

### Supporting Information

# **Mother-To-Child HIV Transmission using Single, Dual and Triple ARV Prophylaxis Regimens and their Correlates in Western Kenya: Chart Review**

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**Annex 1**

**Statistical associations between the covariates and babys' HIV Status at 6 weeks, 9 to <18 months and 18-24 months**

Independent variables	6 weeks				9 to <18 months				18-24 months			
	HIV-negative (n, %)	HIV-positive (n,%)	$\chi^2$	p-value	HIV-negative (n, %)	HIV-positive (n,%)	$\chi^2$	p-value	HIV-negative (n, %)	HIV-positive (n,%)	$\chi^2$	p-value
<b>Hemoglobin levels</b>												
<7mmHg	25 (92.6%)	2 (7.4%)	2.840	0.242	25 (92.6%)	2 (7.4%)	5.541	0.063	25 (92.6%)	2 (7.4%)	2.687	0.261
7-10mmHg	84 (90.3%)	9 (9.7%)			83 (87.4%)	12 (12.6%)			87 (90.6%)	9 (9.4%)		
>10mmHg	421 (94.8%)	23 (5.2%)			420 (94.2%)	26 (5.8%)			427 (94.9%)	23 (5.1%)		
Not stated	1065 (94.6%)	61(5.4%)			1043 (92.3%)	87(7.7%)			1090 (94.6%)	62 (5.4%)		
<b>WHO staging</b>												
I	738 (94.0%)	47 (6.0%)	3.228	0.358	735 (92.5%)	60 (7.5%)	6.140	0.105	754 (94.1%)	47 (5.9%)	3.719	0.293
II	450 (95.5%)	21 (4.5%)			449 (95.7%)	20 (4.3%)			461 (95.6%)	21 (4.4%)		
III	224 (93.3%)	16 (6.7%)			222 (92.1%)	19 (7.9%)			227 (93.0%)	17 (7.0%)		
IV	22 (100.0%)	0 (0.0%)			21 (95.5%)	1 (4.5%)			22 (100.0%)	0 (0.0%)		
Not stated	-	-			-	-			-	-		
<b>CD4 count cells</b>												
<350 cells	431 (92.7%)	34 (7.3%)	8.321	<b>0.016</b>	418 (89.1%)	51 (10.9%)	19.131	<b>&lt;0.0001</b>	443 (92.7%)	35 (7.3%)	7.094	<b>0.029</b>
350 to 500 cells	295 (93.7%)	20 (6.3%)			292 (93.6%)	20 (6.4%)			299 (94.3%)	18 (5.7%)		
>500cells	731 (96.3%)	28 (3.7%)			732 (95.6%)	34 (4.4%)			743 (96.1%)	30 (3.9%)		
Not stated	138 (91.4%)	13 (8.6%)			129 (85.4%)	22 (14.6%)			144 (91.7%)	13 (8.3%)		
<b>Duration between enrolment and ART initiation</b>												
<6 months	193 (92.8%)	15 (7.2%)	3.742	0.154	191 (92.7%)	15 (7.3%)	0.370	0.831	194 (92.8%)	15 (7.2%)	4.597	0.100
6-12 months	522 (96.1%)	21 (3.9%)			511 (93.9%)	33 (6.1%)			532 (96.4%)	20 (3.6%)		
>12 months	581 (94.6%)	33 (5.4%)			578 (93.5%)	40 (6.5%)			586 (94.5%)	34 (5.5%)		
Not stated	299 (92.0%)	26 (8.0%)			291(88.2%)	39 (11.8%)			317 (92.2%)	27 (7.8%)		

