EFV <p>Infant</p> <p>For all exposed infants</p> <ul style="list-style-type: none">• AZT or NVP for 4-6 weeks |

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

Setting national or sub-national recommendations for infant feeding in the context of HIV

National or sub-national health authorities should decide whether health services will principally counsel and support mothers known to be HIV-positive to

–breastfeed and receive ARV interventions OR



–avoid all breastfeeding



as the strategy that will most likely give infants the greatest chance of HIV-free survival.

How long to breastfeed?

In the presence of ARV interventions breastfeeding can continue to 12 months


- avoids many of the complexities associated with stopping breastfeeding
- provides a safe and adequate diet for infants 6-12 months of age



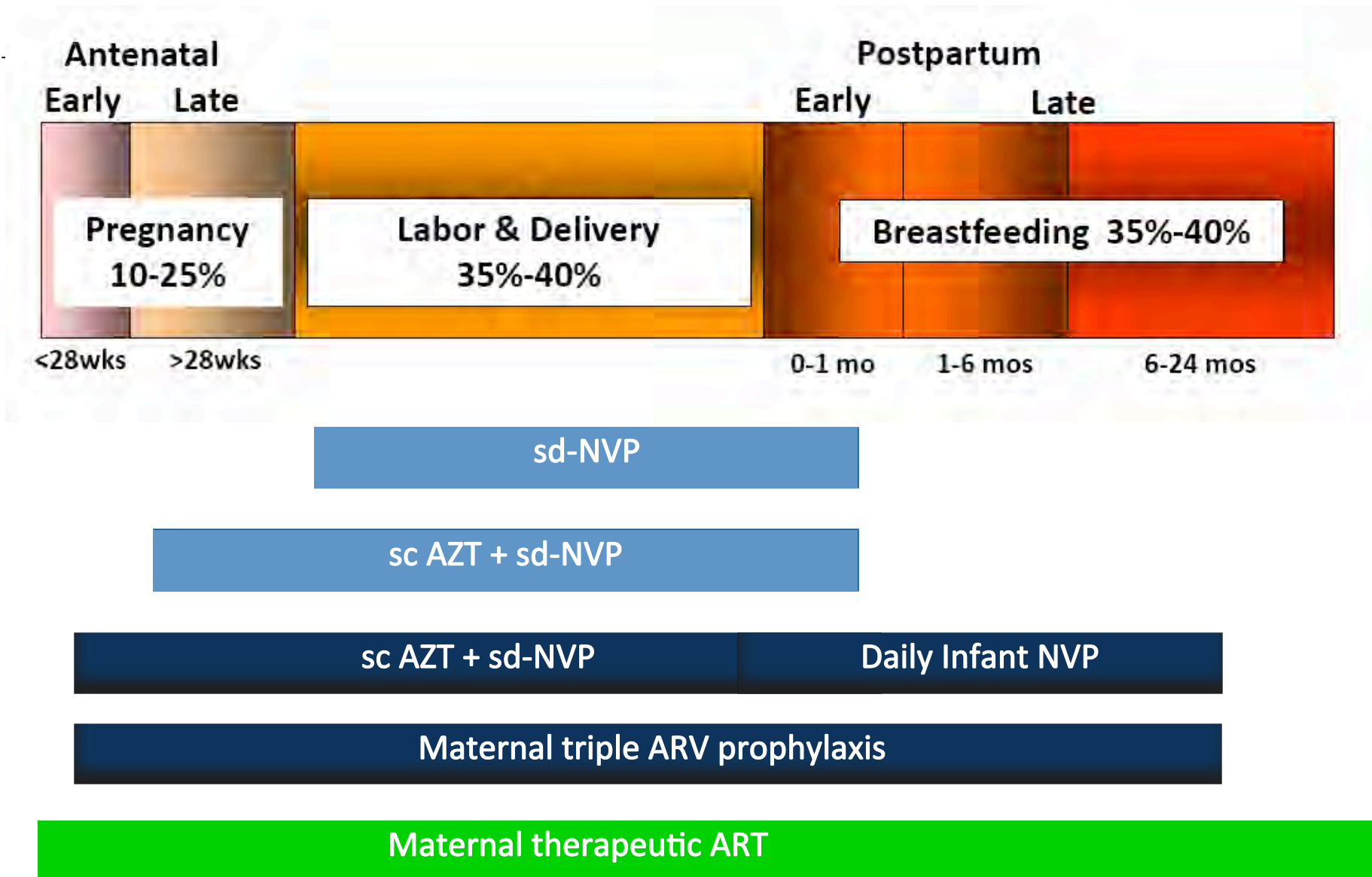
Cost

- 2006 – US \$20-30 for full ARV prophylaxis (mother + infant)
- 2010 – US \$50 for full option A (mother + infant)
- 2010 – US \$200-800 for full option B

