

Reasons for delayed ART initiation in children with HIV in South Africa

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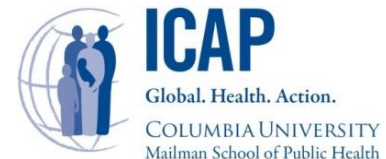
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Background

- Rapid initiation of antiretroviral therapy (ART) is critical for achieving good clinical outcomes in HIV+ children
- Current South African pediatric national ART guidelines:
 - **<5 years:** ART for all HIV+ children
 - “fast-track” initiation within 7 days of HIV diagnosis for all children <12 months
 - **5-15 years:** 2014 guidelines call for ART initiation at CD4+<500 (previously <350)
- We describe timing of ART initiation and reasons for delayed ART initiation among children enrolled in the Paediatric Enhanced Surveillance Study (PESS)

Pediatric Enhanced Surveillance Study (PESS)



- Prospective observational cohort study
 - 397 HIV+ children 1 month-12 years enrolled 2012-2014
 - 5 health facilities in Eastern Cape, South Africa
 - All children are managed in routine clinical HIV services
 - Study enrollment at ART eligibility as identified by health facility
 - 12-24 months study follow-up: quarterly visits with additional physical exams and laboratory measures
- Primary study outcomes
 - Virologic suppression at 12 and 24 months after ART
 - Clinical and care-related outcomes (alive, dead, and lost to follow-up) at 12 and 24 months after initiation of ART

ART initiation analysis: **Methods**

- Children alive and on study 3 months after enrollment
- Outcomes examined:
 - Proportions of ART eligible children initiated on ART by 30, 60 and 90 days from date of eligibility
 - Proportion of children <12 months started within 7 days (among children enrolled after March 2013 “rapid start” guidelines implementation)
 - Time to ART initiation
 - Reasons children not started on treatment as reported by health facility staff in medical charts and by caregivers
- Chi-square and Wilcoxon tests comparing demographic and clinical factors associated with starting ART

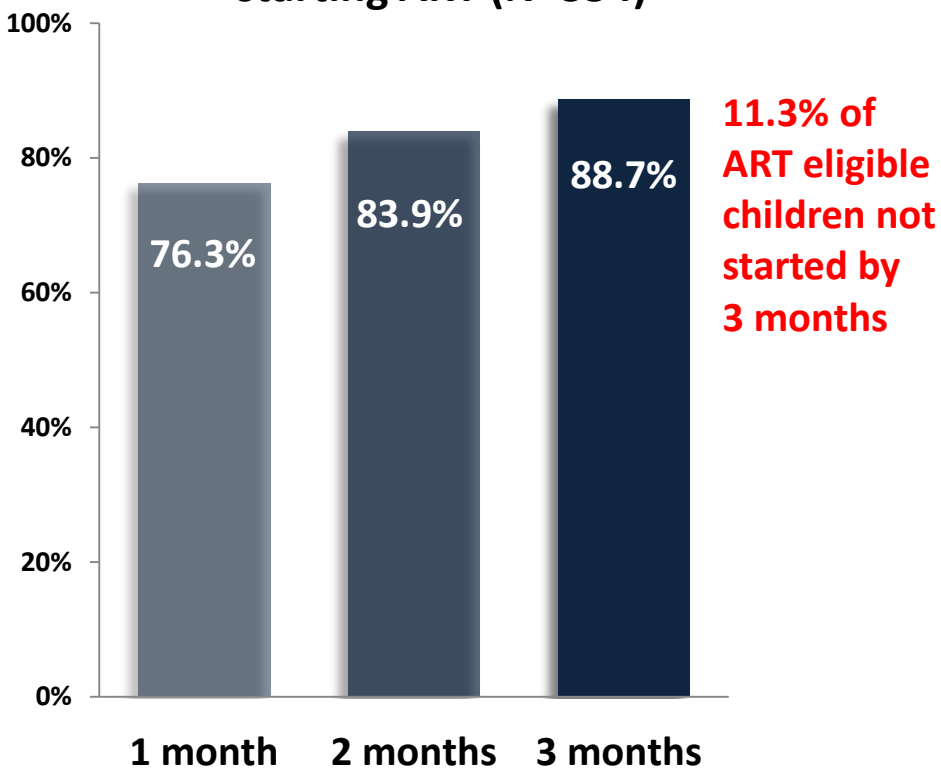
ART initiation analysis: Results

- 354 of 397 children enrolled in PESS were alive and attending study visits at 3 months after enrollment
 - 43 children died or withdrew within 90 days of enrollment

PESS ART initiation cohort (N=354)	N	%
Age		
Median, months (IQR)		26.5 (7.0-95.0)
0-12 months	121	34.2%
1-3 years	79	22.3%
3+-5 years	30	8.5%
>5 years	124	35.0%
Female	171	48.3%
TB (enrollment or history)	131	37.0%
Mother on ART	150	42.4%
Log viral load copies/mL, median (range)		5.6 (5.0-6.2)
CD4+ count cells/mm ³ , median (range)		571 (314-1156)
CD4+ percent, median (range)		17.8 (11.3-25.7)

ART initiation analysis: Results

Cumulative proportion of eligible children starting ART (N=354)



Median time to ART (N=354):
12 days (range: 0-519)

- Children started ART \leq 90 days (N=314, 88.7%): 8 days (0-89)
- Children started ART >90 days (N=31, 8.8%): 119 days (91-519)
- 9 (2.5%) children never started ART
 - 1 death, 4 study withdrawals, 4 remain in study (not started as of April 2015)

