

# **Starting ART early: Progress and lessons from Zimbabwe's largest child cohort (299 words)**

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## **Introduction**

Mortality without Anti Retroviral Therapy (ART) is very high before the age of 2. In Zimbabwe early ART initiation has been supported since 2008 through Early Infant Diagnosis (EID) within Prevention of mother to Child Transmission (PMTCT) programmes and since 2010 through adoption of WHO early initiation guidelines for under 2's. Here we analyse changes in age at ART initiation within the context of these practice and policy changes.

## **Methods**

Since 2004, more than 5,000 HIV positive children (age < 15 at initiation) have been commenced on ART at Mpilo opportunistic infections (OI) clinic, Bulawayo, Zimbabwe, the only paediatric ART initiation site in the city. Data from this cohort were retrospectively analysed using STATA (version 10) The Mann-Whitney-U-Test was used to compare medians. Children were defined as those under 15 at ART initiation date.

## **Results**

During the study period median age at initiation declined, from 6.8 years (IQR 4.3 – 9.4) to 3.9 years (IQR 1.1 – 9.6). Major source of referrals for ART initiation were from the hospitals and clinics, as a result of provider initiated testing and counselling (PITC) after the children fell ill (see table 1).

Referrals for ART initiation from PMTCT progressively increased, but remained modest, referrals from VCT were minimal. (see table 1)

PMTCT referrals commenced ART at a median age of 1.2 years (IQR 0.6 – 2.2) significantly younger than other children ( $p < 0.00005$ )

## **Conclusions**

Currently much opportunity to address the high HIV mortality in the first 24 months of life is being missed, with later initiation being the norm.

While PMTCT referrals commenced ART much earlier than other children their median age at initiation was still too high

Voluntary Counselling and Testing (VCT) programmes focus almost exclusively on adults; innovative strategies such as HIV screening in children's clinics and integration of testing with childhood vaccination may be needed.

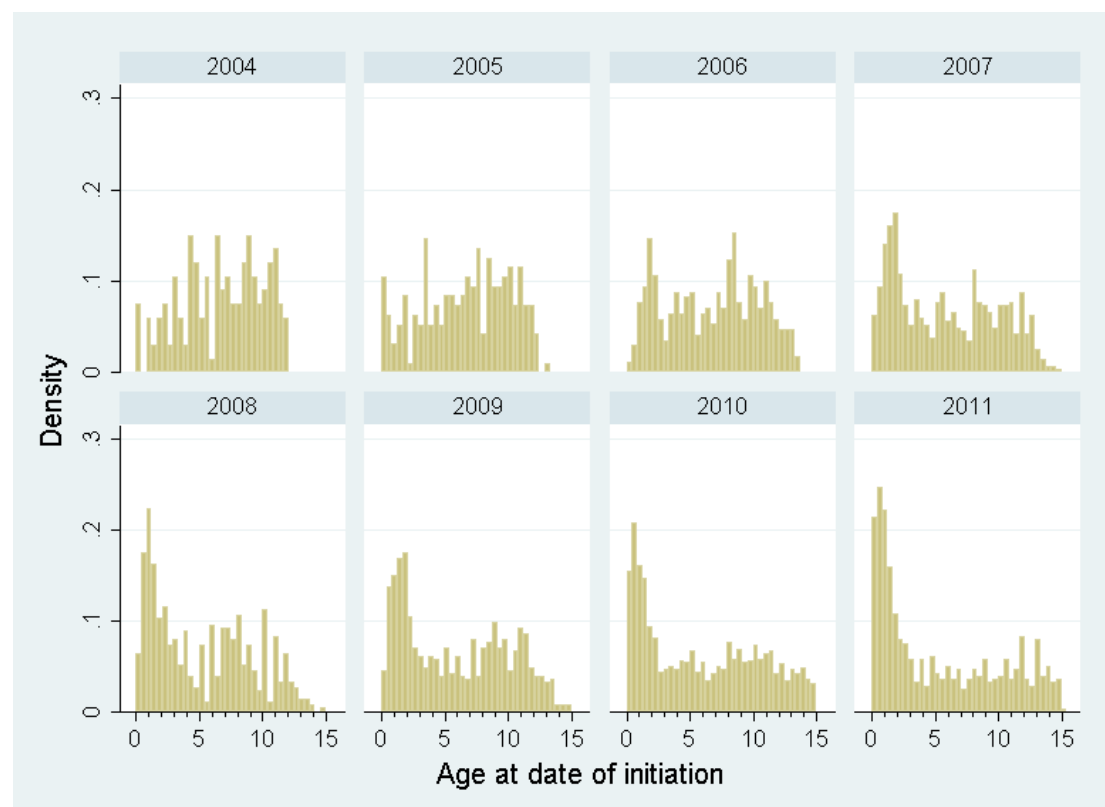
## Funding

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**Figure 1: Secular trends in the age distribution of children commencing ART at Mpilo OI Clinic, Bulawayo, Zimbabwe, between January 2004 and November 2011. Presented according to calendar year of initiation.**



**Table 1: Secular trends in the median age of children commencing ART at Mpilo OI Clinic, Bulawayo, Zimbabwe, between January 2004 and November 2011. The relative contribution of PMTCT and VCT programmes to those admissions is also shown.**

	2004	2005	2006	2007	2008	2009	2010	2011*
Children initiating ART	160	230	410	688	786	785	1,183	664
Median age of children initiating ART (IQR)	6.9 (4.3–9.4)	7.0 (3.7–9.6)	7.2 (3.6–9.8)	5.5 (2.0–9.4)	4.9 (1.6–8.4)	5.4 (1.8–9.6)	5.3 (1.5–10.0)	3.9 (1.1–9.6)
Percentage of commencing ART who are under two at date of initiation	9.4% (15/160)	13.5% (31/230)	13.9% (57/410)	24.6% (169/688)	28.9% (227/786)	26.8% (212/791)	30.6% (362/1183)	38.9% (258/664)
Percentage of commencing ART who are under one at date of initiation	3.75% (6/160)	7.4% (17/230)	3.4% (14/410)	8.6% (59/688)	12.6% (99/786)	10.3% (81/785)	17.6% (208/1183)	22.0% (146/664)
Percentage of children identified in hospital (PITC)	98.1% (157/160)	97.8% (225/230)	96.3% (395/410)	97.1% (668/688)	97.2% (764/786)	95.4% (749/785)	94.8% (1121/1183)	94.1% (625/664)
Percentage of children commencing ART who were PMTCT	0.6% (1/160)	0% (0/230)	0.2% (1/410)	1% (7/688)	1.4% (11/786)	2.5% (20/785)	3.6% (43/1183)	4.1% (27/664)

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referrals								
Percentage of children commencing ART who were VCT referrals	0% (0/160)	0% (0/230)	0% (0/410)	0% (0/688)	0.15% (1/786)	0.3% (2/785)	0.6% (7/1183)	0.5% (3/664)

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\*2011 data includes only initiations up until November 14th