

# **HIV status and fertility desires, contraceptive use, and pregnancy rates in Rakai, Uganda**

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# Background: Fertility in sub-Saharan Africa

- Fertility in SSA is high and contraceptive use is low
- Fertility in Uganda is among highest in SSA
  - TFR 6.7
  - Annual growth rates 3.4%
  - ~50.8% of population <15 years (*Uganda National Household Survey Report 2009/2010*)
  - Built-in potential for population momentum
- Factors that maintain high fertility include fertility desires, unmet need for FP, and lack of male involvement
- Impact of the HIV/AIDS epidemic on fertility has been felt more at individual than at population level

# Background: Contraceptive use by HIV+ women

- Knowledge of contraceptives is almost universal...
  - In Uganda, 98% of all women know at least one method
  - Modern method use is 18%, and there is increasing use of modern methods over time... (UDHS 2006)
- ...but contraceptive use is still low among HIV+ women
  - 30% unmet need in a Kenyan Hospital setting (East Afr Med J. 2008 Apr;85(4):171-7.)
  - 90% unmet need for highly effective FP in Kabarole, Uganda (AIDS. 2009 Nov;23 Suppl 1:S37-45.)
- Access to contraception is critical, particularly since HAART can increase pregnancy rates in HIV+ women (PLoS Med 7(2): e1000229. doi:10.1371/journal.pmed.1000229)
- Integrating FP services into HIV services could help address FP needs of both HIV-infected/uninfected (Reproductive Health: Integrating family planning and HIV services [http://www.africa-health.com/articles/march\\_2010/FHI%20March%20final.pdf](http://www.africa-health.com/articles/march_2010/FHI%20March%20final.pdf) downloaded March 20 2011)

# Objectives

- Share findings on fertility preferences and behaviors and contraceptive uptake in context of HIV infection and care in Rakai, Uganda

