**Supporting Information;** **A comparison of clinical outcomes amongst people living with HIV of different age groups attending Queen Elizabeth Central Hospital Outpatient ART Clinic in Malawi**

**S1 Table. Criteria for ART eligibility amongst those enrolling as young children.**

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| --- | --- |
| **Eligibility** | **N (%)** |
| Immunological cut-off | 257 (12.2) |
| DNA PCR infant | 54 (2.6) |
| HIV infected | 173 (8.2) |
| PSHD | 187 (8.9) |
| WHO stage | 1436 (68.2) |

**S2 Table. The duration on ART by age at ART enrolment.**

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| --- | --- | --- | --- |
|  | **0-1 year** | **More than 1 year-10years** | **More than 10years-19years** |
| Adult | 5882 (27.78) | 12386(60.60) | 2172(10.63) |
| Young adult | 688 (37.31) | 1074(58.24) | 82(4.45) |
| Older teenager | 247 (36.76) | 388(57.74) | 37(5.57) |
| Younger teenager | 275 (27.58) | 654(65.60) | 68(6.82) |
| Older child | 262 (23.21) | 738(65.37) | 129(11.43) |
| Younger child | 928 (43.67) | 1093(57.44) | 104(4.89) |

**S3 Table. Factors associated with adherence at QECH ART clinic.**

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| --- | --- | --- | --- | --- | --- |
|  | **Good Adherence n (%)** | **Odds ratio 95%CI** | **P-value** | **Adjusteda OR****95% CIa** | P-value |
| **Gender (total n)**Male (3673)Females (4,531) | 1,526(41.55%) 1,904 (42.02%)  | 1.0(0.9-1.1) |  0.664  |  |  |
| Age at ART InitiationAdult (6,111) young adult (647) older teen (196)younger teen (289) older child (278) young child (679)  | 2,824 (46.2%)1 307 (47.45%) 81 (41.33) 84 (29.07%) 52 (18.71%) 82 (12.08%)  |  1.0(0.9-1.2)0.8(0.6-1.09) 0.5 (0.4-0.6) 0.3(0.2-0.3)0.1(0.1-0.2) |  0.548 <0.177 <0.001  <0.001 <0.001  | 1.0(0.9-1.2)0.8(0.6-1.1)0.4(0.3-0.5)0.2(0.1-0.3)0.1(0.1-0.2) | 0.2850.259<0.001<0.001<0.001 |
| **TB Co-infection Status**No TB (5181 )Confirmed TB (304 )  |  2,570(49.60%)  143(47.04%)  | 1.1(0.9-1.3)  |  0.385  |  |  |
| **WHO stagea at initiation**WHO stage 1 & 2 (2,636) WHO stage 3 or 4 (5,568)  | 1,156 (43.85%) 2,274(40.84%)  | 1.4(1.3-1.4) | <0.001 |  |  |
| **Duration on ART**1year to less than 1year **(3,846 )** More than 1year-10years**(4,333**) more than 10years-19years**(24)** | 1,332 (34.6%)  2,086(48.14 %)  12(50.00%) | 1.7(1.6-1.9)1.8(0.8-4.2) | <0.0010.121 | 1.7(1.5-1.7)1.4(0.6-3.2) | <0.0010.360 |
| **Switch to alternate line****No (5,162)** **Yes (3,042)** | 2,006 (38.86) 1,424(46.81) | 1.2(1.2-1.3) | <0.001 | 1.4(1.3-1.5) | <0.001 |

a Adjusted for all variables with p-value of less than 0.2 on bivariate analysis with the adherence level which were being switched to alternate first line, WHO stage at ART initiation and duration on ART

