Providing Complex Regimens for PMTCT in Rwanda: challenges and lessons learnt

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Background - Rwanda

- East African country of 26,338 km^2
- Population: 9,100,000 inhabitants.
- Rural population: 83 % (DHS III, 2005)
- Administrative framework
  - 4 provinces
  - 30 districts
  - 415 sectors/Health centers.
- Economy
  - 52% live under the poverty line.
- Access to clean water
  - Urban area : 61% (DHS, 2005)
  - Rural area : 29% (DHS, 2005)

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Maternal and Child Health Indicators, Rwanda, (DHS 2005)

- **Fertility rate**
  - 6.1 children per woman
- **ANC visit (2 or 3 in pregnancy)**
  - 68% (95% with > 1 visit)
- **Age at first ANC visit**
  - 50% at 6.4 months
  - 9% after 8 months
- **Delivery in a health facility**
  - 56% (Urban) vs. 25% (Rural)

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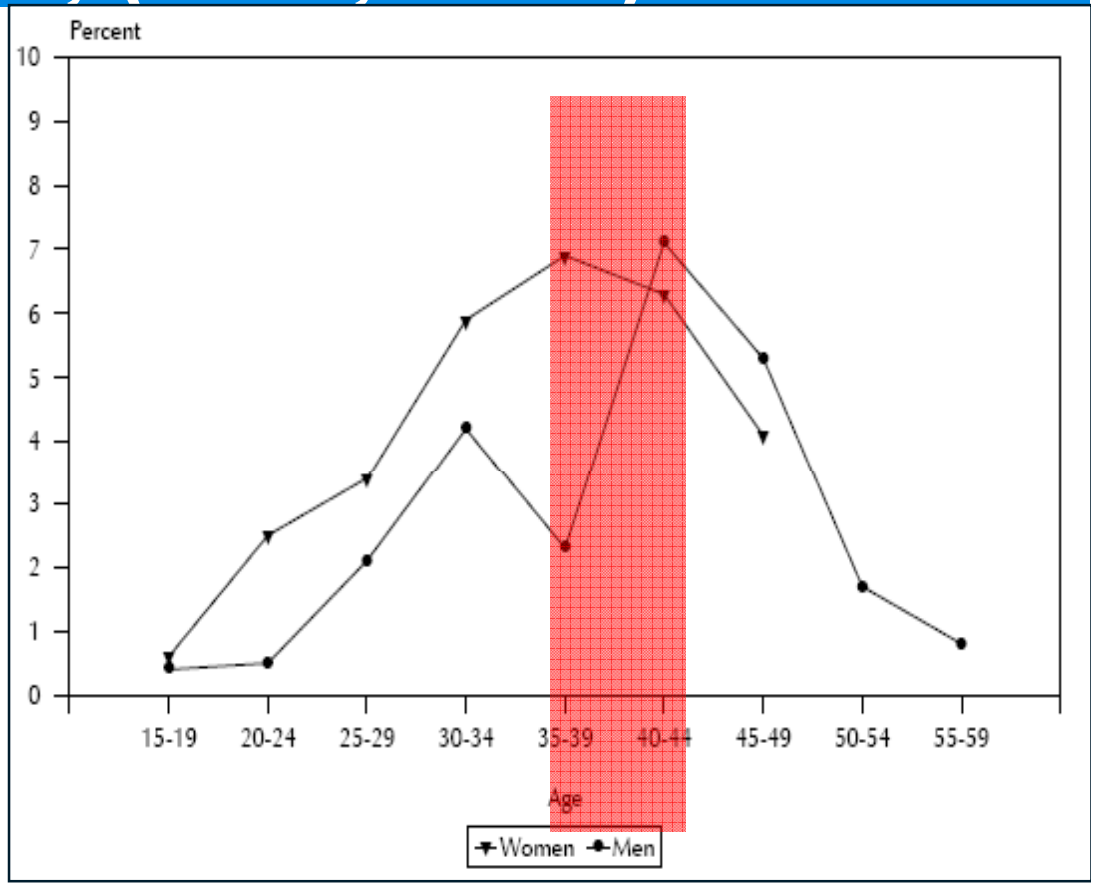
HIV prevalence by Age and Sex Rwanda, (DHS, 2005)

- **HIV prevalence increases with age**
  - **Highest in women in age group 35-39 (6.9 %)**
  - **Highest HIV prevalence in age group 40-44 (7.1 %)**
- **HIV prevalence sex ratio (F/M):**
  - **3.6/2.3**
- **HIV prevalence in pregnant women:**
  - **4.8%**
- **HIV-exposed infants annually**
  - **17,000 (TRAC 2005)**



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National HIV/AIDS Response

- **1987-2000:** National AIDS Control Program (NACP).
- **1999:**
  - First PMTCT site opened.
- **2001:**
  - National AIDS Control Commission (NACC)
  - Treatment and Research on AIDS Centre (TRAC)
  - National Strategic Plan against HIV/AIDS (2001 -2005).
- **2005:**
  - National Strategic Plan against HIV/AIDS (2005-2009).

