**Supplemental Table S1.** Population Characteristics Overall and by Health Insurance Status.

| Characteristic<br>n (% of column) or median (IQR) | Total population | Uninsured | Medicaid | Medicare | Private Insurance | p value[a] |
|---|---|---|---|---|---|---|
| **n** | 1214 | 556 | 168 | 404 | 86 | |
| **Weight parameters** | | | | | | |
| **Significant weight gain** (≥3%BMI/year) | 291 (24.0%) | 180 (32.4%) | 29 (17.3%) | 64 (15.8%) | 18 (20.9%) | <0.001[c] |
| **Baseline BMI in observation period** | | | | | | |
| 18.5 - <25 kg/m$^2$ | 491 (40.4%) | 244 (43.9%) | 60 (35.7%) | 153 (37.9%) | 34 (39.5%) | 0.025[c] |
| 25 - <30 kg/m$^2$ | 455 (37.5%) | 208 (37.4%) | 58 (34.5%) | 162 (40.1%) | 27 (31.4%) | |
| >=30 kg/m$^2$ | 268 (22.1%) | 104 (18.7%) | 50 (29.8%) | 89 (22.0%) | 25 (29.1%) | |
| **Demographic characteristics** | | | | | | |
| **Age at first visit** | 42 (36, 48) | 39 (31, 39) | 44 (38, 51) | 45 (40, 51) | 41 (35, 49) | <0.001[b] |
| **Female gender** | 247 (20.3%) | 119 (21.4%) | 60 (35.7%) | 57 (14.1%) | 11 (12.8%) | <0.001[c] |
| **Mean household income/year for zipcode** | 39,564 (33,869, 49,405) | 40,767 (35,396, 49,591) | 35,761 (32,315, 44,652) | 39,311 (33,869, 49,544) | 47,130 (37,593, 49,639) | <0.001[b] |
| **HIV Transmission Category** | | | | | | |
| MSM | 548 (45.1%) | 279 (50.2%) | 38 (22.6%) | 183 (45.3%) | 48 (55.8%) | <0.001[c] |
| IDU or IDU+MSM | 79 (6.5%) | 21 (3.8%) | 30 (17.9%) | 25 (6.2%) | 3 (3.5%) | |
| Heterosexual sex | 254 (20.9%) | 124 (22.3%) | 42 (25.0%) | 73 (18.1%) | 15 (17.4%) | |
| Other (includes unknown) | 333 (27.4%) | 132 (23.7%) | 58 (34.5%) | 123 (30.4%) | 20 (23.3%) | |
| **Clinical Variables** | | | | | | |
| **Years living with HIV** | 6.07 (1.72, 12.0) | 3.08 (1.02, 8.25) | 8.09 (2.24, 13.1) | 10.1 (4.67, 14.1) | 6.07 (1.26, 12.1) | <0.001[b] |
| **On antiretroviral therapy (ART)** | 1170 (96.4%) | 523 (94.1%) | 163 (97.0%) | 398 (98.5%) | 86 (100%) | 0.001[d] |
| **On protease inhibitor-based ART (n=1170 on ART)** | 657 (56.2%) | 266 (50.9%) | 85 (52.1%) | 257 (64.6%) | 49 (57.0%) | <0.001[c] |
| **Initial CD4+ category in observation period** | | | | | | |
| <200 cells/µL | 374 (30.8%) | 185 (33.3%) | 55 (32.7%) | 116 (28.7%) | 18 (20.9%) | 0.11[c] |

| | | | | | | |
|---|---|---|---|---|---|---|
| 200-349 cells/µL | 285 (23.5%) | 120 (21.6%) | 42 (25.0%) | 105 (26.0%) | 18 (20.9%) | |
| ≥350 cells/µL | 555 (45.7%) | 251 (45.1%) | 71 (42.3%) | 183 (45.3%) | 50 (58.1%) | |
| **Virologic failure** | 638 (52.6%) | 273 (49.1%) | 90 (53.6%) | 244 (60.4%) | 31 (36.0%) | <0.001[c] |
| **Diabetes** | 185 (15.2%) | 58 (10.4%) | 28 (16.7%) | 91 (22.5%) | 8 (9.3%) | <0.001[c] |
| **Hypertension** | 732 (60.3%) | 293 (52.7%) | 101 (60.1%) | 290 (71.8%) | 48 (55.8%) | <0.001[c] |
| **HCV** | 178 (14.7%) | 49 (8.8%) | 52 (31.0%) | 68 (16.8%) | 9 (10.5%) | <0.001[c] |
| **Health Care Utilization** | | | | | | |
| **Months of observation** | 39.0 (25, 44) | 33.9 (23, 43) | 40.3 (26, 45) | 43.0 (32, 45) | 38.5 (23, 44) | <0.001[b] |
| **Infrequent HIV clinic follow up** | 261 (21.5%) | 145 (26.1%) | 32 (19.0%) | 57 (14.1%) | 27 (31.4%) | 0.003[c] |

