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## Letter to the Editor

# Adherence to antiretroviral prophylaxis during early infancy in Latin America

Dear Editor,

We assessed reported adherence to antiretroviral (ARV) prophylaxis by HIV-exposed infants followed in the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) International Site Development Initiative (NISDI) Longitudinal Study in Latin American Countries (LILAC) protocol<sup>1</sup> through at least 6–12 weeks of life. LILAC is a prospective cohort study at sites in Argentina, Brazil, and Peru which enrolled in 2008 and 2009. Among infants enrolled at birth, the primary caregiver was interviewed at birth and at every infant visit regarding infant adherence to ARVs during the previous three days, timing of last dose missed of any prescribed ARV, and any problems or situations making it difficult for caregivers to give infants the prescribed ARV(s).

Of the 385 infants prescribed ARVs at enrollment, percent adherence could be calculated for 312 infants (i.e., those with at least two days of available adherence data). Of these 312 infants, 309 (99.0%) had perfect adherence; 99% received zidovudine. Reasons cited for not having perfect adherence were: the maternity nurse did not administer the ARV(s) to the infant ( $n=1$ ), the caregiver forgot to give the ARV(s) ( $n=1$ ), and nausea ( $n=1$ ). At the 6–12 week visit, 115 (30.6%) infants had a current prescription for ARVs. Percent adherence could be calculated for 97 infants at this visit, of whom 92 (94.8%) had perfect adherence. Caregivers of nine infants (8.0%) reported the last dose missed of any prescribed ARV was within the previous two weeks, six (5.3%) within the previous month, and two (1.8%) over a month ago. The remaining 96 caregivers (85.0%) reported no missed doses. Seventeen caregivers indicated difficulties in giving ARVs to the infants. Primary reasons cited were: the caregiver forgot to give the ARV(s) ( $n=5$ ), the infant was sleeping ( $n=2$ ), the caregiver ran out of medication ( $n=2$ ), and the caregiver misunderstood the prescription ( $n=2$ ). Given the high proportion of subjects reporting perfect adherence, formal analyses of factors associated with lack of adherence were not pursued.

Our results differ substantially from those of other studies in which lower adherence rates were reported from Africa<sup>2,3</sup> (62–73.1% adherence to a single dose of nevirapine at birth)

and the U.S. (71% adherence to zidovudine in the week prior to interview)<sup>4</sup> using similar self-report methods. It is unclear why higher adherence was observed in our population, although a higher susceptibility to social desirability bias is a possibility. Previous studies of adherence have demonstrated that self-reported adherence is generally higher than adherence measured by pill count, electronic monitoring, or drug concentrations in the blood.<sup>5</sup> Thus, adherence rates in this cohort likely represent an overestimate of the actual adherence.

In conclusion, high levels of adherence to infant ARV prophylaxis were observed in this study. Infant ARV prophylaxis adherence should be further evaluated in studies utilizing additional measures of adherence in order to more precisely estimate adherence and understand factors predicting non-adherence.

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## Conflict of interest

All authors declare to have no conflict of interest.

## Appendix A. The NISDI LILAC Study Team

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