

## **PHACS AMP Participant Summary**

### **Title: Hearing Loss in Perinatally HIV-Infected and HIV-Exposed but Uninfected Children and Adolescents**

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**Background:** Some children with HIV infection have had problems with hearing and language. We did a study of hearing problems in children with HIV. We wanted to see whether hearing problems were more common in children with HIV (HIV+) than in HIV-exposed uninfected (HEU) children. Children in the AMP study got a formal hearing test if they met certain conditions. The conditions included having a low score on a language test, a parent who was concerned about the child's hearing, or a hearing problem found in their regular doctor's visits. Children were said to have hearing loss if they could only hear sounds above a certain volume (20 dB or higher). We compared the softest sound that children could hear between the HIV+ and HEU children. We also looked at what factors were related to hearing loss.

**Study Population:** A total of 231 children in AMP had formal hearing tests. 145 were HIV+ and the other 86 were HEU. Just over half (53%) of the children were female, 77% were Black, and 29% were Hispanic.

**Results:** The percent with hearing loss was twice as high for HIV+ compared to HEU children (20% vs. 10.5%). On average, HEU children could hear softer sounds than HIV+ children (11.3 dB vs. 14.9 dB). The higher odds of hearing loss in HIV+ children remained even after taking other factors like caregiver education into account. HIV+ children with a past AIDS diagnosis had over twice the odds of hearing loss. The percent with hearing loss in HIV+ and HEU children was also higher than children in the general population.

**Conclusions:** A higher percentage of HIV+ children had hearing loss as compared with HEU children. The softest sound that could be heard was also significantly louder on average for the HIV+ children than for the HEU children. More studies need to be done to see whether these small differences in hearing will affect how well HIV+ children learn language and how well they do in school.

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