We did brain imaging on 31 youth from one clinical site in AMP. The age of participants ranged from 11 to 20.

We used MRIs to take images of participants' brains while they were at rest (lying awake with their eyes closed) to evaluate the default mode network's activity in the brain. We looked at how well the different regions in the default mode network could communicate.

We found that markers of advanced HIV disease in the past were related to brain activity during rest. Having had a low CD4 count or high viral load in the past seemed to affect different parts of the brain. The parts of the brain that were affected are important for paying attention, learning, and remembering. These findings are similar to those seen in adults with HIV.

This is the first study to show that youth with a history of more advanced HIV disease have changes in their brain activity at rest. This may be why some youth born with HIV have difficulty with memory and attention. These findings may help future research discover ways to help parents and children deal with these challenges.