# Rakai district, Uganda

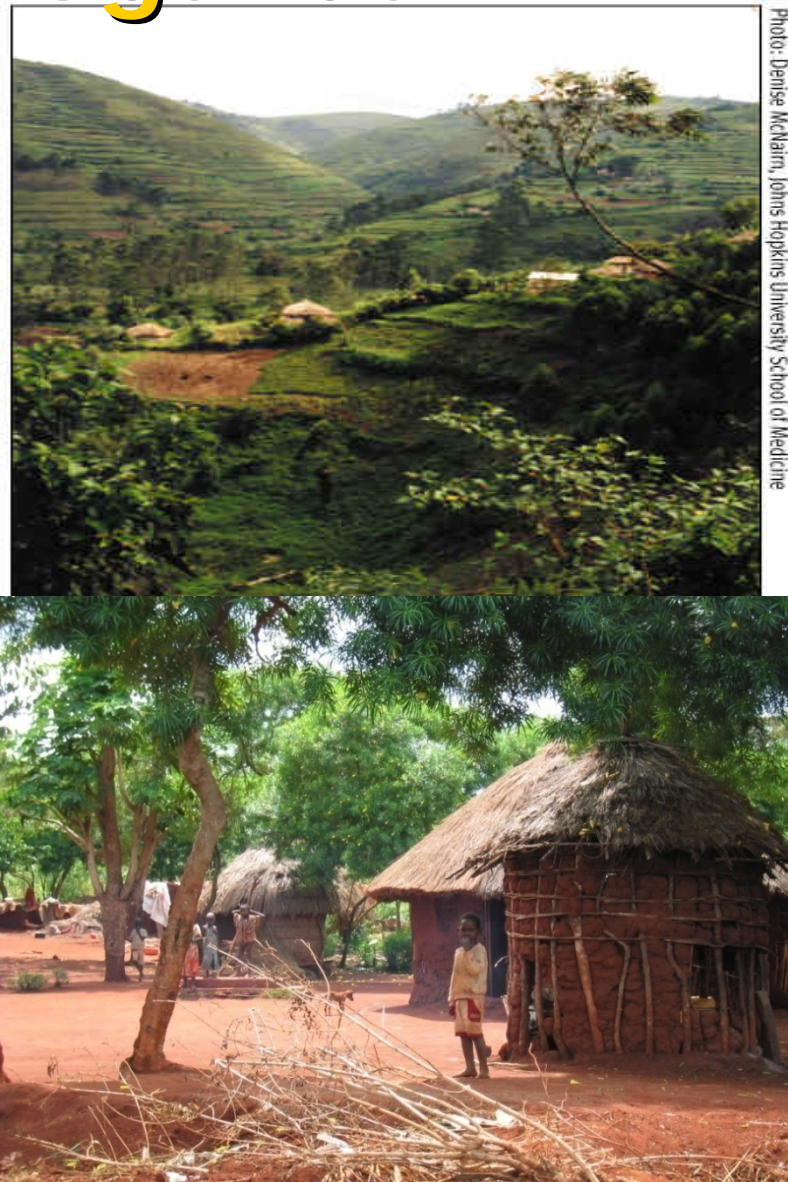
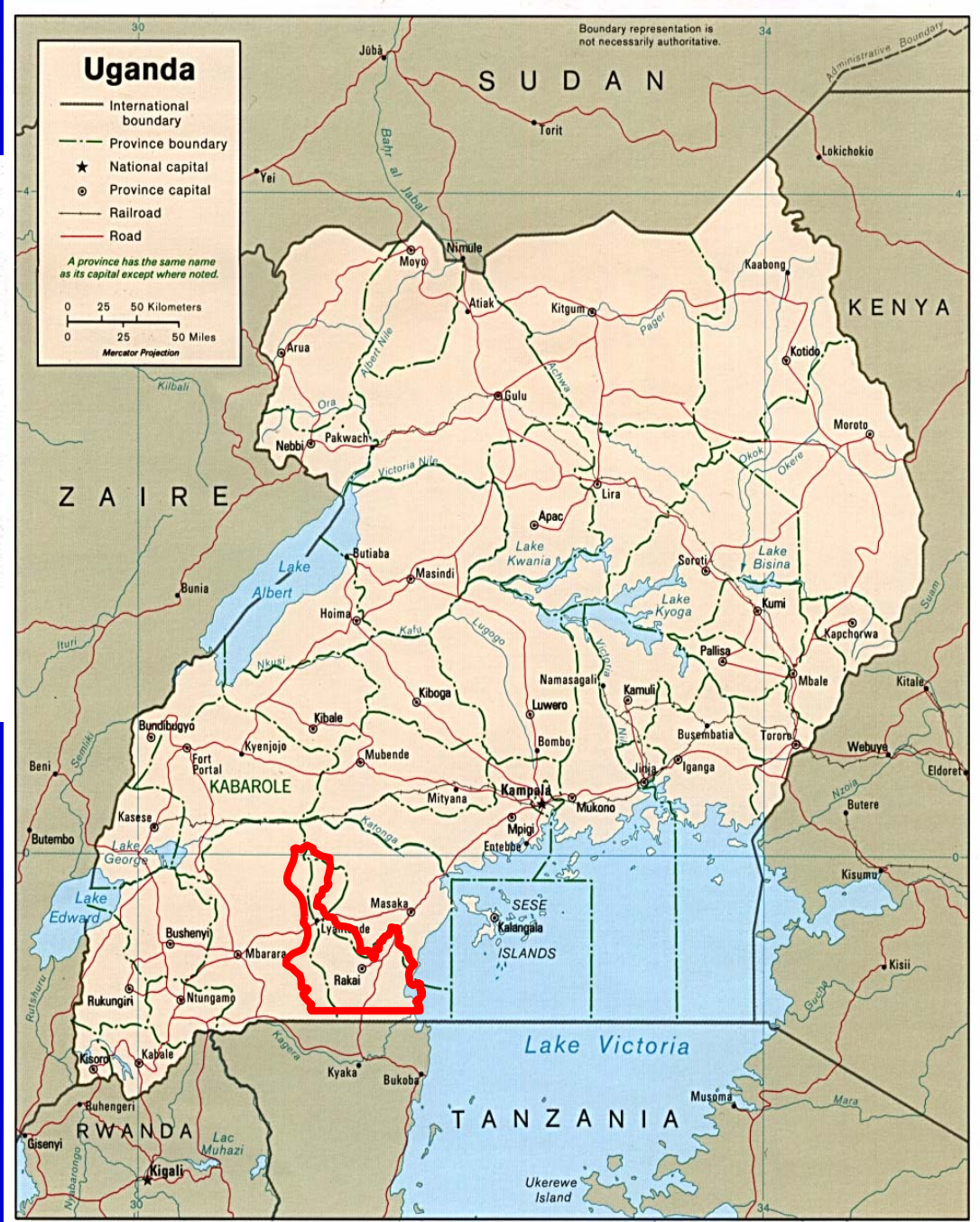


Photo: Denise McNairn, Johns Hopkins University School of Medicine



# Rakai Community Cohort Study

- Annual census and surveys of adults 15-49 in 50 communities since 1994
- 10,000-15,000 population
- Interviews including use of contraceptives, fertility desires and preference, and collection of blood and genital swab samples
- RCCS is the population-core for multiple nested studies including clinical trials, molecular epidemiology, behavioral science

