Factors associated with HIV seroconversion in young women in South Africa

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BACKGROUND

- Adolescent girls and young women (AGYW) in sub-Saharan Africa bear a disproportionate burden of HIV.
- Targeted HIV prevention interventions are needed to reduce the burden of infection in AGYW in this region.
- The study determined whether certain demographic, behavioral and biological factors place AGYW at higher risk of acquiring HIV.
- Findings could provide guidance for designing customized HIV prevention strategies (such as the roll-out of PrEP) for this high-risk sub-group.

METHODS

- Study design: Population-based cohort study that formed part of the HIV Provincial Surveillance System (HIPSS)
- Study setting: uMgungundlovu district KwaZulu-Natal South Africa 2014 - 2017
- Study procedures:
  - Enrolled 2,710 HIV negative women (15-24 years old)
  - Follow up - approximately 18 months after enrolment
- Study Measurements
  - Staff administered questionnaire
  - Peripheral blood sample (HIV, pregnancy and other STIs)
- Study analysis
  - Inter-relationships between demographic, behavioral and biological variables was studied and their association with HIV incidence was examined using a proximate determinants framework and modelled using Cox proportional hazards models.

RESULTS

- HIV incidence rate
  - 163 HIV seroconversions over 4016 person-years (py)
  - Overall = 3.92 (95% confidence interval (CI): 3.27-4.69) per 100 py
  - Women 15-19 years = 3.74 (95% CI: 2.87-4.86) per 100 py
  - Women 20-24 years = 4.13 (95% CI: 3.20-5.33) per 100 py
  - Orphans (<18 years old) = 9.23 (95% CI: 3.86-22.17) per 100 py

CONCLUSIONS

- Findings suggest that structural factors, namely lack of family support and/or education, contribute to the high HIV incidence rates observed in young women in this population.
- While the data also suggests that programs supporting women’s sexual health and condom use remain effective ways to reduce risk, STI rates in this population were found to be high and condom use low.

ADDITIONAL KEY INFORMATION

HIPSS study is funded by the Centers for Disease Control and Prevention (CDC) under terms of the cooperative agreement 3U2GGH000372-02W1 and the US Presidents Emergency Plan for AIDS Relief (PEPFAR)

Our sincere thanks to all households and individual study participants, traditional and municipal leadership, HIPSS study, laboratory and PHC clinic staff in the district.