**BACKGROUND**

- Despite WHO guidelines recommending antepartum and postpartum (if breast feeding) Triple-ARV for the prevention of mother-to-child transmission (PMTCT) of HIV, neurodevelopmental risk to infants is unknown.
- Children in the clinical trial Promoting Maternal and Infant Survival Everywhere (PROMISE) Blantyre Malawi (N=188) and Kampala Uganda (N=208) sites were evaluated on the basis of ARV pre- and postnatal treatment arm.

**OBJECTIVE:** To determine if developmental and cognitive performance of HIV/ARV-exposed uninfected children in Malawi and Uganda differed on the basis of antenatal and postnatal ARV treatment arms within the PROMISE clinical trial of PMTCT.

**RESULTS**

**During pregnancy,** HIV-infected mothers were randomized to either:

1. **Triple-ARV prophylaxis**
   - (3TC-ZDV/FTC-LPV-RTV; N=178) or FTC-TDF/LPV-RTV (N=208)

2. **Zidovudine (ZDV)**
   - (ZDV; N=186), continuing on their trial arm regimen throughout breast feeding.

**Postpartum:** mother/newborn dyads were then randomized to either:

1. **Maternal Triple-ARV**
   - (MSEL available for N=186) or

2. **Infant Nevirapine, (NVP)**
   - (NVP; N=186), and LAZ at age 12, 24 and 48 months of age.

The Kaufman Assessment Battery for Children (KABC-II): Used to assess development in children at 12, 24 and 48 months of age.

**CONCLUSIONS**

- Ante-partum followed by post-partum triple-ARV exposure did not result in significantly poorer outcomes with the MSEL at age 12, 24, 48 months compared to the unexposed reference group.
- Ante-partum followed by post-partum triple-ARV exposure did not result in significantly poorer cognitive ability outcomes with the KABC-II at age 48 and 60 months compared to the unexposed group.
- Monthly clinic visits lead to better nutritional support (e.g., treatment for anemia, micronutrient support).
- Maternal antepartum and postpartum triple ARV exposure results in better health and functionality for moms; enhanced caregiving versus infant exposure risk.

Special thanks to the Johns Hopkins, Makerere University, and Johns Hopkins-Malawi College of Medicine teams.

E-mail: bovin@msu.edu