DO ART NCD Tables & Figures

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## Main paper tables (South Africa only)

* Table 1: Descriptive statistics of cardiovascular risk in the South Africa site of the DO ART study, by trial arm and gender
* Table 2: Poisson + linear regressions for community follow-up compared with clinic follow-up, and including VS
* Table 3: Poisson + linear regressions with VS as predictor, stratified by treatment arm; with interaction term for VS

  \*\*Note that regression analysis uses smoking as a binary variable (even though descriptive shows categorical, because some of the regressions don’t run otherwise - maybe getting small group problems)

## Distribution figures (South Africa only)

* Figure 1: CVD variables, comparing VS versus not

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## Table 1: Descriptive statistics of cardiovascular risk in the South Africa site of the DO ART study, by trial arm and gender (N = 1010)

|  | **Category** | **Clinic follow-up   n (%)** | **Community follow-up   n (%)** | **Women   n (%)** | **Men   n (%)** | **Total   n (%)** |
| --- | --- | --- | --- | --- | --- | --- |
| Age | 18-39 | 252 (72%) | 490 (74%) | 386 (76%) | 356 (70%) | 742 (73%) |
| 40-59 | 91 (26%) | 164 (25%) | 113 (22%) | 142 (28%) | 255 (25%) |
| 60+ | 7 (2%) | 6 (1%) | 6 (1%) | 7 (1%) | 13 (1%) |
| Gender | Women | 169 (48%) | 336 (51%) | -- | -- | 505 (50%) |
| Men | 181 (52%) | 324 (49%) | -- | -- | 505 (50%) |

| **ii) Lifestyle and other risk** | **Category** | **Clinic follow-up   n (%)** | **Community follow-up   n (%)** | **Women   n (%)** | **Men   n (%)** | **Total   n (%)** |
| --- | --- | --- | --- | --- | --- | --- |
| Smoking Status   [Baseline] | Not at all | 261 (75%) | 497 (75%) | 475 (94%) | 283 (56%) | 758 (75%) |
| Former | 4 (1%) | 3 (0%) | 2 (0%) | 5 (1%) | 7 (1%) |
| Current - occasional | 17 (5%) | 42 (6%) | 13 (3%) | 46 (9%) | 59 (6%) |
| Current - frequent | 68 (19%) | 118 (18%) | 15 (3%) | 171 (34%) | 186 (18%) |
| Days of exercise (per week)   [Endline] | 5-7 | 14 (4%) | 38 (6%) | 13 (3%) | 39 (8%) | 52 (5%) |
| 3-4 | 136 (39%) | 262 (40%) | 185 (37%) | 213 (42%) | 398 (39%) |
| 1-2 | 113 (32%) | 187 (28%) | 163 (32%) | 137 (27%) | 300 (30%) |
| 0 | 54 (15%) | 114 (17%) | 101 (20%) | 67 (13%) | 168 (17%) |
| Unknown | 33 (9%) | 59 (9%) | 43 (9%) | 49 (10%) | 92 (9%) |
| Vegetable intake   [Endline] | Always or usually | 53 (15%) | 122 (18%) | 103 (20%) | 72 (14%) | 175 (17%) |
| Sometimes | 166 (47%) | 326 (49%) | 266 (53%) | 226 (45%) | 492 (49%) |
| Never or rarely | 114 (33%) | 166 (25%) | 107 (21%) | 173 (34%) | 280 (28%) |
| Unknown | 17 (5%) | 46 (7%) | 29 (6%) | 34 (7%) | 63 (6%) |
| Prior stroke or heart attack   [Endline] | No | 328 (94%) | 606 (92%) | 469 (93%) | 465 (92%) | 934 (92%) |
| Yes | 5 (1%) | 9 (1%) | 8 (2%) | 6 (1%) | 14 (1%) |
| Unknown | 17 (5%) | 45 (7%) | 28 (6%) | 34 (7%) | 62 (6%) |

