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**Supplemental Material**

***Additional Sensitivity Analyses***

**Differential detection of HIV by study arm**

We assessed potential measurement error associated with transmission timing due to the use of daily infant NVP. In a setting of infant NVP versus maternal ARV exposure, differential detection of HIV-1 using nucleic acid testing may occur. Under daily NVP drug pressure an infant may have very low levels of virus, resulting in a limited number of cells that are infected with HIV-1 and a delayed positive DNA assay result. In a sensitivity analysis, transmission was assumed to occur at the time of the last HIV-negative test rather than the time of the first HIV-positive test for infants in the infant NVP arm.

Allowing for potential differential detection of HIV-1 in an environment of maternal ARV versus daily infant NVP did not change the association between adherence and breastmilk HIV-1 transmission (adjusted HR 0.43, 95% CI 0.19-1.01).

**Inclusion of control arm**

In a sensitivity analysis, we included mother-infant pairs randomized to the enhanced control arm of BAN. Mothers and infants in the control arm received a single-dose of nevirapine at or shortly after delivery, and one week of Combivir to help prevent nevirapine resistance. No postpartum antiretrovirals were provided to mother-infant pairs randomized to the control arm. For this sensitivity analysis, we therefore assigned all mother-infant pairs randomized to the control arm an adherence value of zero. Based on complete case analyses, including the control arm resulted in nearly identical hazard ratio estimates (aHR 0.39, 95% CI: 0.17, 0.90).

**Agreement between self-reported and pill count adherence measures**

We compared the agreement between those reporting 100% self-reported adherence and those with 100% pill count adherence during the same interval, using pill count or bottle weight adherence measured at 2-4 and 24-28 weeks and self-reported adherence measured at 4 and 28 weeks. The Kappa statistic (a measure of agreement) was 0.07 (95% CI 0.04, 0.10) with just over half of the self-reported and pill count adherence measures agreeing. There was likely some measurement error and potential misclassification of adherence category with both adherence measurement strategies. This study was not designed to assess which adherence measure was more accurate.