# Health Education and Community Mobilization



## Field teams

- Collection of biological samples for HIV

- Field editing questionnaires after data collection



# In 1994-95, pregnancy prevalence and incidence rates were higher among HIV- than HIV+ women in Rakai

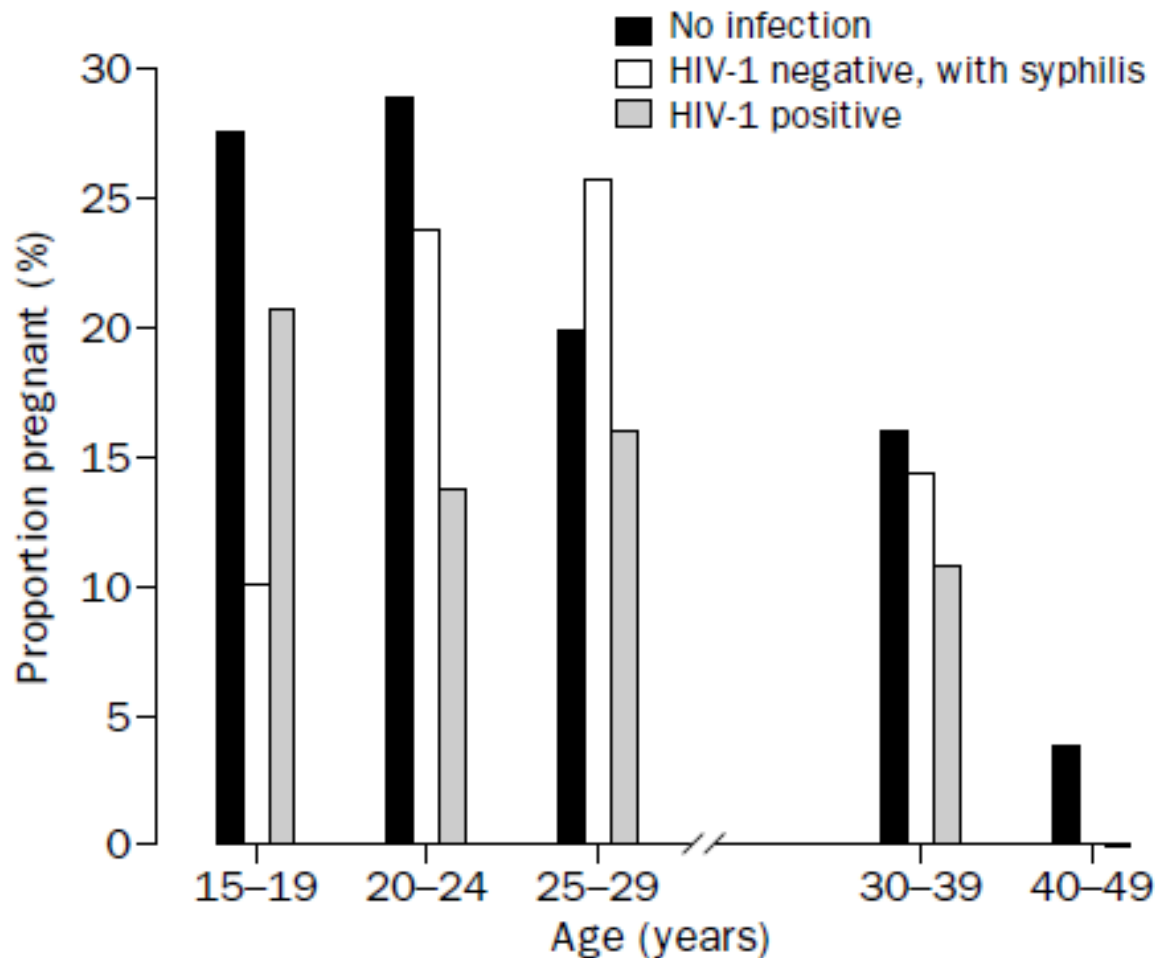


Figure 1: Age-specific prevalence of pregnancy

Pregnancy prevalence rates:

Combined : 19.3%

HIV+ Positive 13.4%

HIV-negative 21.4%

Pregnancy incidence

per 100 woman-yrs:

