**Supplemental Table 1: Characteristics of patients with same day ART, by ART start year**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **ART same day** | | | | | | | | | |
|  | **Year of ART start** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** | **All** |
|  | **N** | **132** | **363** | **799** | **956** | **1,323** | **2,793** | **3,524** | **9,890** |
| Age (years) | 0-14 | 18.2% | 4.4% | 2.5% | 3.7% | 2.9% | 2.7% | 3.0% | 3.2% |
|  | 15-24 | 15.9% | 25.3% | 31.4% | 26.7% | 23.9% | 15.9% | 14.5% | 19.1% |
|  | 25-34 | 37.1% | 37.7% | 44.9% | 45.1% | 42.6% | 37.6% | 33.8% | 38.2% |
|  | 35-49 | 21.2% | 22.3% | 18.4% | 19.0% | 19.9% | 31.2% | 34.3% | 28.1% |
|  | 50+ | 7.6% | 9.6% | 2.8% | 5.1% | 10.3% | 12.4% | 14.2% | 11.1% |
|  | Missing | 0.0% | 0.6% | 0.0% | 0.4% | 0.4% | 0.2% | 0.3% | 0.3% |
| Sex | female non-pregnant / postpartum | 42.4% | 51.0% | 46.1% | 40.5% | 38.7% | 39.3% | 36.9% | 39.5% |
|  | female pregnant / postpartum | 27.3% | 32.0% | 45.9% | 48.6% | 43.5% | 29.7% | 26.3% | 33.5% |
|  | male | 30.3% | 17.1% | 7.5% | 10.6% | 17.6% | 30.9% | 36.4% | 26.7% |
|  | Missing | 0.0% | 0.0% | 0.5% | 0.3% | 0.2% | 0.1% | 0.5% | 0.3% |
| ART regimen | TDF+3TC+EFV | 15.2% | 33.6% | 80.5% | 88.9% | 91.4% | 94.1% | 94.2% | 88.9% |
| WHO stage | WHO stage 1 | 35.6% | 33.1% | 51.3% | 47.5% | 40.7% | 42.9% | 47.3% | 44.8% |
|  | WHO stage 2 | 6.1% | 11.8% | 9.6% | 10.8% | 12.8% | 20.4% | 25.7% | 19.0% |
|  | WHO stage 3 | 14.4% | 13.5% | 11.4% | 12.6% | 21.1% | 14.8% | 13.3% | 14.5% |
|  | WHO stage 4 | 18.9% | 21.8% | 13.9% | 17.1% | 16.9% | 11.6% | 4.9% | 11.1% |
|  | Missing | 25.0% | 19.8% | 13.8% | 12.1% | 8.5% | 10.3% | 8.8% | 10.5% |
| Body mass index | normal 18.5-<25 | 30.3% | 38.0% | 46.1% | 47.5% | 51.2% | 48.0% | 51.8% | 49.0% |
|  | <18.5 | 5.3% | 5.2% | 5.1% | 6.9% | 10.0% | 13.6% | 16.5% | 12.4% |
|  | overweight 25-<30 | 6.8% | 13.8% | 17.5% | 15.4% | 14.0% | 13.5% | 12.0% | 13.5% |
|  | obese >=30 | 1.5% | 4.7% | 4.9% | 6.5% | 4.1% | 5.4% | 3.5% | 4.5% |
|  | missing | 56.1% | 38.3% | 26.4% | 23.7% | 20.7% | 19.4% | 16.1% | 20.6% |
| HIV-related services | Adherence counseling | 0.0% | 0.3% | 0.0% | 0.1% | 0.0% | 0.1% | 0.0% | 0.0% |
| at ART baseline | Buddy named | 5.3% | 6.9% | 10.1% | 11.8% | 13.1% | 14.8% | 14.0% | 13.2% |
|  | Cotrimoxazole prophylaxis | 50.8% | 62.0% | 64.1% | 85.9% | 88.4% | 95.2% | 97.0% | 89.7% |
|  | INH prophylaxis | 2.3% | 17.6% | 26.7% | 38.7% | 51.3% | 59.5% | 57.8% | 50.9% |
|  | TB treatment | 0.0% | 0.0% | 0.5% | 0.4% | 0.4% | 0.6% | 0.5% | 0.5% |

**Supplemental Table 2: Factors associated with 6 month ART retention, interrupted time series model with interaction of pre-ART interval and time and discontinuous level effects** Ϯ