	6 weeks				9 to <18 months				18-24 months			
Independent variables	HIV-negative (n, %)	HIV-positive (n,%)	$\chi^2$	p-value	HIV-negative (n, %)	HIV-positive (n,%)	$\chi^2$	p-value	HIV-negative (n, %)	HIV-positive (n,%)	$\chi^2$	p-value
<b>Type of prophylaxis received</b>												
NVP	26 (92.9%)	2 (7.1%)	8.273	<b>0.041</b>	23 (85.2%)	4 (14.8%)	7.601	0.055	26 (92.9%)	2 (7.1%)	3.425	0.331
AZT	226 (97.0%)	7 (3.0%)			212 (90.2%)	23 (9.8%)			235 (96.7%)	8 (3.3%)		
HAART	1271 (94.6%)	72 (5.4%)			1262 (93.5%)	88 (6.5%)			1283 (94.6%)	73 (5.4%)		
None	60 (88.2%)	8 (11.8%)			60 (88.2%)	8 (11.8%)			67 (91.8%)	6 (8.2%)		
Not stated	12 (66.7%)	6 (33.3%)			14 (77.8%)	4 (22.2%)			18 (72.0%)	7 (28.0%)		
<b>NVP prophylaxis for the baby received</b>												
Yes	1514 (94.7%)	84 (5.3%)	4.382	<b>0.036</b>	1487 (92.8%)	116 (7.2%)	3.507	0.061	1536 (94.8%)	85 (5.2%)	0.950	0.330
No	24 (85.7%)	4 (14.3%)			26 (83.9%)	5 (16.1%)			30 (90.9%)	3 (9.1%)		
Not stated	57 (89.1%)	7 (10.9%)			1571(92.5%)	127 (7.5%)			63 (88.7%)	8 (11.3%)		
<b>TB status of the patient</b>												
No signs	1429 (94.7%)	80 (5.3%)	2.193	0.334	1411 (93.0%)	107 (7.0%)	8.282	<b>0.016</b>	1457 (94.8%)	80 (5.2%)	9.428	<b>0.009</b>
TB signs	61 (93.8%)	4 (6.2%)			61 (93.8%)	4 (6.2%)			61 (93.8%)	4 (6.2%)		
TB Treatment	4 (80%)	1 (20.0%)			3 (60.0%)	2 (40.0%)			4 (66.7%)	2 (33.3%)		
Not stated	101(91.0%)	10 (9.0%)			96 (87.3%)	14 (12.7%)			107 (91.5%)	10 (8.5%)		
<b>Duration between enrolment and delivery</b>												
<6 months	1153 (96.0%)	48 (4.0%)	14.002	<b>0.001</b>	1135 (94.5%)	66 (5.5%)	18.818	<b>&lt;0.0001</b>	1161 (96.1%)	47 (3.9%)	14.622	<b>0.001</b>
6-24 months	245 (90.7%)	25 (9.3%)			244 (88.7%)	31 (11.3%)			257 (90.8%)	26 (9.2%)		
24 months	82 (92.1%)	7 (7.9%)			80 (86.0%)	13 (14.0%)			87 (92.6%)	7 (7.4%)		
Not stated	115 (88.5%)	15 (11.5%)			112 (86.8%)	17 (13.2%)			124 (88.6%)	16 (11.4%)		
<b>Place of delivery</b>												
Home	211 (95.9%)	9 (4.1%)	0.881	0.348	205 (94.5%)	12 (5.5%)	0.718	0.397	217 (96.0%)	9 (4.0%)	0.641	0.423
Facility	525 (97.2%)	15 (2.8%)			513 (92.8%)	40 (7.2%)			541 (97.1%)	16 (2.9%)		

