

# EARLY MOTHER-TO-CHILD HIV TRANSMISSION RISK AMONGST YOUNG WOMEN: FINDINGS FROM THREE NATIONAL SURVEYS, SOUTH AFRICA, 2010, 2011-12 AND 2012-13

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## BACKGROUND

- ± 5300 new HIV infections among adults ≥ 15 years, of whom:
  - ± 47% in women
  - ± 35% in young people (15-24)
  - ± 20% among young women (15-24)



Young women (15-24 years) in sub-Saharan Africa are **twice** as likely as young men to be living with HIV.

- Prevalence of live births by age 18, amongst women aged 20-24 years:**
- 28% in West and central Africa
  - 25% in Eastern and Southern Africa compared with
  - 4% in Eastern Europe and Central Asia

- Unmet need for contraception amongst women 15-24 years:**
- Amongst married women:**
- 29-31% in western and central Africa
  - 24-26% in east and southern Africa

- Amongst unmarried sexually active women:**
- 35-47% in western and central Africa
  - 24-49% in east and southern Africa

**Key question:** Is MTCT being eliminated amongst adolescent girls and young women? How far away are we?

### WHO impact criteria for elimination:

- <50 new paediatric infections via MTCT per 100 000 live births (case rate)
- <5% MTCT breastfeeding populations, and <2% in non-breastfeeding populations

### AND

### WHO process criteria for elimination:

- ≥ 95% antenatal care coverage amongst all women (at least one visit),
- ≥ 95% coverage of HIV testing of pregnant women,
- ≥ 90% antiretroviral treatment (cART) coverage of HIV-positive pregnant women

Sources: UNAIDS 2016. AIDS by the numbers. Available from: [http://www.unaids.org/sites/default/files/media\\_asset/AIDS-by-the-numbers-2016\\_en.pdf](http://www.unaids.org/sites/default/files/media_asset/AIDS-by-the-numbers-2016_en.pdf)  
 Manjunath K. 2014. Unmet Need for Family Planning among Young Women: Levels and Trends. DHS Comparative Reports No. 34. Rockville, Maryland: ICF International  
 UNFPA. 2013. Adolescent Pregnancy: A review of the Evidence. Available from: [https://www.unfpa.org/sites/default/files/pub-pdf/ADOLESCENTPREGNANCY\\_UNFPA.pdf](https://www.unfpa.org/sites/default/files/pub-pdf/ADOLESCENTPREGNANCY_UNFPA.pdf)  
 SAMRC. 2014. Preventing HIV among girls and young women, implementation strategy. <http://hiva.org.za/2014/06/27/launch-of-national-campaign-for-young-women-and-girls/>  
 WHO 2014. Global guidance on criteria and processes for validation, elimination of mother-to-child transmission of HIV and syphilis.

## AIM

To quantify the differential risks of early MTCT amongst adolescents, young women and adults in South Africa

## METHODS

### STUDY DESIGN

**Setting:** South Africa where HIV prevalence amongst women 15-24 years is 11.4%.  
**Methods:** Secondary data analysis of data from three nationally representative cross sectional surveys

### MOTHERS AND INFANTS

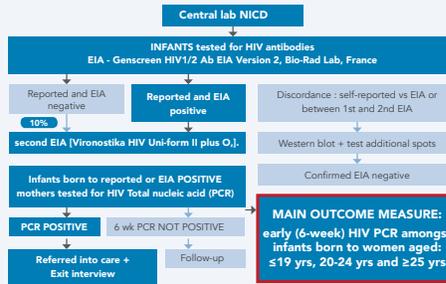
- Sampled consecutively / systematically
- Eligible if 4-8 weeks old + receiving Diphtheria-Pertussis-Tetanus (DTP1) immunization + non-emergency
- Enrolment independent of maternal HIV or PMTCT status

### DATA COLLECTION

2010	2011	2012
June – Nov	Aug 2011 – Mar 2012	Oct 2012 – May 2013

- Primary caregiver consented, interviewed and infant DBS taken

### HIV TESTING



### DATA ANALYSIS

Weighted for sample realisation and South African live births

#### STEP 1:

- Weighted univariate analysis for each survey year.
- Continuous variables: two sample t-tests or Wilcoxon rank sum test
- Categorical variables chi-squared tests or Fishers exact tests.
- P-values (adolescent vs. adults and young women vs adults) generated using Adjusted Wald test.

