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 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
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.

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

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

(Afr J Reprod Health 2010; 14[4]: 91-101)
Contraceptive use among HIV+ women who want to stop or postpone their next birth, Rakai 2007/2008

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

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