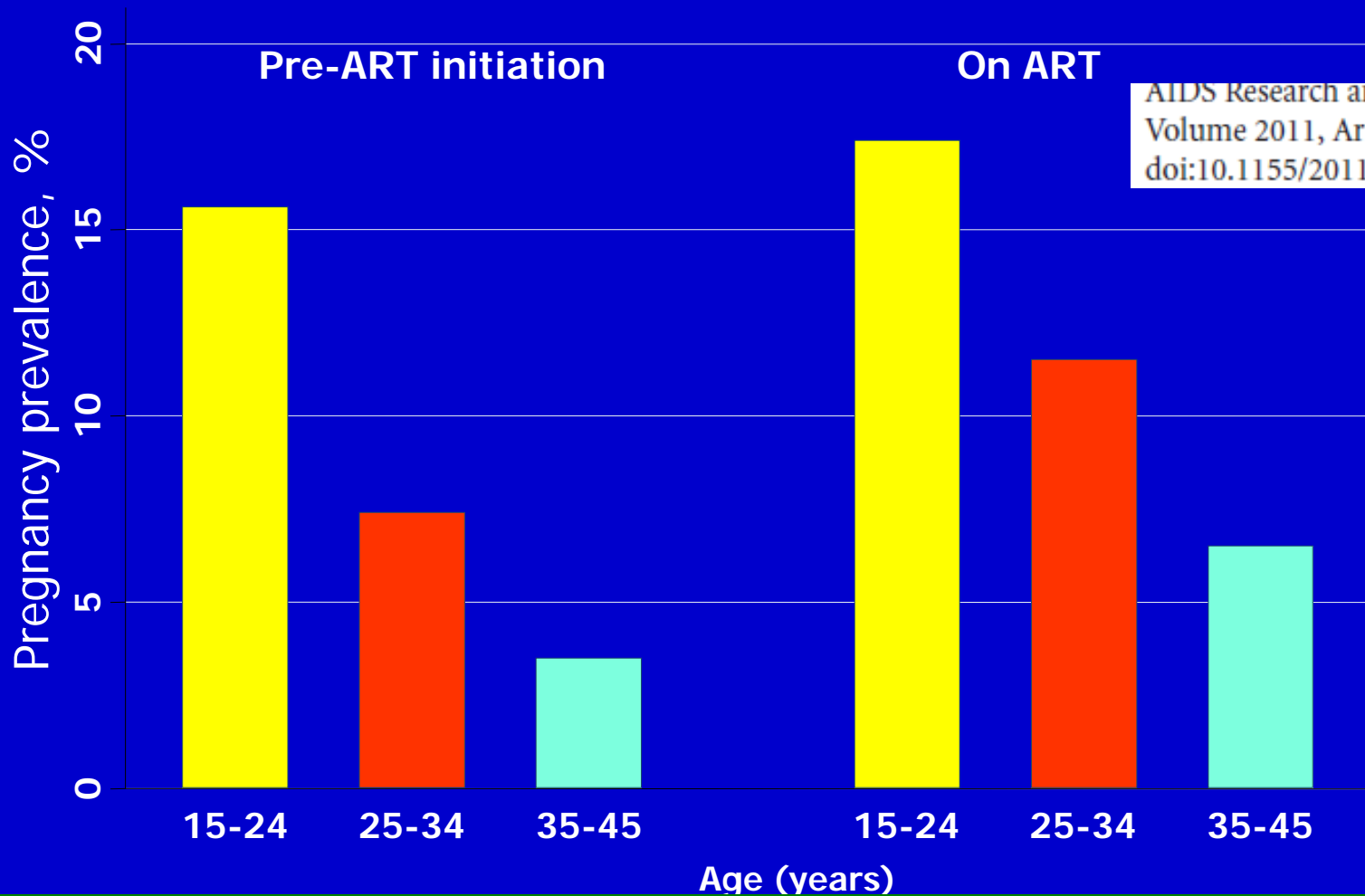
HIV+ Positive 23.5

HIV - Negative 30.1

( $p=0.007$ )



