

Supplementary Table 1. Predictors of orphanhood among infants, children and adolescents (<18 years of age) initiating ART at two HIV clinics in Johannesburg, SA, prior to propensity score matching (N=854)[†]

	Non-orphans (N=603)	Orphans (N=251)	OR* (95% CI)
Sex, n (%)			
Female	324 (73.6)	116 (26.4)	1.00
Male	279 (67.4)	135 (32.6)	1.71 (1.12 - 2.61)
Age at initiation (years), n (%)			
≤1	155 (93.4)	11 (6.6)	1.00
>1 - ≤5	237 (82.6)	50 (17.4)	1.17 (0.49 - 2.77)
>5 - ≤10	129 (54.4)	108 (45.6)	2.38 (0.86 - 6.56)
>10	82 (50.3)	82 (50.0)	4.42 (1.57 - 12.41)
Time period of ART initiation, n (%)			
June 2004 - May 2006	15 (42.9)	20 (57.1)	1.00
June 2006 - May 2008	87 (64.9)	47 (35.1)	0.24 (0.08 - 0.74)
June 2008 - May 2010	207 (71.6)	82 (28.4)	0.17 (0.06 - 0.51)
June 2010 - May 2012	201 (72.0)	78 (28.0)	0.25 (0.08 - 0.74)
June 2012 - May 2013	93 (79.5)	24 (20.5)	0.13 (0.03 - 0.50)
CD4+ measurement [‡] at ART initiation, n (%)			
Severe	217 (69.3)	96 (30.7)	1.00
Advanced	147 (69.3)	65 (30.7)	1.07 (0.63 - 1.82)
Mild	131 (76.6)	40 (23.4)	1.40 (0.76 - 2.56)
Not significant	108 (68.4)	50 (31.7)	1.27 (0.70 - 2.33)
WHO clinical stage at ART initiation, n (%)			
I or II	364 (68.2)	170 (31.8)	1.00
III or IV	239 (74.7)	81 (25.3)	0.38 (0.20 - 0.71)
TB at ART initiation, n (%)			
No	497 (71.0)	203 (29.0)	1.00
Yes	106 (68.8)	48 (31.2)	2.62 (1.24 - 5.56)
Anaemia at ART initiation, n (%)			
None	180 (63.6)	103 (36.4)	1.00
Mild	149 (73.4)	54 (26.6)	0.80 (0.48 - 1.35)
Moderate/severe	274 (74.5)	94 (25.5)	0.67 (0.41 - 1.09)
Anthropometric measurements [‡] at ART initiation, n (%)			
Normal/above normal	383 (74.4)	132 (25.6)	1.00
Below normal	134 (79.3)	35 (20.7)	1.12 (0.67 - 1.88)
Missing	86 (50.6)	84 (49.4)	
Baseline ART regimen			
NRTI			
ABC	269 (74.7)	91 (25.3)	1.00
TDF	14 (77.8)	4 (22.2)	0.51 (0.15 - 1.80)
d4T	320 (67.2)	156 (32.8)	1.12 (0.52 - 2.39)
PI [§]			
No	300 (57.3)	224 (42.7)	1.00
Yes	303 (91.8)	27 (8.2)	0.24 (0.12 - 0.48)
Site			
A	210 (85.7)	35 (14.3)	1.00
B	393 (64.5)	216 (35.5)	3.14 (1.86 - 5.30)
Age at ART initiation (years), median (IQR)	2.9 (1.0 - 7.4)	8.5 (5.1 - 11.5)	
CD4+ percentage [¶] at ART initiation (%), median (IQR)	19.8 (14.6 - 25.8)	15.5 (11.7 - 21.9)	
CD4+ absolute count [¶] at ART initiation (cells/μL), median (IQR)	270 (131 - 515)	281 (119 - 462)	
Haemoglobin at ART initiation (g/dL), median (IQR)	10.4 (9.4 - 11.4)	11.2 (10.3 - 12.0)	
Weight for age at ART initiation (z-score), median (IQR)	-1.3 (-2.3 - -0.6)	-1.1 (-1.9 - -0.2)	
BMI for age at ART initiation (z-score), median (IQR)	-1.0 (-2.4 - -0.2)	-1.7 (-3.2 - -0.5)	

ART = antiretroviral therapy; SA = South Africa; OR = odds ratio; CI = confidence interval; WHO = World Health Organization; TB = tuberculosis; NRTI = nucleoside reverse transcriptase inhibitor; ABC = abacavir; TDF = tenofovir; d4T = stavudine; PI = protease inhibitor; LPV/r = lopinavir/ritonavir; IQR = interquartile range; SD = standard deviation; BMI = body mass index. *ORs calculated from a logistic regression model for orphan v. non-orphan; predicted probabilities were used to create propensity scores to match patients for analyses of outcomes of orphans compared with non-orphans.