Option A or Option B?

| Option A AZT to mother during pregnancy and NVP to infant during BF | Option B Mother triple ARV during pregnancy and during BF |
|--|--|
| <p><u>Advantages</u></p> <ul style="list-style-type: none">• Lower cost• Ease of providing prophylaxis to baby• Easier change from current programme <p><u>Disadvantages</u></p> <ul style="list-style-type: none">• Switch in regimens• Long duration on AZT monotherapy | <p><u>Advantages</u></p> <ul style="list-style-type: none">• Likely more effective IF will also include many women eligible but not receiving ART• Ongoing contact with mother during BF <p><u>Disadvantages</u></p> <ul style="list-style-type: none">• Higher cost• Higher burden on MCH nurses (ARV)• Need for CD4• Potential impact on later treatment• Bigger supply chain issues  |

Duration, timing and complexity of ARV regimens to reduce MTCT



Guiding Principles

- Women (including pregnant women) in need of ARV for their own health should get life-long ART
- Antenatal CD4 is critical for decision-making about ART eligibility
- Interventions should maximize reduction of vertical transmission, minimize side effects, and preserve future HIV treatment options
- Unify antepartum and postpartum approaches; strengthen mother and infant follow up
- Effective postpartum ARV-based interventions for all women will allow safer breastfeeding practices
- Different options may be appropriate in different settings

Summary: Benefits and Opportunities

- Revised 2010 guidelines – new norms and standards for highly effective interventions to:
 - Improve health of the mother
 - Decrease mother-child HIV transmission
 - Improve HIV-free survival
- Reduce transmission to <5% in breastfeeding populations and <2% in non-breastfeeding populations
- Make significant progress towards virtual elimination of paediatric HIV