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Category | aIRR | (95% CI) | *p*-value |
| Time period (level effect, ref = period 1, pre-Option B+) | Period 2, Option B+ | 1.00 | (0.97, 1.02) | 0.86 |
| Period 3, Test & Start | 1.07 | (1.01, 1.13) | 0.02 |
| Pre-ART interval (ref = ART >30 days after diagnosis) | ART same day | 0.78 | (0.60, 1.02) | 0.07 |
| ART 1-30 days after diagnosis | 0.98 | (0.90, 1.05) | 0.53 |
| Rate of change per 3 month period, by pre-ART interval (slope, ref = ART >30 day after HIV diagnosis during Period 1) | Slope for reference category | 1.006 | (0.997, 1.015) | 0.22Ϯ Ϯ |
| ART same day, Period 1 | 1.000 | (0.967, 1.034) | 0.99 |
| ART same day, Period 2 | 0.997 | (0.985, 1.010) | 0.68 |
| ART same day, Period 3 | 1.004 | (0.986, 1.022) | 0.67 |
| ART 1-30 days, Period 1 | 0.996 | (0.986, 1.006) | 0.44 |
| ART 1-30 days, Period 2 | 0.992 | (0.983, 1.002) | 0.10 |
| ART 1-30 days, Period 3 | 0.983 | (0.968, 0.997) | 0.02 |
| ART >30 days, Period 2 | 0.993 | (0.917, 1.075) | 0.86 |
| ART >30 days, Period 3 | 0.985 | (0.966, 1.005) | 0.14 |
| Sex (ref = female non-pregnant) | Female pregnant | 1.06 | (1.05, 1.08) | <0.001 |
| Male | 1.02 | (1.01, 1.03) | <0.001 |
| Missing | 1.12 | (0.92, 1.37) | 0.27 |
| Age at HIV diagnosis  (ref = 25-34 years) | 0-14 | 1.22 | (1.16, 1.29) | <0.001 |
| 15-24 | 0.94 | (0.92, 0.96) | <0.001 |
| 35-49 | 1.04 | (1.03, 1.05) | <0.001 |
| 50+ | 1.07 | (1.05, 1.09) | <0.001 |
| missing | 1.02 | (0.87, 1.19) | 0.84 |
| Marital status (ref = Married/cohabitating) | Widow/divorce | 1.00 | (0.99, 1.02) | 0.68 |
| Single | 1.01 | (0.99, 1.02) | 0.36 |
| Missing | 0.97 | (0.95, 0.99) | <0.01 |
| Department of residence (ref = West) | North | 0.99 | (0.94, 1.06) | 0.83 |
| Artibonite | 0.96 | (0.92, 1.00) | 0.04 |
| South | 1.00 | (0.96, 1.03) | 0.90 |
| North-east | 1.03 | (0.98, 1.08) | 0.20 |
| North-west | 0.93 | (0.88, 0.98) | 0.01 |
| South-east | 1.03 | (0.98, 1.08) | 0.22 |
| Grand Anse | 0.95 | (0.90, 1.00) | 0.06 |
| Nippes | 0.98 | (0.94, 1.02) | 0.25 |
| Central | 1.09 | (1.03, 1.14) | <0.01 |
| Missing | 0.96 | (0.94, 0.99) | 0.01 |
| Mobility | Prior HIV care at >1 site at ART start | 1.08 | (1.02, 1.14) | 0.01 |
| BMI at ART baseline  (ref = normal 18.5-<25) | underweight <18.5 | 0.96 | (0.94, 0.97) | <0.001 |
| overweight 25-<30 | 1.04 | (1.02, 1.05) | <0.001 |
| obese >=30 | 1.04 | (1.02, 1.07) | <0.01 |
| Missing | 0.83 | (0.81, 0.86) | <0.001 |
| WHO stage at ART baseline  (ref = Stage 1) | Stage 2 | 1.02 | (1.00, 1.04) | 0.04 |
| Stage 3 | 1.00 | (0.98, 1.02) | 0.94 |
| Stage 4 | 0.99 | (0.98, 1.01) | 0.59 |
| Missing | 0.95 | (0.91, 0.98) | 0.01 |
| HIV related services (ref = No) | Adherence counseling | 1.06 | (1.04, 1.09) | <0.001 |
| Buddy named | 1.02 | (1.01, 1.04) | <0.01 |
| Cotrimoxazole prophylaxis | 1.10 | (1.06, 1.15) | <0.001 |
| INH prophylaxis | 1.02 | (1.00, 1.03) | 0.05 |
| TB treatment | 1.04 | (1.01, 1.06) | <0.01 |

aIRR = adjusted Incidence Rate Ratio; BMI = body mass index; WHO = World Health Organization; TB = tuberculosis.

Ϯ Model adjusted for fixed effects for calendar month. Ϯ Ϯ p-value for comparison to null value of slope=1.0.