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PMTCT Program milestones, Rwanda (1999-2007)

4. - Introduction of More Efficacious ARV regimens for PMTCT;
- ART Scaling-up

2. TRAC defines National goals for PMTCT

1999 - 2000 | 2001 | 2002-2005 | 2005 | 2006 - 2007

1. PMTCT pilot project (Kicukiro)

3. Initial expansion of the Sd-NVP regimen to decentralized level

5. - National expansion of PMTCT services;
- Introduction of early infant diagnostic (DBS-PCR)

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PMTCT Program Strategies

- Family approach
- District approach
- Decentralization laboratory capacities (CD4 testing)
- Community mobilization
- Capacity building
  - Development of clinical mentorship models
- Coordination
  - VCT/ PMTCT unit at TRAC
  - Technical WG on PMTCT/VCT.
- Partnership
- Advocacy and resources mobilization: NACC
- Monitoring and evaluation

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Package of services for Mother-infant pair in the PMTCT program, Rwanda

HIV+ pregnant mother

- Routine opt-out counseling and HIV testing (Promotion of partner testing)
- Laboratory investigation: FBC or HB, CD4 count
- Routine pregnancy medications: Malaria prevention (IPT+Bednets), anemia prevention (Iron/Folic acid)
- ARV prophylaxis
- HAART for women eligible
- Safe delivery
- Infant feeding counseling and support
- Family planning services
- Psychosocial and adherence suppoı

HIV-exposed infants

- Post-exposure prophylaxis
  - Sd-NVP + AZT (4 weeks)
- Drug package (CTx prophylaxis)
  - CTx starts at 6 weeks
- Clinical monitoring
  - Growth monitoring
  - Symptoms of early HIV infection
- Early Infant diagnostic (DBS-PCR)
  - DNA-PCR
    - PCR1: at 6 weeks
    - PCR2: 6 weeks after end of BF
- Serology
    - 9 months (1rst)
    - 18 months (2nd)

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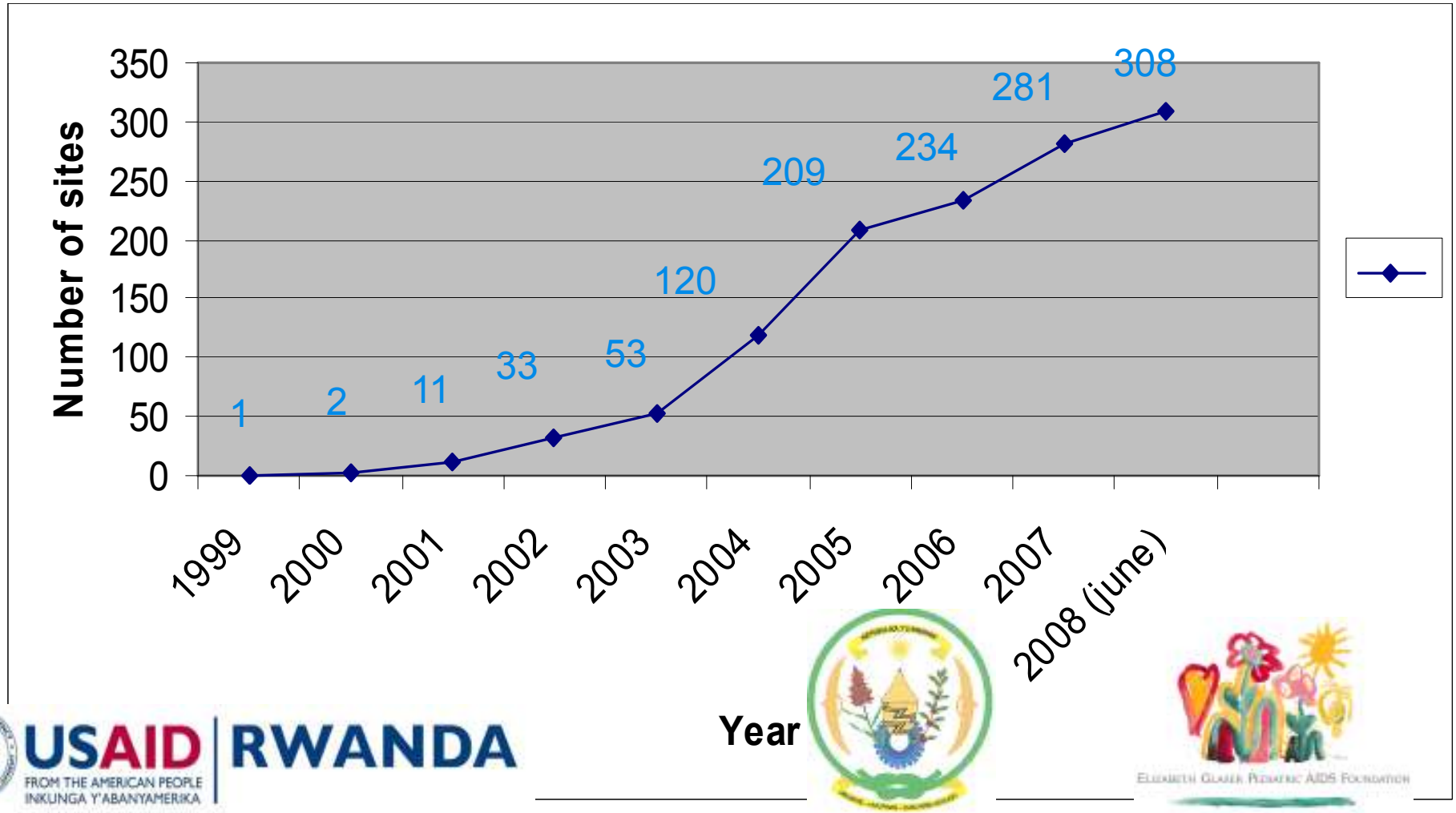
ARV prophylaxis guidelines for PMTCT program in Rwanda (Since Sept 2005)