| **iii) Cardiovascular Risk** | **Category** | **Clinic follow-up   n (%)** | **Community follow-up   n (%)** | **Women   n (%)** | **Men   n (%)** | **Total   n (%)** |
| --- | --- | --- | --- | --- | --- | --- |
| Blood pressure   [Endline] | Normal | 171 (49%) | 334 (51%) | 263 (52%) | 242 (48%) | 505 (50%) |
| Elevated | 88 (25%) | 133 (20%) | 99 (20%) | 122 (24%) | 221 (22%) |
| Hypertension Stage 1 | 61 (17%) | 136 (21%) | 104 (21%) | 93 (18%) | 197 (20%) |
| Hypertension Stage 2 | 12 (3%) | 20 (3%) | 16 (3%) | 16 (3%) | 32 (3%) |
| Missing | 18 (5%) | 37 (6%) | 23 (5%) | 32 (6%) | 55 (5%) |
| BMI (kg/m^2)   [Endline] | <18.5 | 10 (3%) | 20 (3%) | 4 (1%) | 26 (5%) | 30 (3%) |
| 18.5-24.9 | 152 (43%) | 268 (41%) | 149 (30%) | 271 (54%) | 420 (42%) |
| 25-29.9 | 100 (29%) | 219 (33%) | 187 (37%) | 132 (26%) | 319 (32%) |
| 30+ | 70 (20%) | 113 (17%) | 142 (28%) | 41 (8%) | 183 (18%) |
| Missing | 18 (5%) | 40 (6%) | 23 (5%) | 35 (7%) | 58 (6%) |
| Hemoglobin A1C (%)   [Endline] | Normal | 235 (67%) | 403 (61%) | 341 (68%) | 297 (59%) | 638 (63%) |
| Prediabetes | 19 (5%) | 35 (5%) | 20 (4%) | 34 (7%) | 54 (5%) |
| Diabetes | 2 (1%) | 6 (1%) | 2 (0%) | 6 (1%) | 8 (1%) |
| Missing | 94 (27%) | 216 (33%) | 142 (28%) | 168 (33%) | 310 (31%) |
| Total cholesterol (mg/dL)   [Endline] | Normal | 324 (93%) | 584 (88%) | 449 (89%) | 459 (91%) | 908 (90%) |
| Borderline High | 1 (0%) | 9 (1%) | 7 (1%) | 3 (1%) | 10 (1%) |
| High | 0 (0%) | 2 (0%) | 1 (0%) | 1 (0%) | 2 (0%) |
| Missing | 25 (7%) | 65 (10%) | 48 (10%) | 42 (8%) | 90 (9%) |
| 10-year CVD risk score   [Endline] | <10% | 255 (73%) | 444 (67%) | 362 (72%) | 337 (67%) | 699 (69%) |
|  | 95 (27%) | 216 (33%) | 143 (28%) | 168 (33%) | 311 (31%) |

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## Table 2. Cardiovascular risk for community follow-up HIV care versus clinic follow-up care, South Africa (N = 1010).

|  | **Baseline Analysis** | | | **Adjusted Analysis** | | | **Extended Analysis (VS)** | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Relative Risk** | **95% CI** | **p-value** | **Adj. Relative Risk** | **Adj. 95% CI** | **Adj. p-value** | **Ext. Relative Risk** | **Ext. 95% CI** | **Ext. p-value** |
| Elevated BP | 0.93 | (0.79,1.09) | 0.368 | 0.95 | (0.81,1.11) | 0.49 | 0.94 | (0.81,1.1) | 0.452 |
| Overweight (BMI >= 25) | 1.03 | (0.91,1.17) | 0.633 | 1.01 | (0.9,1.14) | 0.809 | 1.01 | (0.89,1.13) | 0.929 |
| Elevated blood sugar (a1c >= 5.7) | 1.22 | (0.74,2) | 0.44 | 1.23 | (0.76,2.02) | 0.401 | 1.24 | (0.76,2.04) | 0.391 |
| Smoker [baseline] | 0.99 | (0.79,1.24) | 0.919 | 1.02 | (0.83,1.25) | 0.87 | 1.02 | (0.83,1.25) | 0.865 |