Abbreviations: IQR = Intraquartile range; BMI = Body Mass Index (kg/m$^2$); MSM = Men who have sex with men; IDU = Injection drug use; ART = antiretroviral therapy; Virologic failure: 2 HIV-1 plasma RNA levels >1000 copies/ml ≥24 weeks after starting ART; hypertension = two blood pressure readings >140 mmHg systolic or >90 mmHg diastolic or ICD-9-CM codes (401.xx at ≥2 visits); diabetes = hemoglobin A1c ≥6.5% or CD-9-CM diagnosis codes 250.XX at ≥2 visits; Infrequent HIV clinic follow up = <7 HIV provider visits during observation period (lowest quartile).

[a] The statistic tests for a difference across all four categories.
[b] Kruskal-Wallis H test
[c] Pearson $X^2$
[d] Fisher's exact test

**Supplemental Table S2. Final Mixed Effects Model with Continuous BMI as the Response Variable**

| Covariate | Coefficient Estimate (SE) | P Value |
|---|---|---|
| **Race-Ethnicity/Insurance category** | | 0.69[a] |
| Insured white | reference | |
| Uninsured white | 0.05( 0.39) | 0.91 |
| Insured minority | 0.27( 0.29) | 0.35 |
| Uninsured minority | 0.06( 0.31) | 0.85 |
| **Baseline BMI in observation period** | | <0.0001 [a] |
| ≥30 kg/m$^2$ | reference | |
| 18.5 to <25 kg/m$^2$ | -12.57 (0.25) | <0.0001 |
| 25 to <30 kg/m$^2$ | -7.69 (0.25) | <0.0001 |
| **Age at first visit (years)** | -0.001 (0.01) | 0.93 |
| **Female gender** | 1.24 (0.23) | <0.0001 |
| **Initial CD4+ count in observation period** | | 0.89 [a] |
| ≥350 cells/μL | reference | |
| <200 cells/μL | -0.09 (0.22) | 0.67 |
| 200-349 cells/μL | -0.08 (0.23) | 0.72 |
| **Virologic failure** | -0.11 (0.20) | 0.56 |
| **Years living with HIV** | -0.02( 0.02) | 0.31 |
| **ART type** | | 0.79 [a] |
| ART without PIs | reference | |
| ART with PIs | -0.01( 0.26) | 0.97 |
| No ART | 0.30 (0.53) | 0.57 |
| **Months of observation** | -0.01 (0.01) | 0.25 |
| **Infrequent HIV clinic follow-up** | -0.01 (0.26) | 0.97 |
| **Time (year since baseline BMI)** | -0.16 (0.14) | 0.26 |
| **Time × Race-Ethnicity/Insurance category** | | <0.0001 [a] |
| White with insurance | reference | |

| | | |
|---|---|---|
| White without insurance | 0.004 (0.16) | 0.98 |
| Minority with insurance | -0.19 (0.12) | 0.10 |
| Minority without insurance | 0.29 (0.12) | 0.02 |
| **Time × baseline BMI in observation period** | | <0.001 [a] |
| ≥30 kg/m$^2$ | reference | |
| 18.5 to <25 kg/m$^2$ | 0.40 (0.10) | <0.0001 |
| 25 to <30 kg/m$^2$ | 0.30 (0.10) | 0.003 |
| **Time × initial CD4+ count in observation period** | | <0.0001 [a] |
| ≥350 cells/μL | reference | |
| <200 cells/μL | 0.42 (0.09) | <.0001 |
| 200-349 cells/μL | 0.08 (0.10) | 0.38 |
| **Time × Virologic failure** | -0.16 (0.08) | 0.04 |
| **Time × ART type** | | 0.06 [a] |
| ART without PIs | reference | |
| ART with PIs | 0.13 (0.08) | 0.12 |
| No ART | -0.31 (0.23) | 0.18 |

Abbreviations: SE= Standard error; BMI= body mass index; Virologic failure= 2 HIV-1 plasma RNA levels >1000 copies/ml ≥24 weeks after starting antiretroviral therapy; ART= Antiretroviral therapy; PI=protease inhibitor; Infrequent HIV clinic follow up= <7 HIV provider visits during observation period (lowest quartile)

[a] An overall effect of a categorical variable based on Type III sums of squares tests.