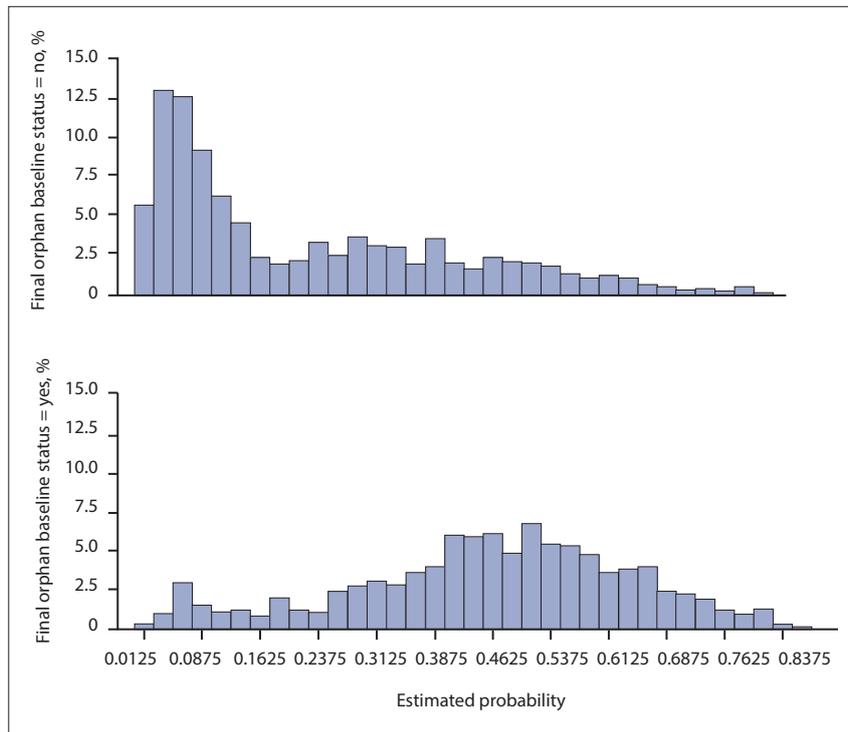
[†]CD4+ classification as follows: (i) Severe if children aged ≤12 months had a CD4+ percentage <20%, children aged 13 - 59 months had a CD4+ percentage <15%, or children and adolescents aged ≥5 years had a CD4+ count <200 cells/μL; (ii) advanced if children aged ≤12 months had a CD4+ percentage of 20 - 24%, children aged 13 - 59 months had a CD4+ percentage of 15 - 19%, or children and adolescents aged ≥5 years had a CD4+ count of 200 - 349 cells/μL; (iii) mild if children aged ≤12 months had a CD4+ percentage of 25 - 34%, children aged 13 - 59 months had a CD4+ percentage of 20 - 24%, or children and adolescents aged ≥5 years had a CD4+ count of 350 - 499 cells/μL; and (iv) not significant if children aged ≤12 months had a CD4+ percentage >35%, children aged 13 - 59 months had a CD4+ percentage >25%, or children and adolescents aged ≥5 years had a CD4+ count >500 cells/μL.

[‡]Normal or above normal defined as weight-for-age z-score for children ≤5 years of age ≥-2 SD or BMI-for-age z-score for children and adolescents >5 years of age ≥-2 SD; below normal defined as weight-for-age z-score for children ≤5 years of age <-2 SD or BMI-for-age z-score for children and adolescents >5 years of age <-2 SD.

[§]PI for all was LPV/r.

[¶]CD4+ percentage was calculated for children aged <5 years, and CD4+ absolute count for children and adolescents aged ≥5 years.

^{||}Weight for age was calculated for children aged ≤5 years, and BMI for age for children and adolescents aged >5 years.



Supplementary Fig. 1. Histogram for propensity scores of baseline orphan status.