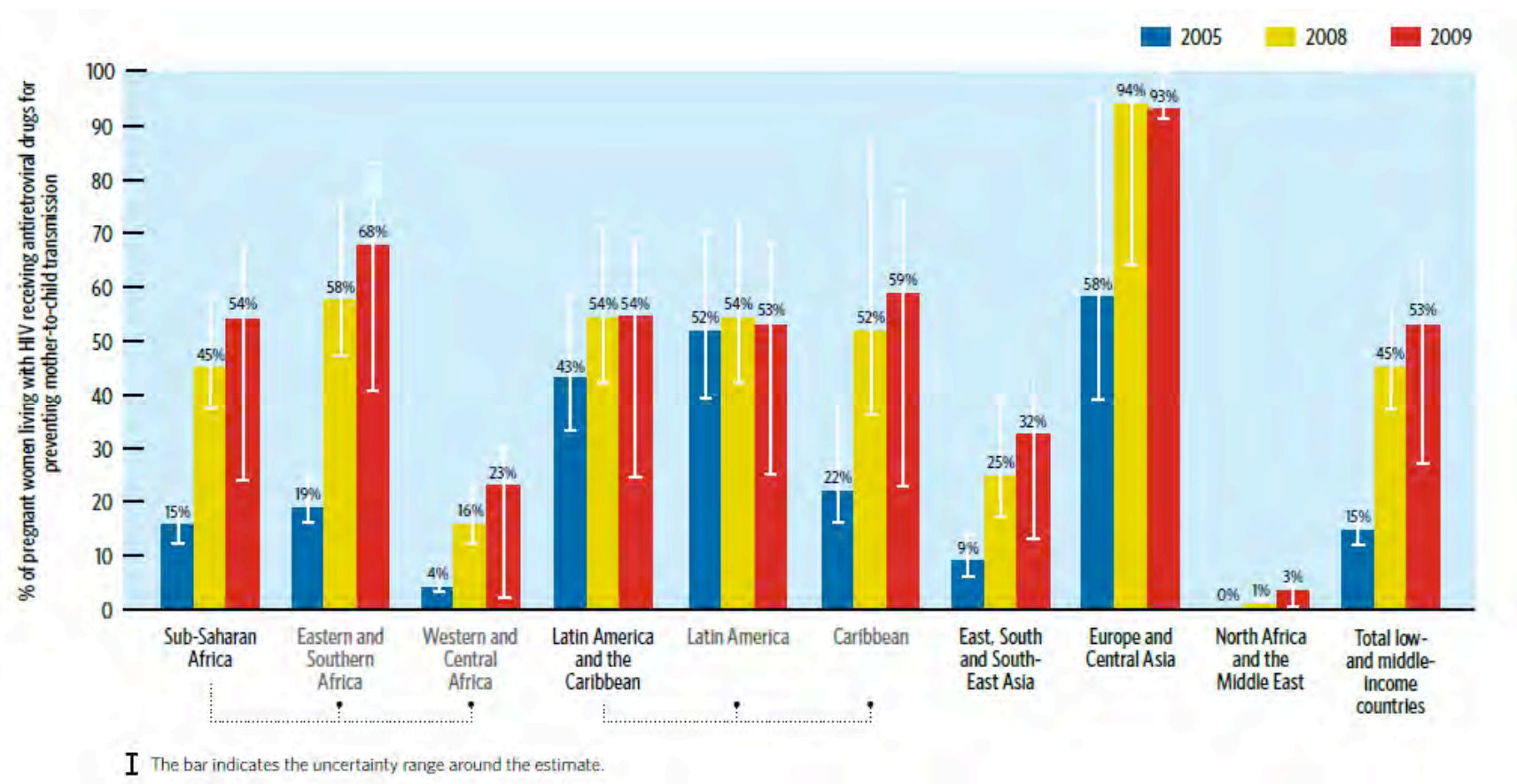
Goal: Elimination

To eliminate new paediatric HIV infections and improve maternal, newborn and child survival and health in the context of HIV

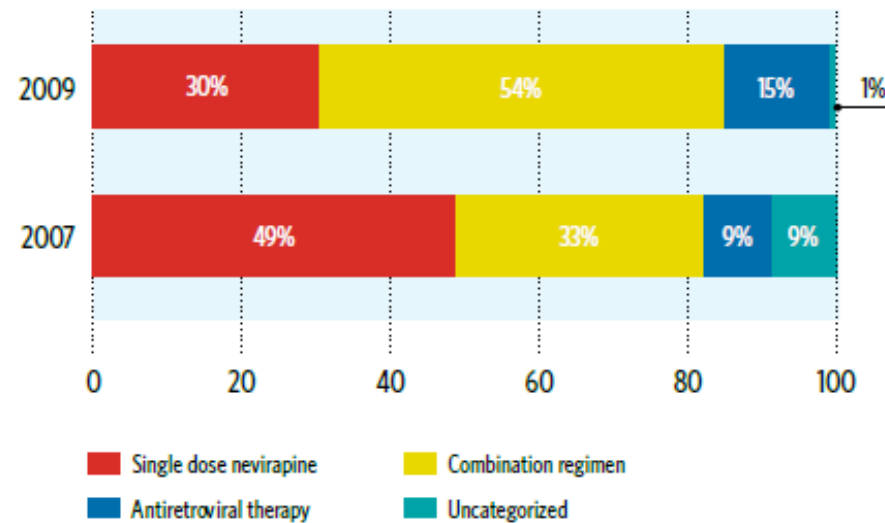
Increasing Advocacy for MTCT Elimination

- Regional initiatives for MTCT Elimination
- UNAIDS call for "virtual elimination" - 2009
- PEPFAR II focus on new goals for PMTCT
- New WHO ARV and infant feeding guidelines
- Global Fund priority for PMTCT
- UNAIDS BC and Outcome Framework
- High level agency advocacy
- IATT: need for review of technical issues

