Online Appendix 1.

The PEPI study, conducted in Malawi, randomised children born to mothers who had received single-dose NVP to receive either a neonatal single-dose of NVP and one week of ZDV (group 1), or 14 weeks of extended daily infant ARV prophylaxis with NVP (group 2) or NVP+ZDV (group 3) [1]. At 9 months of age, the risk of HIV infection was 10.6% in group 1, 5.2% in group 2 and 6.4% in group 3. However, at 18 months, HIV rates were as high as 13.9% in group 1, 10.1% in group 2 and 10.2% in group 3. In the SWEN study, conducted as parallel randomised trials in Ethiopia, India and Uganda, an extended infant post-exposure prophylaxis with daily NVP from birth during six weeks was assessed in breastfed children, and compared to single-dose NVP (all mothers had received single-dose NVP) [2]. The 6-week transmission rate in the extended-NVP arm was 2.5% versus 5.3% in the single-dose NVP arm (p=0.009), but the 6-month HIV transmission rate was similar in both study arms: 8.9% in the extended-NVP arm vs. 6.9% in the single-dose NVP arm (p=0.16). Moreover, nearly all (92%) infants who became infected in the extended-NVP arm developed NNRTI resistance mutations [3]. In Tanzania, breastfed children received daily 3TC from birth through six months of age, while their mothers received daily ZDV+3TC from the third trimester of pregnancy until one week post-partum [4]. HIV-transmission rates were 3.8% and 4.9% at six weeks and six months of age, respectively. However, the breastfeeding duration was considerably shorter than usual African practices (18 weeks in median), and only 15% of the children were still breastfed at six months of age.

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Online Appendix 2.

In Kisumu, Kenya, the 12-month transmission rate for children born to mothers with a baseline CD4 count >250 cells/ml and receiving ARV therapy from 34 weeks of gestation until 6 months post-partum was 5.5% [1]. In this study, the overall transmission attributable to breastfeeding was 3.5% at 12 months of age. However maternal HAART was stopped at six months of age if WHO treatment criteria were not met, even if children were still being breastfed. Thus, among women with baseline CD4 count >250 cells/ml, the postnatal transmission risk was 1.7%: 1.1% occurred between months 1 and 6 (i.e. while mothers were on ARV treatment), and 0.6% occurred between six and 12 months of age (i.e. after the maternal HAART was stopped). Among women with a baseline CD4 count <250 cells/ml, the maternal HAART was continued beyond six months of age. The postnatal transmission risk in this higher-risk subgroup was 2.4% between months 1 and 12. In Côte d'Ivoire and Mozambique, although maternal ARV treatment had been provided to HAART-eligible women from the third trimester of pregnancy and throughout the breastfeeding exposure, the cumulative postnatal HIV transmission rate (between 1 and 12 months) was 2.3 and 1.6%, respectively [2-4]. The postnatal transmission risk between months 1 and 6 was estimated at 0.8% in Mozambique [3-4], and 0.9% in Tanzania [5]. Finally, the open-label AMATA trial in Rwanda yielded the lowest transmission rate ever reported after six months of continuous breastfeeding exposure and maternal HAART [6]. More recently, very low transmission rates have also been reported at 6 months post-partum in Botswana among women with CD4 ≥200 cells/ml treated with HAART [7], but more detailed data beyond that age are now expected.

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