# Between 2004-2008, pregnancy prevalence rose for HIV+ women on ART care in Rakai

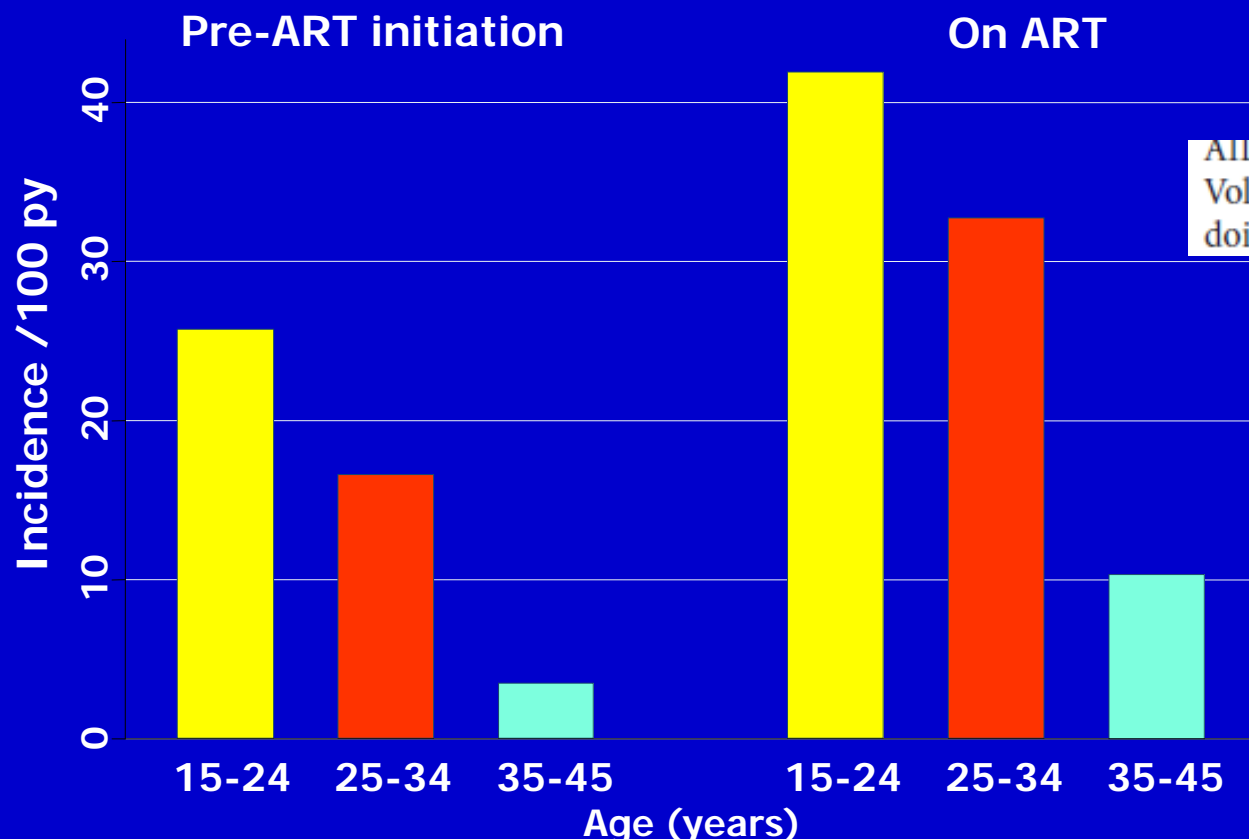


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Pregnancy prevalence rates:

Pre-ART , 7.2%; On-ART, 10.1%; p= 0.0315

# Between 2004-2008, pregnancy incidence rose for HIV+ women on ART care in Rakai



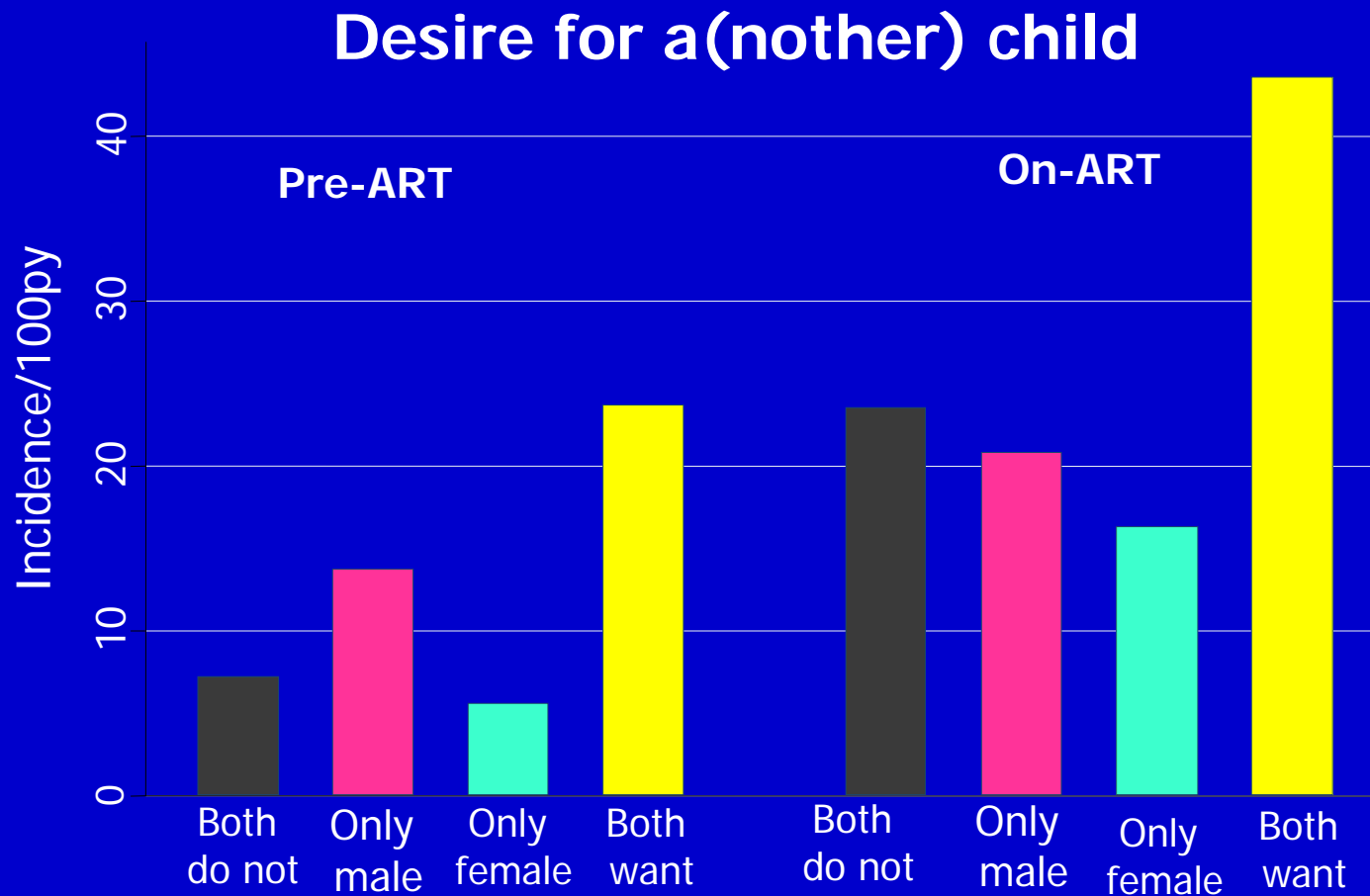
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Incidence Pregnancy :