	6 weeks				9 to <18 months				18-24 months			
Independent variables	HIV-negative (n, %)	HIV-positive (n,%)	$\chi^2$	p-value	HIV-negative (n, %)	HIV-positive (n,%)	$\chi^2$	p-value	HIV-negative (n, %)	HIV-positive (n,%)	$\chi^2$	p-value
Not stated	859 (92.4%)	71 (7.6%)			853 (91.9%)	75 (8.1%)			871 (92.5%)	71 (7.5%)		
<b>Mode of delivery</b>												
C-section	47 (100.0%)	0 (0.0%)	1.682	0.195	43 (91.5%)	4 (8.5%)	0.164	0.685	48 (100.0%)	0 (0.0%)	1.731	0.188
Spontaneous Vaginal	753 (96.5%)	27 (3.5%)			736 (93.0%)	55 (7.0%)			775 (96.5%)	28 (3.5%)		
Not stated	795 (92.1%)	68 (7.9%)			1571 (92.5%)	127 (7.5%)			806 (92.2%)	68 (7.8%)		
<b>Feeding options at 6 weeks</b>												
EBF	1337 (96.2%)	53 (3.8%)	34.748	<0.0001	1305 (94.0%)	83 (6.0%)	13.983	0.001	1348 (96.2%)	53 (3.8%)	31.520	<0.0001
ERF	16 (84.2%)	3 (15.8%)			16 (84.2%)	3 (15.8%)			16 (84.2%)	3 (15.8%)		
MF	129 (86.0%)	21 (14.0%)			130 (86.7%)	20 (13.3%)			131 (86.8%)	20 (13.2%)		
Not stated	113 (86.3%)	18 (13.7%)			120 (85.1%)	21 (14.9%)			134 (87.0%)	20 (13.0%)		
<b>Feeding options at 9 months</b>												
MF	-	-			1077 (92.9%)	82 (7.1%)	0.720	0.698	1105 (94.8%)	61 (5.2%)	4.688	0.096
NBF	-	-			4 (100.0%)	0 (0.0%)			4 (100.0%)	0 (0.0%)		
RF	-	-			383 (93.9%)	25 (6.1%)			398 (97.3%)	11 (2.7%)		
Not stated	-	-			107 (84.3%)	20 (15.7%)			22 (83.6%)	24 (16.4%)		
<b>Feeding options at 18 months</b>												
MF	-	-			-	-			134 (93.7%)	9 (6.3%)	1.158	0.282
RF	-	-			-	-			916 (95.7%)	41 (4.3%)		
Not stated	-	-			-	-			579 (92.6%)	46 (7.4%)		

The table shows the independent categorical variables abstracted from the Ministry of Health registers with regard to the social and demographic characteristics for the mother-baby pairs. The number (n) and proportion (%) of HIV-negative and HIV-positive status at 6 weeks, 9 to <18 months and 18-24 months for different variables are shown. Not stated means there was no documentation in the Ministry of Health registers. Statistical analysis was determined by  $\chi^2$  statistics and the p-value are also shown for each variable.

## Annex 2

Logistic regression showing the associations between the covariates and babies' HIV Status at 6 weeks, 9 to &lt;18 months and 18-24 months

Independent variables	6 weeks				9 to <18 months				18-24 months			
	Odds Ratio	95% CI for OR		p-value	Odds Ratio	95% CI for OR		p-value	Odds Ratio	95% CI for OR		p-value
		Lower limit	Upper limit			Lower limit	Upper limit			Lower limit	Upper limit	
<b>Hemoglobin levels</b>												
<7mmHg	1.464	0.327	6.564	0.618	1.292	0.290	5.756	0.737	1.485	0.331	6.657	0.605
7-10mmHg	1.961	0.876	4.388	0.101	<b>2.335</b>	<b>1.133</b>	<b>4.814</b>	<b>0.022</b>	1.921	0.859	4.293	0.112
>10mmHg	Ref				Ref				Ref			
<b>WHO staging</b>												
I	Ref								Ref			
II	102878877.1	0.000		0.998	1.714	0.227	12.965	0.602	100701246.5	0.000		0.998
III	75386138.86	0.000		0.998	0.935	0.120	7.306	0.949	73591338.79	0.000		0.998
IV	115386947.2	0.000		0.998	1.797	0.229	14.102	0.577	120984963.7	0.000		0.998
<b>CD4 count cells</b>												
<350 cells	Ref				Ref				Ref			
350 to 500 cells	<b>2.059</b>	<b>1.232</b>	<b>3.444</b>	<b>0.006</b>	<b>2.627</b>	<b>1.674</b>	<b>4.121</b>	<b>&lt;0.0001</b>	<b>1.957</b>	<b>1.185</b>	<b>3.231</b>	<b>0.009</b>
>500cells	1.770	0.982	3.192	0.058	1.475	0.835	2.604	0.181	1.491	0.819	2.716	0.192
<b>Duration between enrolment and ART initiation</b>												
<6 months	Ref				Ref				Ref			
6-12 months	1.368	0.728	2.574	0.331	1.135	0.613	2.100	0.687	1.333	0.711	2.499	0.371
>12 months	0.708	0.405	1.240	0.227	0.933	0.580	1.502	0.776	0.648	0.368	1.140	0.132
<b>Type of prophylaxis received</b>												
NVP	0.577	0.115	2.905	0.505	1.304	0.358	4.752	0.687	0.859	0.163	4.532	0.858

