Evaluating the first individual-level feedback for the Penn Computerized Neurocognitive Battery (PCNB) in Botswana

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Background: Children affected by HIV have increased risk of neurocognitive challenges, impacting memory, attention, planning and organization. These may manifest as difficulties in school. Due to resource limitations, children in high HIV prevalence settings such as Botswana rarely access comprehensive neurocognitive screening. The Penn Computerized Neurocognitive Battery (PCNB) has been culturally adapted and validated for use among children aged 7-18 years old in Botswana. For the first time, clinic-based feedback to parents based on individualized PCNB reports is being pilot-tested to determine how to best facilitate home- and school-based supports. Reports are individualized based on PCNB-determined profiles of cognitive strengths and weaknesses. Assessment results need to be accessible and actionable to parents, as the primary recipients of this information and those empowered to advocate for their children's educational support.

Approach: We iterated approaches to simplify clinician-to-parent feedback, deciding to pilot an approach that results in parent-clinician agreement on at least three profile-based intervention targets. For quality improvement and user-centered design, the next step in implementation requires pilot testing of the feedback process. Anonymous questionnaires will evaluate the extent to which the feedback process changes parental understanding of their child's strengths and weaknesses, assess clinician and parent shared understanding of agreed intervention targets, and elucidate ways to enhance usability. We hypothesize that individual-level feedback and discussion following PCNB assessments will result in better parental understanding of their child's educational needs. Feedback from parents will help with adaptations to improve acceptability and shared understanding between parents and clinicians. Preliminary findings suggest the ability to translate score reports into actionable recommendations. Qualitative data has highlighted early process improvements to incorporate into the prospective feedback process. Following clinic-based pilot-testing and refinement, use of the PCNB will be rolled out in public schools in Botswana, using a similar reporting and feedback system.