Pre-ART , 13.1 CI (10.14, 16.75); On-ART , 24.6 CI(18.1, 32.6)  $p=0.0017$

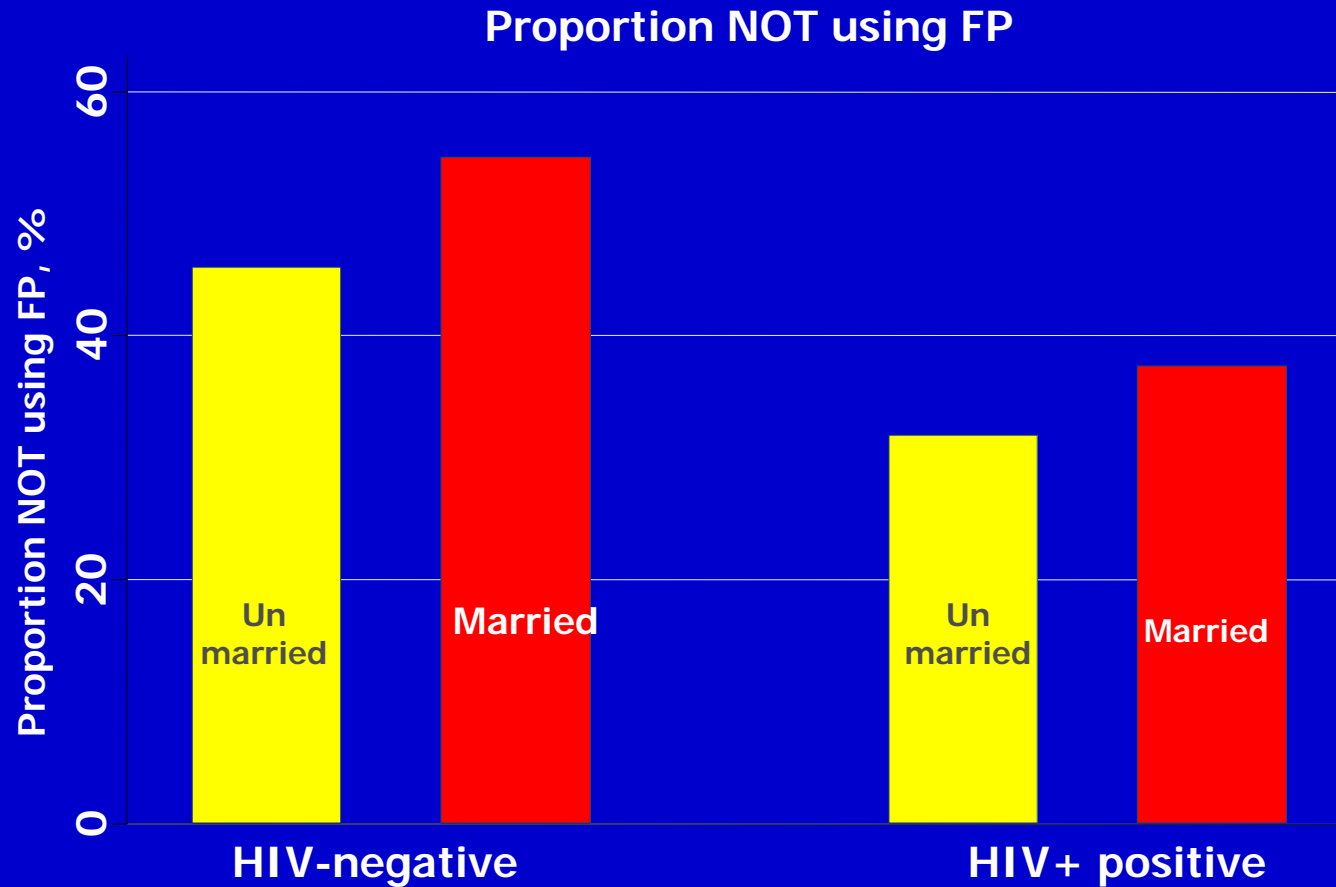
Pregnancy incidence and prevalence significantly increase while On-ART suggesting need for more attention to reproductive health needs of HIV+ individuals

