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Infant feeding choices and effects on infant morbidity in PMTCT programs transitioning to “option b+” in Western Cape, South Africa: The mother infant health study

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**Introduction** Since the discovery of HIV transmission through breast milk more than 30 years ago, guidelines for feeding infants born to HIV-infected women have been changing. Despite the current recommendations for HIV-infected women to breastfeed with combination antiretroviral treatment, there are limited data on morbidity and growth of infants who are cared for in normal practice settings. The objective of this study was to determine the effect of infant feeding on morbidity and growth among predominantly breastfed and formula-fed HIV-exposed over a 12 months period. **Methods** We performed a longitudinal cohort study between July 2012 and December 2013 at Kraaifontein Midwife Obstetric Unit.

**Results** One hundred eighty three HIV-exposed uninfected infants were included in the analysis. Of these, 80 (44%) were in the breastfeeding group and 103 (56%) were in the formula feeding group at baseline. The follow-up rate was 28 of 80 (35%) in the breastfeeding group and 47 of 103 (46%) in the formula feeding group. The median (range) duration of breastfeeding was 1.93 (0.43 to 12.06) months and that of formula feeding was 8.94 (0.46 to 12.75) months. There were 37 infection related hospitalizations, twelve of these occurred among predominantly breastfed infants and 25 occurred among predominantly formula fed infants. The unadjusted and adjusted odd ratio of hospitalization due to major infectious morbidity among formula fed children compared to those who were breastfed was 1.53 (0.56 to 4.18) and 1.10 (95% CI: 0.38 to 3.20). We found no differences in weight-for-age, length-for-age and weight-for-length z -score between predominantly breastfed and predominantly formula fed infants.

**Conclusion** Women who chose to breastfeed quickly switched to formula feeding. Infection related hospitalizations tended to be fewer among predominantly breastfed infants. PMTCT programs need to adopt strategies that improve adherence to prolonged breastfeeding for the benefits to be realized at population level.

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