

Standardized Pediatric Expedited Encounters for ART Drugs Initiative (SPEEDI): description of an innovative pediatric ART delivery model in Tanzania

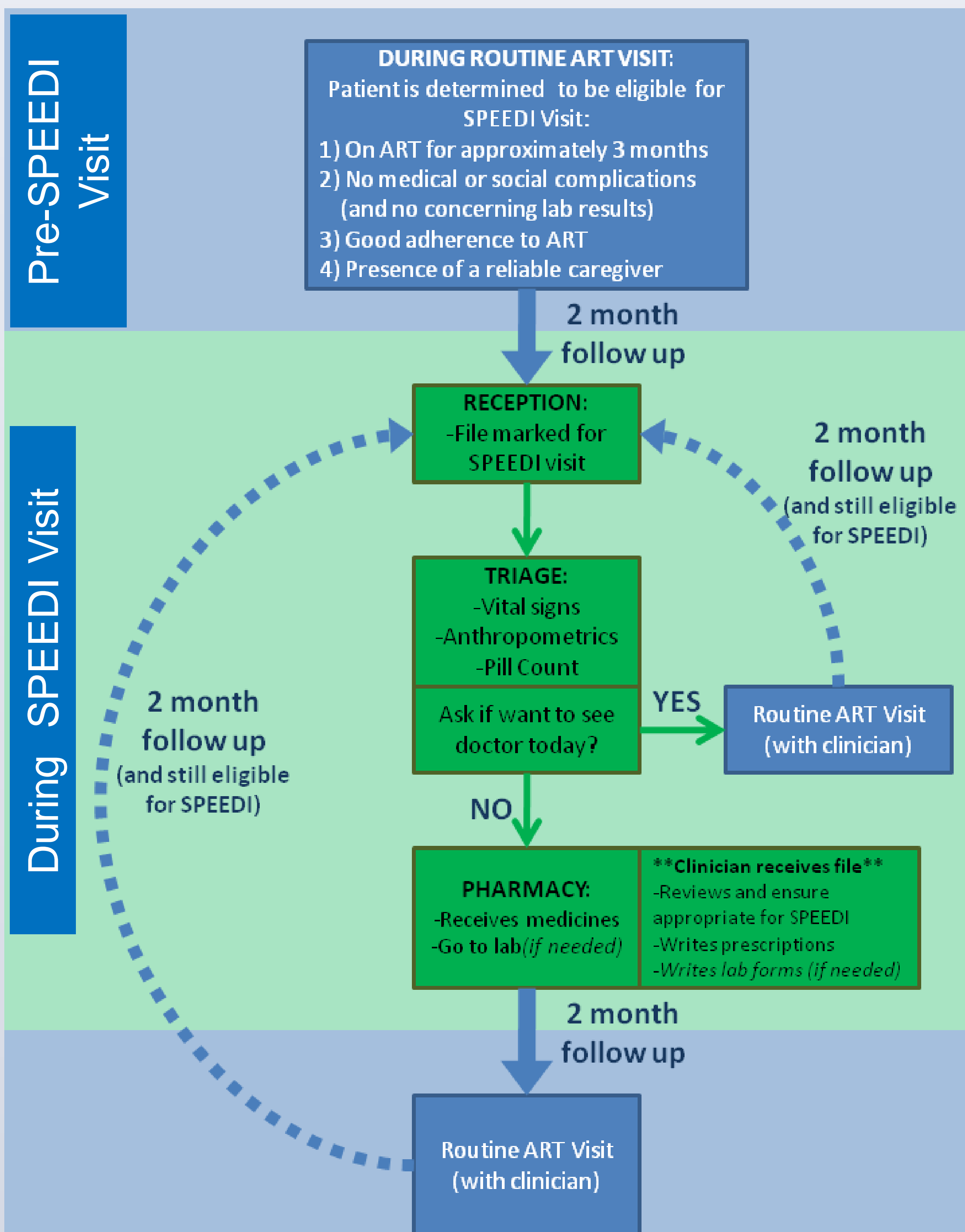
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1. BACKGROUND:

- As countries scale up antiretroviral therapy (ART) for children, innovative strategies to deliver quality services to children are needed.
- Differentiated ART delivery models have been successful in adults, but no such program has been described in children.
- We describe the Standardized Pediatric Expedited Encounters for ART Drugs Initiative (SPEEDI) at the Baylor College of Medicine Centre of Excellence in Mbeya, Tanzania.

2. MATERIALS AND METHODS:



- Retrospective chart review of patients with SPEEDI visits from 1st January 2013 to 31st December 2015.
- “Good Outcome” = all patients still active in care and those successfully transferred out;
- “Poor Outcome” = all deaths and lost to follow ups
- We compared outcomes of children with at least one SPEEDI visit between 1st January 2013 and 31st December 2015 and those on ART who visited between 1st March 2011 and 31st December 2012 (pre-SPEEDI implementation).