Clinical scenario	Regimen for Mother	Regimen for Infant
Pregnant women with indications for ART (CD4 count<350 cells/ul)	AP[1]: AZT+3TC+NVP IP[2]: AZT+3TC+NVP PP[3]: AZT+3TC+NVP	Sd-NVP + AZT x 4 weeks
Pregnant women (28wks-34wks) who are not yet eligible for ART (CD4 count>350 cells/ul)	AP: AZT starting at 28 weeks or as soon as feasible thereafter IP: Sd-NVP PP: AZT/3TC x 7 days	Sd-NVP + AZT x 4 weeks
Pregnant women tested HIV+ after 34 weeks (late arrival)	AP[1]: AZT+3TC+NVP IP[2]: AZT+3TC+NVP *(Interrupt HAART after delivery if not eligible for life)* PP[3]: AZT/3TC x 7 days	Sd-NVP + AZT x 4 weeks
HIV women seen in labor who have not received ARV prophylaxis/Women in discordant couple	IP: Sd-NVP PP: AZT/3TC x 7 days	Sd-NVP + AZT x 4 weeks

1- AP: Ante-Partum; 2- IP: Intra-Partum; 3- PP: Post-Partum

Trend in health facilities with PMTCT services, National PMTCT program, Rwanda 1999-2008 (June)



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Some indicators
National PMTCT program

- HIV C & T in pregnant women: 95%
- HIV C & T partners of pregnant women in ANC 76%
- Health facilities taking samples for DNA-PCR (DBS):165 (including 30 DH and 3 referral hospitals)
- Health facility deliveries among HIV+ women: 75%
- Health facility deliveries among all women: 69%