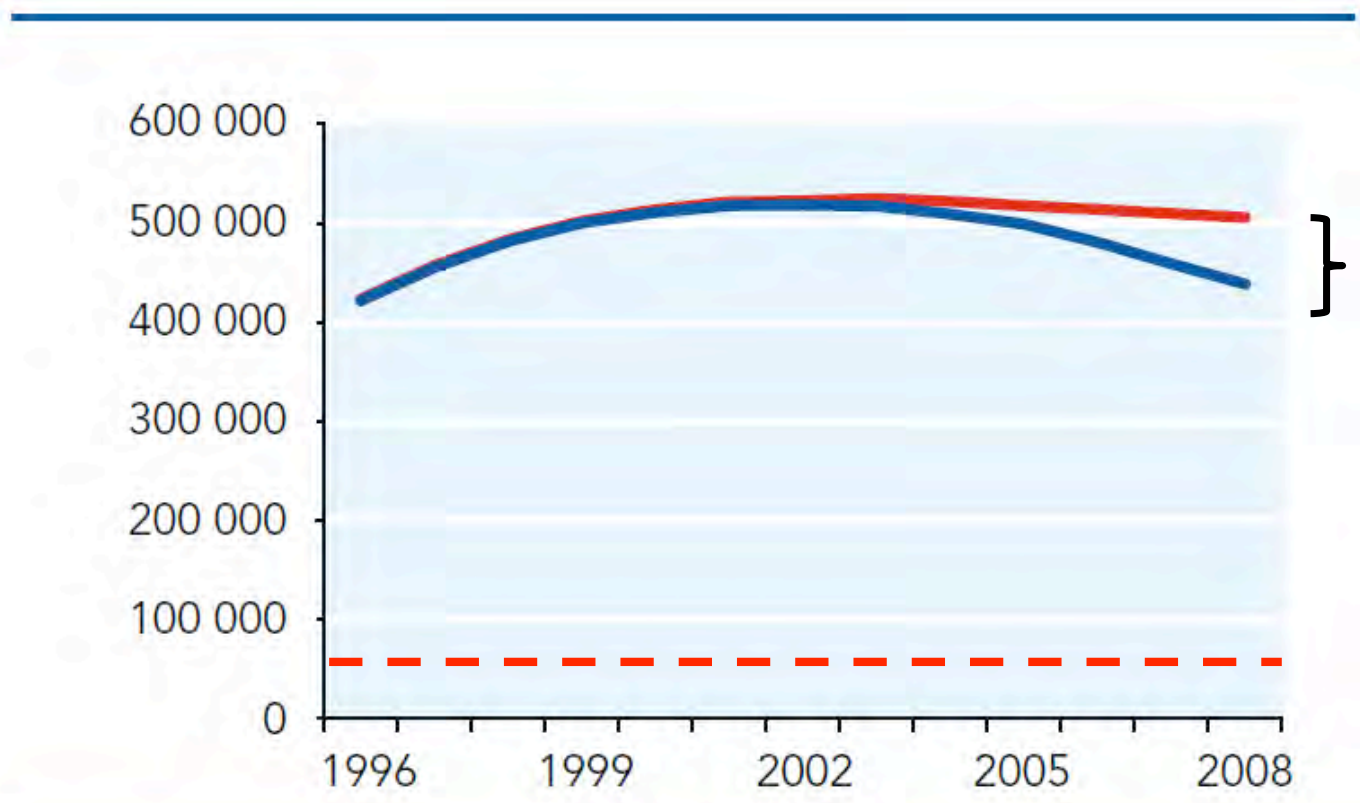
Percentage of pregnant women living with HIV receiving antiretrovirals for preventing mother-to-child transmission of HIV in low- and middle-income countries by region, 2005, 2008 and 2009



Percentage distribution of various antiretroviral regimens provided to pregnant women in low- and middle-income countries in 2007 (59 countries) and 2009 (86 countries)



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



Consultation Objectives

Provide guidance on the MTCT elimination goal within a framework of support for the 2015 MDGs

1. Review and clarify definition and **terminology** for the **goal** of MTCT elimination.
2. Review and clarify global elimination **targets**, agree on sub-targets, recommend a process for development of regional and country-specific targets & timeframes.
3. Define the most appropriate **indicators**, how to establish baselines & methods for monitoring progress towards elimination.
4. Highlight links between MTCT elimination goals & 2015 **MDGs**.
5. Recommend **operational framework** and action steps to support MTCT elimination.

Overall Targets

- 90% reduction in infections

From baseline of ~400,000 infections (2008/09) to <40,000 infections

- <5% transmission rate

<2% at 6 weeks and in non-breastfeeding settings

Based on "final infection" estimates in country

Clear, comprehensive global target

Will focus on infections prevented, not "coverage"

Calculated from models and country data

Global Estimate: No. HIV+ Pregnant Women Needing ARV and ART (2009)

- 1.38 million HIV+ pregnant women in 2009
- 727 thousand (53%) currently receiving "some" ARV (few receiving full, effective regimens)
 - ~100 thousand receiving ART

Need

- 95% coverage of ARV's/ ART
- ~ 550 thousand eligible for ART (40%)
- ~800 thousand in need of ARV prophylaxis

Thank You!

