CONSIDERATIONS REGARDING CHANGES IN HIV TESTING AND DIAGNOSIS AMONG CHILDREN AND ADOLESCENTS AND THE EFFECTIVENESS OF A PEDIATRIC RISK ASSESSMENT TOOL FOR HIV TESTING IN ZAMBIA

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Background

• In 2019, Zambia had an estimated pediatric treatment gap of 10,515 (17%) children living with HIV (CLHIV).
• In April 2019, the Ministry of Health (MOH) introduced a pediatric (<15 years) HIV Risk Assessment Tool (HRAT) (Figure 1).
• HRAT items included: maternal HIV status, death ≥1 parent, tuberculosis symptoms, recent sickness or hospitalization, recurrent skin problems, or ear pus.
• Children scoring “yes” to ≥1 item were referred for HTS.
• Prior to HRAT introduction, the MOH recommended universal routine HIV testing services (HTS) in all facility entry points for children with an undocumented HIV status.
• The Faith-based Action for Scaling-up Testing and Treatment for the Epidemic Response (FASTER) project implemented the HRAT in 50 health facilities from July 2019 to September 2021.
• This analysis assesses pediatric HIV testing and case identification pre/post HRAT implementation at select health facilities in Zambia.

Methods

• Collected aggregate data on HIV tests conducted and HIV-positive results from the outpatient modality across 12 of 50 FASTER-supported health facilities.
• Using Stata 17, the Wilcoxon matched-pairs signed-ranks test to test for equality of pre- (October 2017-June 2019) and post-HRAT (July 2019-March 2021) implementation.

Results

• During the post-HRAT period, pediatric HIV tests decreased by 56.2% (z=3.059, p=0.002) and diagnoses decreased by 43.3% (z=3.040, p=0.002).
• All 12 health facilities had declines in HIV tests and only one increased HIV case finding (19.8% increase).
• The increase in testing yield from (2.4% vs. 3.2%) was not statistically significant (z=0.875, p=0.382).

Conclusion

There was a decline in pediatric HIV-positive case identification following the introduction of the HRAT, raising concerns CLHIV may have screened-out of HIV testing services. HRAT validation is recommended to inform tool screening performance (i.e., sensitivity, specificity) for HIV testing among children and adolescents. Countries introducing HRATs can validate tools in a limited number of sites in advance of national roll out and use continuous quality monitoring to identify gaps and inform real-time interventions. Further analysis is needed to understand the impact of the COVID-19 pandemic on pediatric outpatient attendance, changes in programmatic pediatric HIV testing targets, as well as other community-level factors, on pediatric HIV testing services.

References
1. PEPFAR Zambia Country Operation Plan (2020)

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FASTER
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