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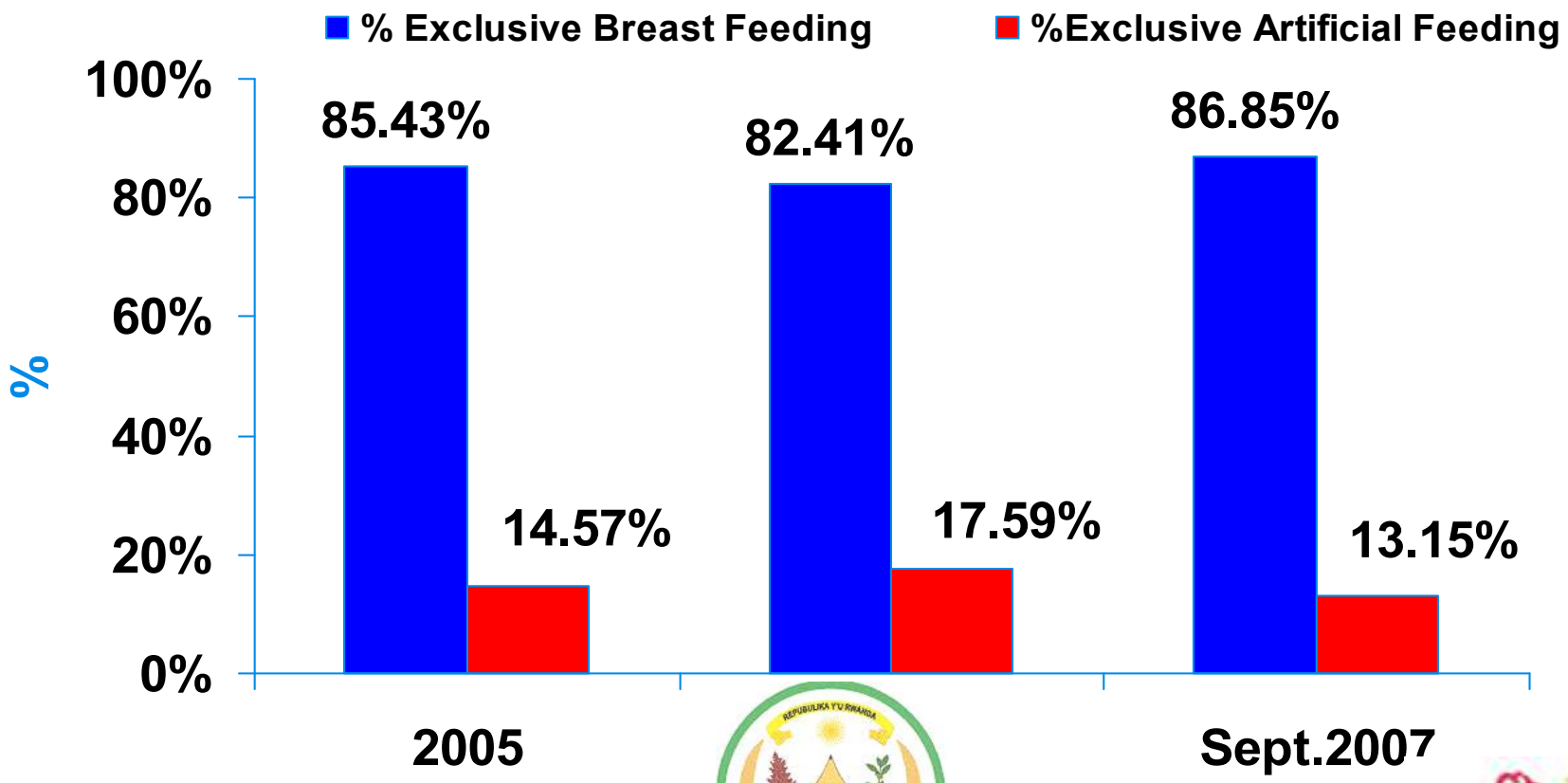
Infant feeding choices at birth among HIV+ mothers, National PMTCT program, Rwanda, (2005-2007)



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Lessons learned

- It is feasible in resource-limited countries ….
- Shifting to more efficacious ARV regimens requires
  - High political leadership
  - Decentralization of CD4 count system to district level
  - Sample transport (CD4, DNA PCR)
  - Reorganisation of services to increase uptake of CD4 count testing
  - Development of job aids and revision of monitoring tools
- Coordination
  - Leadership of MOH (TRAC) is critical for guidance and coordination of partners activities
  - An active technical working group helped to the quickly scale-up successful approaches

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Lessons learned

- **Exposed infant follow-up need to be instituted and integrated within MCH to improve**
  - **CTX prophylaxis coverage**
  - **Early infant diagnostic**
  - **Infant feeding counselling and support (CSB for 6 to 18 months for all HIV exposed infant have started with 140 health facilities)**
- **Community-based Health Insurance schemes**
  - **Has improved overall uptake of health facility services for underserved population**

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Challenges

- There is a need to improve the monitoring of the more efficacious regimen at national level.
- ART prescription still medical doctor driven (nurses not yet allowed)
- Scaling up the more efficacious regimen requires more decentralized capacities for laboratory (CD4 count, biochemistry, etc..).
- Scaling up early infant diagnostic requires more DNA-PCR laboratory capacities at the national level. Only one lab is performing DNA-PCR
- Maintaining Mother-infants pairs into follow-up requires innovative approaches involving communities (e.g. PLWHA associations)
- Post-natal HIV transmission during breastfeeding remains a constrain to a successful PMTCT.
- Integration of family planning within HIV prevention and care
- Promoting HIV testing (PITC) in labour room

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Way Forward

- Integrating the monitoring of the more efficacious regimen within the National electronic HIS (TRACnet).
- Strengthening the capacity of laboratory for CD4 testing at decentralized level
- Clinical mentoring Scaling up more efficacious regimen
- Scaling up EID
- Task shifting
  - under MD supervision nurses could manage stable HIV cases
- Weaning food initiative:
  - Scaling up fortified porridge (6 to 18 months for all HIV exposed infant)

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Acknowledgements

WHO

UNICEF

Global Funds

PEPFAR implementing partners

Unitaid

Clinton Foundation

PACFA

All the implementing sites

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