TITLE: Outcomes of the test and treat policy for HIV infected children and adolescents younger than 15 years of age at a pediatric center of excellence

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BACKGROUND

- In 2014 Uganda was the first high-burden country to adopt the test and treat model for all children and adolescents living with HIV under the age of 15 years.
- We compared 6 and 12 months outcomes of children who initiated ART under the test and treat model and WHO 2010 guidelines at an HIV clinical center of excellence in Uganda.



Photo 1: Baylor-Uganda Center of Excellence, located at Mulago National Referral Hospital in Kampala, Uganda.

METHODS

- All children and adolescents under 15 years were started on ART. For this analysis, participants were eligible if they were aged 5-15 years and had initiated first line ART between 1st April 2014 and 31st March 2015.
- Participants were further categorized into 2 groups namely those eligible for ART based on WHO 2010 guidelines and those only eligible based on the new test and treat policy.
- Data was retrospectively reviewed and comparisons made between the 2 groups for CD4 levels, nutritional status, drug adverse events, viral load and retention in care. Data was analyzed using STATA SE/13.0

RESULTS

- We studied 500 children and the majority 381/500 (76.2%) had initiated ART due to the new test and treat policy while 119/500 (23.8%) required ART based on the 2010 WHO guidelines.
- Children initiated based on the new policy had a median baseline CD4 count of 745 [551-1089] compared to 313 [77-558] for those initiated based on the 2010 guidelines.
- Children initiated based on the new policy were less likely to develop malnutrition within the first 6 months of treatment OR 0.13 [95%CI 0.05; 0.30], were more likely to be adherent to ART OR 1.85 [95% CI 1.02; 3.29] and were also more likely to have viral suppression at 6 months OR 4.42 [95% CI 2.29; 8.53].
- The rates of retention at 12 months were 99% for the test and treat group versus 85% for children initiated based on 2010 WHO guidelines. There were no other statistically significant differences between the two groups.

Table 1: Clinical outcomes of children initiated on ART.

Children aged 5 - <15 years initiated on ART between April 2014 to March 2015			
Characteristic		Eligible based on WHO 2013 HIV treatment guidelines	Not Eligible based on WHO 2013 HIV treatment guidelines
Median CD4 count at base line		313 [77-558]	745 [551-1089]
Incidence of Malnutrition (SAM+ MAM)			
6 months	Yes	22(18%)	11 (3%)
	No	62(52%)	236 (62%)
	Missing	35(30%)	134 (35%)
12 months	Yes	7 (6%)	19 (5%)
	No	32 (27%)	194 (51%)
	Missing	80 (67 %)	168 (44%)
Adherence to ART	Adherence to ART >=95%		
6 months	Yes	66 (55%)	259(68%)
	No	25 (21%)	53 (14%)
	Missing	28 (24%)	69 (18%)
12 months	Yes	31 (26%)	169 (44%)
	No	15 (12%)	58 (15%)
	Missing	73 (62%)	154 (41%)
		(N=71)	(N=283)
Viral load at 6 months	Suppressed <1000	46 (65%)	252 (89%)
	Not Suppressed >1000	25 (35%)	31 (11%)

CONCLUSION

- The test and treat model of treatment is viable for resource limited settings
- Children and adolescents initiated on ART using the test and treat model have favorable short term treatment outcomes.

RECOMMENDATIONS

While these data are encouraging, follow up of these children and adolescents will be important to assess the long term effects of initiation of ART based on the test and treat model.

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