**S4 Table. Risk factors for defaulting amongst all clinic attendees.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Defaulters n (%)** | **Hazard ratio (95%CI)** | **P-value** | **Adjusted HR****95% CIa** | **P-value** |
| Gender (total n)Male (11,542)Females (14,964) | 3475(30 %) 3918 (26%)  | 0.8(0.7-0.85) |  <0.001  | 0.8(0.7- 0.87) | <0.001 |
| Age at ART InitiationAdult (19,934 ) young adult (1,772 ) older teen ( 649 )younger teen (958) older child (1,103)young child (2,074)  | 5,302 (27 %) 626 (35 %) 43 (6.63 %) 43(4.49%) 30 (2.72%) 74 (3.57%)  |  1.5(1.4-1.7)1.4(1.2-1.7) 1.0 (0.8-1.2) 0.9(0.8-1.09)1.7(1.6-1.9) |  <0.001 <0.001 0.658  0.451 <0.001  | 1.3(1.1-1.5)1.1(1.1-1.4)0.9(0.7-1.2)0.7(0.6-1.01)1.5(1.2-1.7) | <0.0010.1920.9120.066<0.001 |
| TB Co-infection StatusNo TB (21,085 )Confirmed TB (710)  | 4,566 (22%)  324 (46%)  | 4.7(4.0-5.5)  |  <0.001  | 1.7(1.4-2.1)  | <0.001 |
| WHO stagea at initiationWHO stage 1 & 2 (10,488) WHO stage 3 or 4 (16,018)  | 335 (3.19%)  1,120(6.99%)  | 1.4(1.3-1.4) | <0.001 |  |  |
| AdherencePoor Adherence (4,774 ) Good Adherence (3,430)  | 1,671(35%) 1,482 (43%) | 0.9(0 .8-0.98) | 0.020 | 0.9(0.8-0.9) | 0.002 |
| Regiment doseOnce daily(8,367) Twice daily(17,079) | 1,286(15%) 5201(30%)  |  3.5(3.2-3.7) | <0.001  |  |  |
| ART GroupNiverapine based(9,002) Efavirenz based (8,4950 Protease Inhibitor based(1,313) Non-standard (6,636)  | 3,425 (38 %)  1,300 (15%) 162 (12%) 1,268(19 %)  | 0.2(0 .18-0.2)0.2( 0.17-0.25)0.4( 0.4-0.52) | <0.001<0.001<0.001 |  0.7( 0.6-0.8)0.4(0.3-0.6)1.9(1.7-2.1) | <0.001<0.001<0.001 |
| ART LineFirst Line(24,698 ) Second Line(1,808) | 7,151 (29%)  242 (13%) | 0.4(0.4-0.5) | <0.001 | 0.3(0.2-0.43) | <0.001 |

a Adjusted for factors with p-value<0.2 in bivariate analysis TB class, age at ART initiation, Adherence, WHO stage at ART initiation, ART group, frequency of medication and Gender.

b World Health Organization Clinical Staging for HIV and AIDS

**S5 Table. The median time to death amongst deaths in the clinic and the median time to defaulting amongst all clinic defaulters.**

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| --- | --- |
| **Dead or defaulted** | **Median time (IOR)** |
| Died | 4.73 (0.99-25.25 |
| Defaulted | 9.66 (1.31-35.60) |

**S6 Table. Default rates by 6 age group categorisation.**

|  |  |
| --- | --- |
|  | **Default rates**  |
| Adult | 0.0595 |
| Young adult | 0.1006 |
| Older teenager | 0.0948 |
| Younger teenager | 0.0657 |
| Older child | 0.0591 |
| Young child | 0.1223 |
| Overall | 0.0654 |

**S7 Table. Log-rank test comparing default rates by 6 age group categorisation.**

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| --- | --- | --- | --- |
|  | **Observed**  | **Expected** | **p-value** |
| Adult | 4212 | 4540.34 | <0.001 |
| Young adult | 496 | 352.00 |  |
| Older teenager | 155 | 116.23 |  |
| Younger teenager | 173 | 180.38 |  |
| Older child | 162 | 186.59 |  |
| Young child | 451 | 273.46 |  |