Session 843

48-week outcomes of African children starting ART at CD4>500 with streamlined care

[1]Florence Mwangwa, [1]Asifas Owaraganise, [2]James Ayieko, [3]Vivek Jain, [4]DalsoneKwarisiima, [5]Dathan M. Byonanebye, [3]Tamara D.Clark, [3]Edwin D. Charlebois, [6]Maya Petersen, [4]Moses R. Kamya, [2]Diane V. Havlir, [2]Theodore D. Ruel

[1]Infectious Diseases Research Collaboration, Kampala, Uganda [2]Kenya Medical Research Institute,[3]Division of HIV/AIDS, University of California San Francisco, USA ; [4]Makerere University Joint AIDS Program, Kampala, Uganda; [5]Makerere University Kampala, Uganda; [6]University of California, Berkeley, USA

Florence Mwangwa, MBChB , Infectious Diseases Research Collaboration,
e-mail: fmwangwa@idrc-uganda.org

Background

- To reach the UNAIDS goal of 90/90/90, there is a need for efficient and effective strategies to scale up ART-delivery while ensuring good clinical outcomes in children
- Data on retention, viral suppression and safety of ART in children 2-14 years with high CD4 counts (>500 cells/ml) are particularly limited

Objectives

- To evaluate the clinical outcomes of HIV+ children starting ART at CD4> 500 cells/µl using a streamlined care model

Methods

Study subjects

- Residents of 16 rural East African communities were tested for HIV at a community fair or at home between 2013-2015 and offered ART
- Children aged 2-14 years who had CD4 >500 cells/µl and were otherwise ineligible for ART by country guidelines were enrolled

Patient assessments

- Visits were scheduled at week 0, 4, 12, and every 12 weeks after with screening for physical signs or symptoms of ART toxicity
- Viral load and basic safety tests assessed at baseline, 24 and 48 weeks

Analysis

- Proportion of children retained in care at 48 weeks
- Proportion of children with viral suppression at 48 weeks
- Rates of DAIDS Grade III/IV adverse events in first 48 weeks of ART

The Streamlined Care Model

- Nurse-driven visits focused on symptom-based ART toxicity screening,
- On-site nurse referral of complex cases to a physician
- Streamlined Visit schedule with Provision of 3 months' ART refills, and
- Appointment reminders and patient tracking
- Viral load (VL) measurement and structured VL counseling
- A patient-centered care system, fostering a welcoming environment

Results:

Figure 1. Enrollment, retention and suppression through 48 weeks

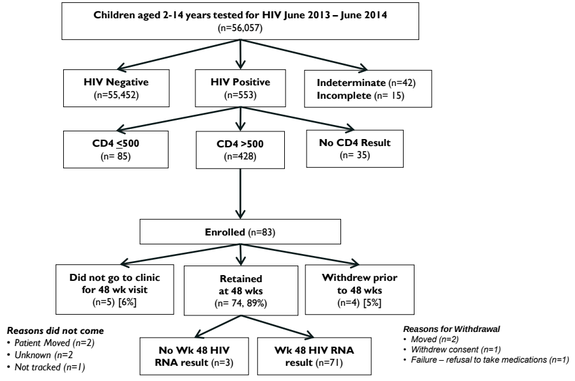


Table 1. Subject Characteristics

Region	
Uganda	37 (45%)
Kenya	46 (55%)
Male	36 (43%)
Age in years, median (IQR)	8 (6-11)
Orphan	29 (35%)
Baseline CD4 cells/mm^3, median (IQR)	863 (662-1180)
Baseline HIV RNA, copies/ml	
<500	3 (4%)
500-10,000	16 (19%)
10,001-100,000	31 (37%)
> 100,000	16 (19%)
Pending / not done / failed	17 (20%)

Figure 2. Retention by study visit

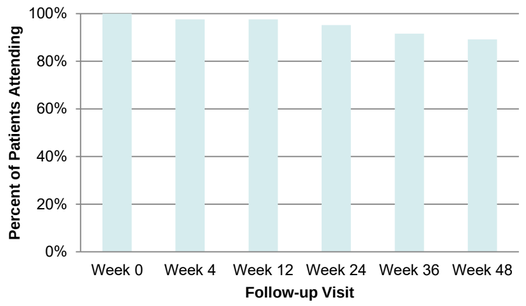


Table 2. HIV RNA Levels at 48 Weeks

< 500 copies/ml	**65 (92%)**
500-10,000 copies/ml	4 (6%)
>10,000 copies/ml	2 (3%)

Total of 74 attended 48 week visit, but viral load results missing for 3.

89% of children attended their week 48 visit and 92% of those were virally suppressed (<500 copies/ml)

Table 3. Safety of ART through 48 weeks

Grade III or IV Adverse Events (n=3)	Neutropenia (III) Thrombocytopenia (III) Rash (IV)
ART Regimen Change (n=2)	Nevirapine and abacavir stopped for rashes.
Deaths (n=0)	n/a

Conclusions

- HIV+ children 2-14 years old with CD4>500cells/µl receiving ART in rural African clinics employing streamlined ART delivery had 89% retention in care; 92% of those tested had viral suppression at 48 weeks
- Streamlined nurse-driven care systems can deliver safe and effective ART care to HIV+ children
- As nations seek to achieve universal ART for children, similar programs should be considered

Acknowledgments : *Research reported in this [publication/poster/presentation/press release] was supported by Division of AIDS, NIAID of the National Institutes of Health under award number U01AI099959 and in part by the President's Emergency Plan for AIDS Relief and Gilead Sciences. The content is solely the responsibility of the authors and does not necessarily represent the official views of the NIH, PEPFAR, or Gilead. The SEARCH project gratefully acknowledges the Ministries of Health of Uganda and Kenya, our research team, collaborators and advisory boards, and especially all communities and participants involved.*