# Incidence of pregnancy by partners fertility desires among HIV+ women seeking HIV care in Rakai, 2004-2008



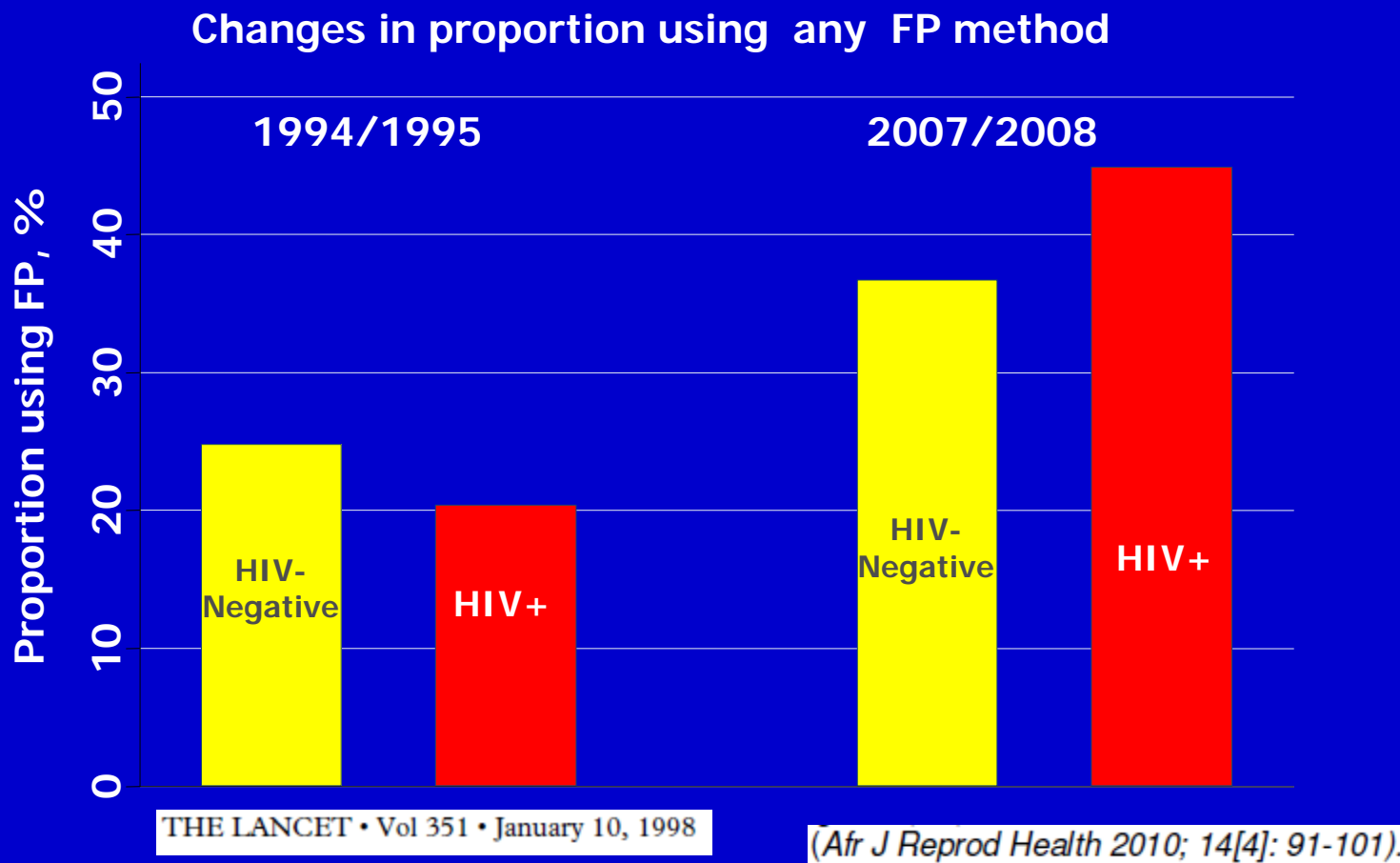
- Male partner's fertility desires play an important role in pregnancy rates
- High pregnancy incidence even when both do not want indicates high levels of unmet need for FP

# Need for FP among HIV+ and HIV- women who want to stop or postpone their next birth in Rakai, 2007/8



- Need for FP among HIV+ women, married and unmarried, is high and not unlike the levels among HIV- women.

