Factors associated with HIV infection despite overall low transmission rates in HIV Exposed Infants in rural Kenya

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Despite the availability of Prevention of Mother-to-Child HIV Transmission (PMTCT) interventions and donor and government investments in developing country implementation, the problem of vertical HIV transmission persists.
To explore the reasons for MTCT persistence in areas with overall low transmission rates and PMTCT service provision.
Methods

- A case-control study
- HIV-exposed infants (HEI) enrolled in follow-up care between January and June 2012
- Conducted at 20 rural health facilities in Rongo District, Nyanza Province, Kenya
- All facilities supported by Family AIDS Care and Education Services (FACES), a comprehensive HIV prevention, care, and treatment program
Methods

HEI ENROLLED BETWEEN JAN & JUNE 2012

- CASES - PCR POSITIVE
  - PMTCT INTERVENTIONS
  - NO PMTCT INTERVENTIONS
- CONTROLS - PCR NEGATIVE
  - PMTCT INTERVENTIONS
  - NO PMTCT INTERVENTIONS
Methods

- **Cases**
  - HEI who turned HIV positive and controls were HEI who remained negative at last test

- **Controls**
  - Randomly selected after matching based on birth month and gender to identify a number equal to cases
Methods

- Data abstracted from:
  - Routine PMTCT registers
  - HEI cards
  - Infant forms

- Data analysis:
  - Logistic regression performed to determine factors associated with HIV infection
Logical framework

**Predictor variables**
- Maternal Adherence *(Missed ARVs for self during pregnancy)*
- Age at enrolment *(<8weeks vs. >8weeks)*
- Infant feeding *(Mixed feeding < 6month vs. > 6months)*
- Infant Adherence *(Missed being given prophylactic ARVs)*

**Intervening or moderating variables**
- No. Of times to ANC attendance
- Disclosure
- Gestation in weeks at 1st ANC
- Mother reports receiving HIV education at ANC*
- Mother reports receiving HIV Counselling at ANC*

**Outcome variable**
- PCR Positivity
Results

- 45 cases and 45 controls compared

- Maternal, clinical and infant factors associated with HIV-infected infants:
  - Poor PMTCT service uptake including late enrolment of infant to follow up, (OR = 0.14, 95%CI: 0.06 - 0.38)
  - Poor adherence to infant prophylaxis (OR=8.32, 95%CI 3.24 –21.38)
  - Fewer antenatal (ANC) visits (OR = 0.62, 95% CI: 0.41 - 0.96)
Results

- Mothers of cases were also significantly less likely to report
  - Having received clinic level HIV education and counselling compared to the controls (OR 0.13, 95% CI 0.04 - 0.54 and OR 0.12, 95% CI 0.03 -0.46)

- Maternal disclosure, gestation at first ANC visit, and infant feeding type were not associated
Conclusion

- Poor uptake of PMTCT services and a reported absence of HIV education and counselling at the clinic level were associated with MTCT.

- More emphasis on PMTCT service provision including counselling and education are urgently needed to minimize opportunities for HIV transmission to infants.
An Island on land

Ongito Dispensary – Uriri District
Migori County
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For more information on the FACES programme, please visit www.faces-kenya.org

The findings and conclusions in this presentation are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention (CDC)
What questions do you have?
“If you always do what you’ve always done, you’ll always get what you’ve always got”