|  | **Baseline Analysis** | | | **Adjusted Analysis** | | | **Extended Analysis (VS)** | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Mean Difference** | **95% CI** | **p-value** | **Adj. Mean Difference** | **Adj. 95% CI** | **Adj. p-value** | **Ext. Mean Difference** | **Ext. 95% CI** | **Ext. p-value** |
| Systolic BP (mmHg) | -0.8 | (-2.16,0.56) | 0.247 | -0.62 | (-1.97,0.73) | 0.366 | -0.6 | (-1.96,0.75) | 0.383 |
| Diastolic BP (mmHg) | -0.03 | (-1.11,1.05) | 0.956 | 0.06 | (-1,1.12) | 0.916 | 0.08 | (-0.97,1.14) | 0.875 |
| BMI (kg/m^2) | -0.02 | (-0.68,0.64) | 0.964 | -0.12 | (-0.74,0.5) | 0.703 | -0.21 | (-0.83,0.4) | 0.492 |
| Hemoglobin A1c (%) | 0.04 | (-0.04,0.12) | 0.287 | 0.04 | (-0.03,0.12) | 0.272 | 0.05 | (-0.03,0.12) | 0.255 |
| Total cholesterol (mg/dL) | 3.13 | (-0.18,6.43) | 0.064 | 3.12 | (-0.18,6.41) | 0.064 | 2.56 | (-0.73,5.85) | 0.127 |

* Relative risk is estimated using a GEE poisson model (and log link).
* Mean Difference is estimated using a GEE linear model.
* Baseline model adjusts for site only
* Adjusted models includes site, age, smoking and gender.
* Extended model includes model endline viral suppression [binary] plus all adjustment variables

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## Table 3: Cardiovascular risk for persons virally suppressed versus not suppressed at endline, South Africa (N = 983).

|  | **Clinic follow-up, Adjusted   (N = 341)** | | | **Community follow-up, Adjusted   (N = 642)** | | | **Interaction   (N = 983)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Adj. Relative Risk** | **Adj. 95% CI** | **Adj. p-value** | **Adj. Relative Risk** | **Adj. 95% CI** | **Adj. p-value** | **Adj. p-value** |
| Elevated BP | 0.91 | (0.71,1.17) | 0.48 | 1.16 | (0.93,1.44) | 0.193 | 0.16 |
| Overweight (BMI >= 25) | 1.07 | (0.87,1.33) | 0.521 | 1.2 | (1.02,1.41) | 0.031 | 0.4 |
| Elevated blood sugar (a1c >= 5.7) | 0.78 | (0.34,1.79) | 0.564 | 1.04 | (0.55,1.95) | 0.902 | 0.692 |
| Current smoker [baseline] | 0.95 | (0.68,1.34) | 0.782 | 0.92 | (0.7,1.2) | 0.517 | 0.933 |

|  | **Clinic follow-up, Adjusted   (N = 341)** | | | **Community follow-up, Adjusted   (N = 642)** | | | **Interaction   (N = 983)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Adj. Mean Difference** | **Adj. 95% CI** | **Adj. p-value** | **Adj. Mean Difference** | **Adj. 95% CI** | **Adj. p-value** | **Adj. p-value** |
| Systolic BP (mmHg) | -1.64 | (-3.89,0.61) | 0.154 | 0.79 | (-0.9,2.48) | 0.359 | 0.06 |
| Diastolic BP (mmHg) | -0.98 | (-2.64,0.69) | 0.249 | 0.16 | (-1.19,1.51) | 0.816 | 0.203 |
| BMI (kg/m^2) | 0.57 | (-0.49,1.62) | 0.292 | 1.18 | (0.4,1.97) | 0.003 | 0.316 |
| Hemoglobin A1c (%) | 0.06 | (-0.08,0.19) | 0.4 | -0.08 | (-0.18,0.03) | 0.146 | 0.102 |
| Total cholesterol (mg/dL) | 2.07 | (-3.27,7.41) | 0.448 | 7.48 | (2.91,12.04) | 0.001 | 0.12 |

* Note, we drop 27 participants without endline viral load available.
* Relative risk is estimated using a GEE poisson model (and log link).
* Mean Difference is estimated using a GEE linear model.
* Adjusted models includes site, age, smoking and gender.
* The p-value for interaction term comes from the adjusted model with an interaction term between viral suppression and trial arm
* For smoker, the adjusted and extended analyses do not adjust for smoking

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## Figure 1: Distribution of cardiovascular risk, by viral suppression status at endline [dashed lines are group medians]