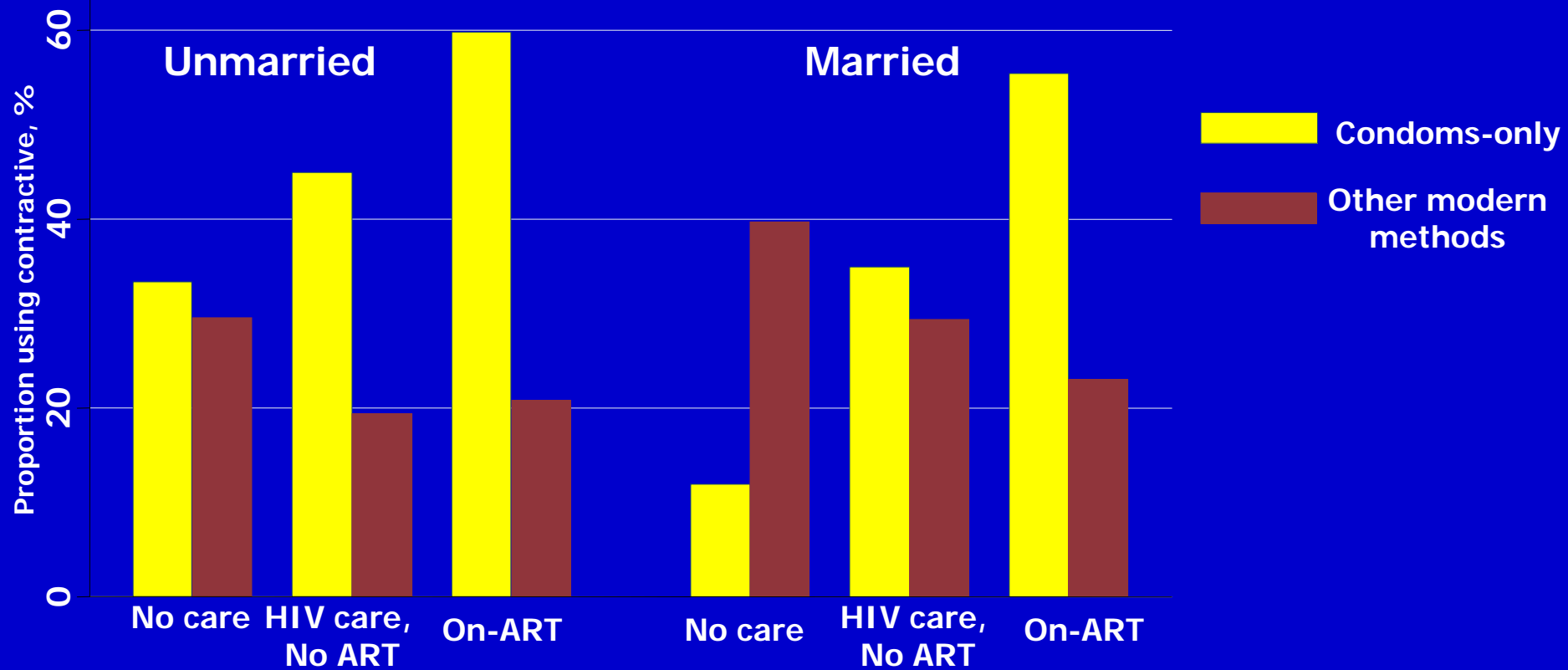
# Changes in proportions using a FP method in Rakai, 1994/5 and 2007/8



- Use of FP has significantly increased, irrespective of HIV status
- Increase is greater in the HIV+ relative to HIV-negative

# Contraceptive use among HIV+ women who want to stop or postpone their next birth, Rakai 2007/2008

Contraceptive use by marital status and HIV care



(Afr J Reprod Health 2010; 14[4]: 91-101).

- Condom use increases with increasing level of HIV care services
- Use of other modern methods decreases with increasing care among the married

# Other results

- Desire for large (6+) family size still an important factor in fertility
- VCT receipt was associated with higher use of condoms
- VCT without result discussion with partner was associated with higher use of modern methods, but not condoms

# Summary of findings

- Condom use is more common among unmarried HIV+ women, but use of other modern contraceptives is more common among married women
- Condom use among HIV-infected women increases and protection by other modern contraceptives decreases with increasing level of HIV care



# Summary of findings, continued

- Unmet need for FP is still high, especially among married women, irrespective of HIV-status
- Use of FP has significantly increased over time, irrespective of HIV status
- Being in HIV care significantly increases use of FP, especially condoms over other modern methods

# Recommendations

- Strategies to address desire for high fertility need to be developed and/or strengthened (especially male involvement)
- There is need to strengthen FP services in HIV care programs, with promotion of modern contraceptive methods, and with particular attention to women on ART

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**Thank you**