	6 weeks				9 to <18 months				18-24 months			
Independent	Odds Ratio	95% CI for OR		p-value	Odds	95% CI for OR		p-value	Odds Ratio	95% CI for OR		p-value
AZT	<b>0.232</b>	<b>0.081</b>	<b>0.666</b>	<b>0.007</b>	0.814	0.346	1.911	0.636	0.380	0.127	1.134	0.083
HAART	<b>0.425</b>	<b>0.196</b>	<b>0.922</b>	<b>0.030</b>	0.523	0.242	1.128	0.098	0.635	0.267	1.513	0.306
None	Ref				Ref				Ref			
<b>NVP prophylaxis for the baby received</b>												
Yes	Ref				Ref				Ref			
No	3.004	1.019	8.855	0.046	2.465	0.929	6.539	0.070	1.807	0.541	6.040	0.337
<b>TB status of the patient</b>												
No signs	Ref				Ref				Ref			
TB signs	0.224	0.025	2.027	0.183	<b>0.114</b>	<b>0.019</b>	<b>0.688</b>	<b>0.018</b>	<b>0.110</b>	<b>0.020</b>	<b>0.609</b>	<b>0.011</b>
TB Treatment	0.262	0.023	2.931	0.277	<b>0.098</b>	<b>0.013</b>	<b>0.768</b>	<b>0.027</b>	<b>0.131</b>	<b>0.018</b>	<b>0.946</b>	<b>0.044</b>
<b>Duration between enrolment and delivery</b>												
<6 months	Ref				Ref				Ref			
6-24 months	0.488	0.214	1.112	0.088	<b>0.358</b>	<b>0.189</b>	<b>0.676</b>	<b>0.002</b>	0.503	0.221	1.146	0.102
24 months	1.195	0.498	2.866	0.689	0.782	0.390	1.567	0.488	1.257	0.527	2.999	0.606
<b>Place of delivery</b>												
Home	Ref				Ref				Ref			
Facility	1.493	0.643	3.464	0.351	0.751	0.386	1.460	0.398	1.402	0.610	3.222	0.426
<b>Mode of delivery</b>												
C-section	Ref				Ref				Ref			
Spontaneous Vaginal	0.000	0.000	-	0.998	1.245	0.431	3.595	0.686	0.000	0.000		0.998
<b>Feeding options at 6 weeks</b>												
EBF	Ref				Ref				Ref			
ERF	<b>0.244</b>	<b>0.142</b>	<b>0.416</b>	<b>&lt;0.0001</b>	<b>0.413</b>	<b>0.246</b>	<b>0.696</b>	<b>0.001</b>	<b>0.258</b>	<b>0.149</b>	<b>0.444</b>	<b>&lt;0.0001</b>

	6 weeks			9 to <18 months			18-24 months					
Independent	Odds Ratio	95% CI for OR		p-value	Odds	95% CI for OR		p-value	Odds Ratio	95% CI for OR		p-value
MF	1.152	0.309	4.297	0.833	1.219	0.326	4.562	0.769	1.228	0.328	4.597	0.760
<b>Feeding options at 9 months</b>												
MF					Ref				Ref			
NBF	-	-	-		1.166	0.734	1.853	0.514	<b>1.997</b>	<b>1.040</b>	<b>3.834</b>	<b>0.038</b>
RF	-	-	-		0.000	0.000		0.999	0.000	0.000	-	0.999
<b>Feeding options at 18 months</b>												
MF	-	-	-		-	-	-		Ref			
RF	-	-	-		-	-	-		1.501	0.713	3.157	0.285

The table shows the results of the logistic regression analysis. The significance value, Odds Ratio and 95% confidence intervals are also shown for independent variable taking certain reference categories for each variable. Home delivery for place of delivery, C-section for mode of delivery, Yes for baby NVP prophylaxis, WHO stage I for WHO staging, No TB signs for TB status, None for type of prophylaxis, EBF for feeding options at 6 weeks, MF for feeding options at 9 months and 18 months were considered as reference groups. Ref=Reference group.