3. RESULTS:

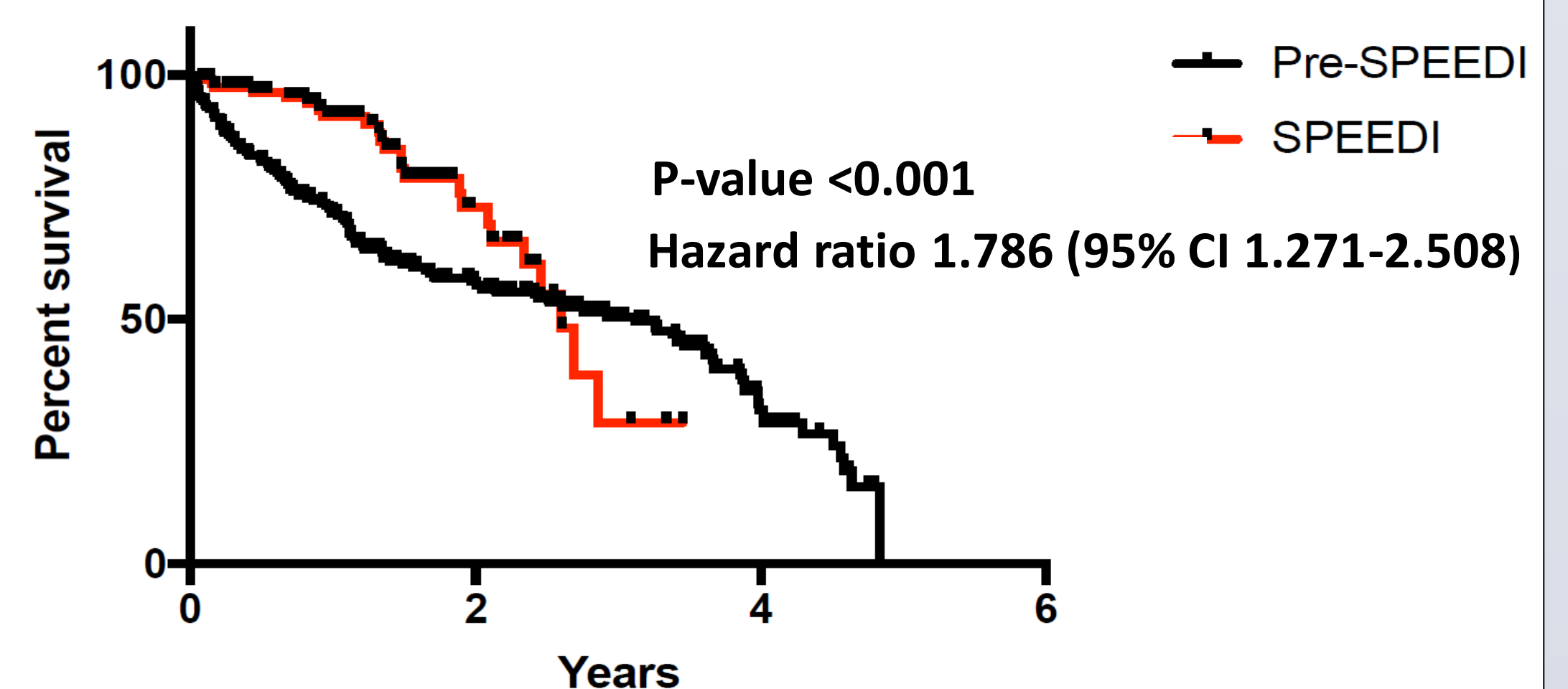
- Total of 1164 pediatric ART patients utilized SPEEDI, totaling 3493 SPEEDI visits.
- SPEEDI reached 51.3% (1164/2269) of the total pediatric ART patients at the COE and accounted for 7.7% (3493/44489) of all patient encounters.

Comparison of SPEEDI Patients and Pre-SPEEDI Patients

	SPEEDI Patients (n=1164)	Pre-SPEEDI Patients (n=1109)	p-value
Demographics			
% Females (n)	52.0% (605)	49.4% (548)	0.222
Median age (range)	11.8 yr (1.2-25.5 yr)	8.2 yr (0.1-21.7 yr)	<0.001
Median time on ART (range)	32 months (4-130 months)	29 months (4-117 months)	0.009
Outcomes			
Good Outcome	98.8%	94.5%	<0.001
Mortality rate	0.61 deaths per 100 patient-yrs	2.6 deaths per 100 patient-yrs	
LTFU rate	<0.1%	2.1%	<0.001

Plot of Kaplan Meier survival analysis comparing SPEEDI versus pre-SPEEDI patients.

Comparison of Survival in SPEEDI vs pre-SPEEDI groups



There was a statistically significant difference in the survival curves favoring SPEEDI patients (Hazard ratio log rank statistic = 1.786, 95% CI 1.271-2.508, $p < 0.001$).

4. CONCLUSION:

- SPEEDI was an effective, feasible way to delivery ART to children in our setting, leading good clinical outcomes and retention to care.
- The SPEEDI program safely and effectively expedited and spaced out ART visits for children and adolescents, and can serve as an adaptable ART delivery model for other resource limited settings.