Characteristics of HIV+ children at ART eligibility by delayed initiation status

	Children delayed >3 months		Children started ≤3 months		p-value
	N	%	N	%	
	40	11.3%	314	88.7%	
Age					
Median, months (IQR)	26.0 (6.0-98.0)		29.5 (8.0-73.0)		0.90
0-12 months	13	22.5%	108	34.4%	
1-3 years	9	22.5%	70	22.3%	
3+-5 years	5	12.5%	25	8.0%	
>5 years	13	32.5%	110	35.4%	
Female	15	37.5%	156	49.7%	0.15
TB (at enrollment or history)	16	40.0%	115	36.6%	0.82
Primary caregiver: mother	34	85.0%	216	68.8%	0.03
Mother on ART	21	52.5%	129	41.1%	0.40
Log viral load copies/mL, median (range)	5.4 (4.9-6.0)		5.6 (5.0-6.3)		0.45
CD4+ count cells/mm ³ , median (range)	635 (422-1464)		565 (314-1138)		0.28
CD4+ percent, median (range)	18.4 (11.8-26.8)		17.5 (11.3-25.7)		0.63

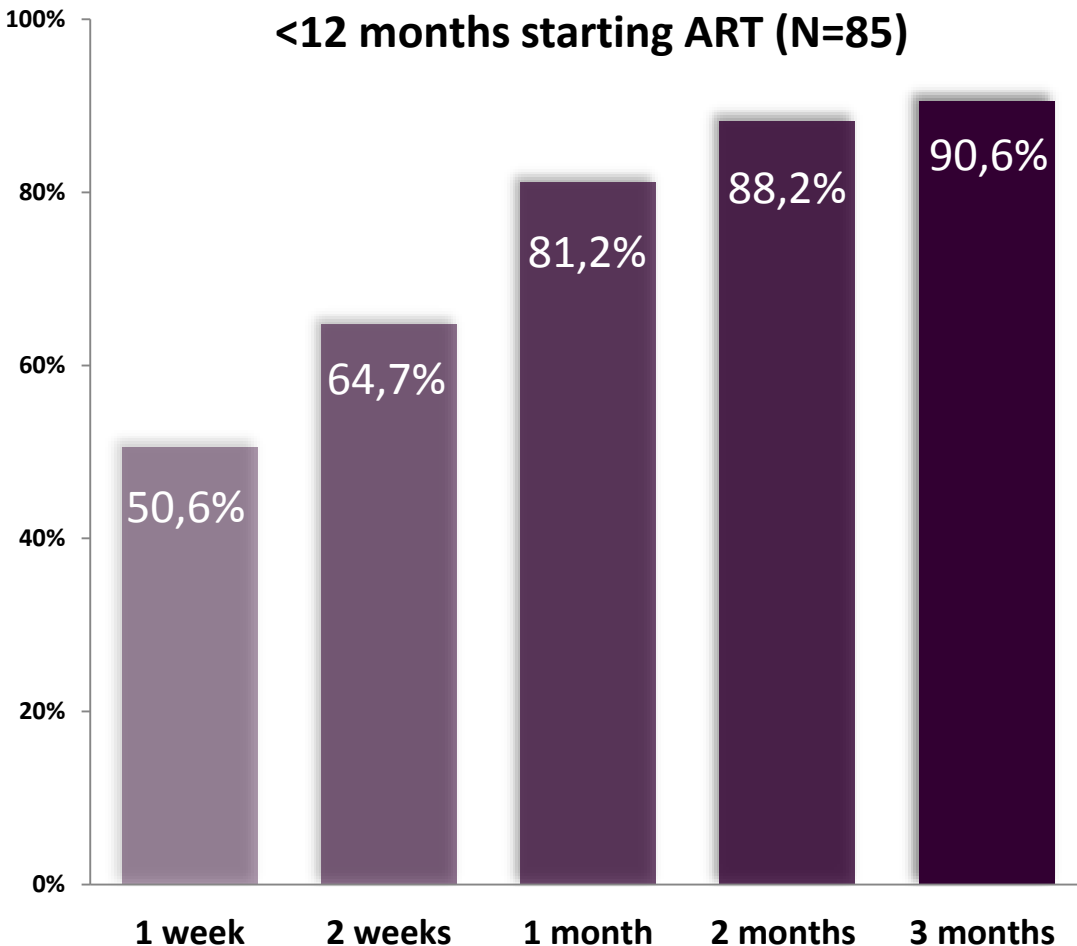
ART initiation analysis: Results

- Reasons for delayed ART initiation >90 days
 - 29 of 40 children who started >90 days after ART eligibility had data for reason not started

Reason for delay from health facility chart	N (%)
Adherence counseling not completed/accepted (including lack of treatment supporter)	19 (48%)
Caregiver did not return to facility for visit or medications	8 (20%)
TB treatment	2 (5%)
Not documented/unknown	11 (28%)

ART initiation analysis: Results

Cumulative proportion of children
<12 months starting ART (N=85)



85 children <12 months enrolled after March 2013

- Median time to ART: 8 days (0-127)
- 42 (49.4%) NOT started on ART within 7 days
 - Median time to ART: 19 days (8-127)
 - 33 had viral load >100,000 copies/mL
 - No differences in characteristics

Conclusions

- Three-quarters of ART eligible children were rapidly initiated on treatment within 30 days
 - 87% initiated ART by 90 days
- Only half of children <12 months started ART within 7 days per South African fast-track guidelines
- Most delays in ART initiation resulted from perceived adherence challenges
 - Delays for many younger children with high viral load
 - Children who had mothers as primary caregiver more likely to have delayed ART initiation
- Continued efforts are needed to rapidly initiate all eligible children on ART

THANK YOU

- PESS study participants and caregivers
- PESS study teams East London & Port Elizabeth
- Eastern Cape Department of Health
- Port Elizabeth Hospital Complex
- East London Hospital Complex
- US Centers for Disease Control & Prevention