#### STEP 2:

Multivariable analyses: using logistic regression

Used Stata 14

#### Definitions:

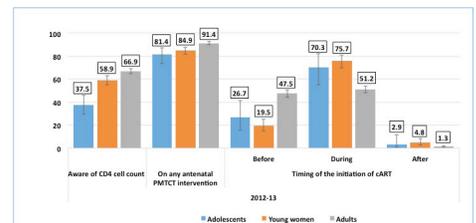
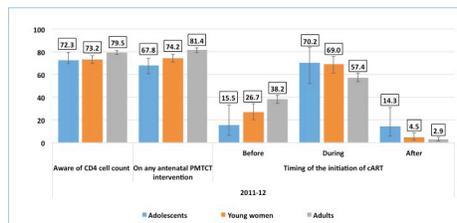
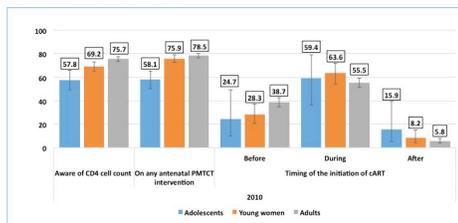
- Adolescent: age ≤19 years
- Young: 20-24 years
- Adult: age ≥ 25 years
- Early MTCT: 4-8 weeks postpartum

## RESULTS

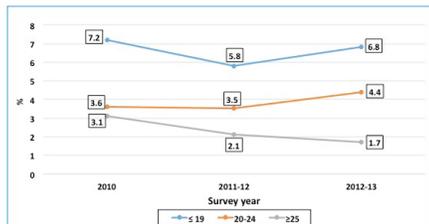
### SAMPLE CHARACTERISTICS

Data from 4814 adolescents (1746 in 2010, 1680 in 2011-12, and 1388 in 2012-13); 9190 young women (3190 in 2010, 3035 in 2011-12, and 2965 in 2012-13) and 16263 adult mothers (5618 in 2010, 5356 in 2011-12, and 5289 in 2012-13) were analysed.

### COVERAGE OF PMTCT SERVICES



- Fewer adolescents and young women compared to adults had a CD4 test and were aware of their results.
- A lower proportion of HIV positive adolescent and young women compared with adults reported being on any PMTCT intervention.
- More adolescent and young mothers commenced cART during or after pregnancy compared with adults.



- Amongst adults: Declining early MTCT trend**
- Reduced from 3.1% in 2010 to 1.7% in 2012-13

#### BUT

- Amongst adolescents and young women: No declining early MTCT trend**
- Adolescents: 7.2% in 2010, 5.8% in 2011-12, and 6.8% in 2012-13.
  - Young women: 3.6% in 2010, 3.5% in 2011-12 and 4.4% in 2012-13.

#### Pooled analysis using data from all three surveys revealed significant associations between early MTCT and:

- Age ≥25 years (adjusted odds ratio, AOR: 0.04 (0.01-0.21, p<0.0001)
- Gestational age at first ANC booking: every one week delay in gestational age at first ANC booking increased
- Early MTCT by 9% (AOR 1.09 (1.01-1.18, p=0.025).

## SUMMARY AND CONCLUSION

By the last South African PMTCT survey in 2012-13, adolescent, young and adult mothers had:

- ≥ 95% antenatal care coverage with all women averaging more than 4 visits
- < 80% coverage of pre-pregnancy HIV testing
  - only 58.9% of adolescents, 73.0% of young women were tested compared to 78.2% of adult mothers
- < 95% cART coverage of HIV-positive pregnant women
  - only 81.4% of adolescents, 84.9% of young women were on an any PMTCT intervention compared to 91.4% of adult mothers

#### Most importantly

- Adolescents and young mothers had
  - Significantly higher early MTCT compared to adult mothers
  - 6.8% MTCT among adolescents, 4.4% MTCT among young women compared to 1.7% MTCT among adult mothers

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