Methods

HIV-positive patients attending HIV clinic visits at Raleigh Fitch Memorial Hospital in Manzini, Swaziland were eligible for screening for CVDRF:

- Had been on ART for at least a year
- ≥ 40 years of age
- No history of CVD
- No prior history of HTN
- Not pregnant or acutely ill

Of the 403 eligible patients, 229 were randomized into the INT arm and 174 into the REF arm. Of the 229 randomized, 218 (95%) completed at least one follow-up visit and had vital signs recorded. Baseline characteristics were similar in both arms (Table 1). There was no difference in primary outcomes between arms (Figure 3). Linkage to CVDRF care within one month was achieved by 85% and 82% in the INT and REF arms, respectively. While at 6 months follow-up only 20% of pts in INT and 21% in REF arms continued to receive documented CVDRF services, retention in HIV care was 98% in both arms. Among the 35 pts with DM, 9 initiated DM medication. There was a statistically significant mean reduction of 0.68% in HbA1c (CI: -1.26, -0.10) and 1.37% in INR (2.51, -0.24) in the INT and REF arms, respectively with no statistical difference between arms. Among the 40 pts on lipid medication, there was a statistically significant mean reduction in TC of -0.91 mmol/L (CI: -1.76, -0.65) in the REF arm and no significant Δ in the INT arm.

Secondary outcomes (intervention fidelity):

- Pts in each arm had an average of 2.3 and a median of 2.0 visits in which CVDRF services were documented during the 6 months of the study.
- Adherence with assigned study arm was higher in the INT vs. REF arms (86% vs. 66%, RR [CI]: 1.28 [1.10, 1.47]).

Secondary outcomes (HIV and CVDRF outcomes):

- 184/218 (84%) of INT pts and 194/219 (89%) of REF pts were on BP meds at baseline. Of those 122/184 (66%) initiated BP meds during the study.
- A higher proportion of eligible pts with HTN initiated BP meds in the INT arm (72% of those not on BP meds) than the REF arm (53% of those not on BP meds) (RR [95% CI]: 1.35 [1.01, 1.80]).
- Among pts with HTN, there was a statistically significant mean reduction in SBP in 6 months in both study arms (2 mmHg in both arms, but no statistically significant difference between arms. The median (IQR) change was –14 (-26.5, -3.5) in the INT arm and -17 (-25.5, -6) in the REF arm.
- Among the 35 pts with DM, 9 initiated DM medication. There was a statistically significant mean reduction of 0.68% in HbA1c (CI: -1.26, -0.10) and 1.37% in INR (2.51, -0.24) in the INT and REF arms, respectively with no statistical difference between arms. Among the 40 pts on lipid medication, there was a statistically significant mean reduction in TC of -0.91 mmol/L (CI: -1.76, -0.65) in the REF arm and no significant Δ in the INT arm.

Conclusion

Among pts with both HIV and CVDRF, linkage to CVDRF care following screening was high regardless of the management strategy assigned. Pts demonstrated a preference for integrated care, as evidenced by lower adherence with the REF management strategy. Marked improvements in SBP and HbA1c were noted in both arms among pts started on medication for CVDRF during the study while slight improvement in TC was seen only in the REF arm. Retention in HIV care was high in both arms, with no difference between patients receiving INT vs. REF management. In contrast, retention in CVDRF care was modest in both arms. This could be due either to disconnection of CVDRF management or discontinuation of documentation of CVDRF management; the latter is more likely given the sustained improvement in CVDRF care. The study showed that one-quarter of HIV patients ≥ 40 years on ART at Raleigh Fitch Memorial Hospital had HTN and/or ≥ 10% ten-year CVD risk. Substantial improvements in BP and diabetes control were achieved irrespective of management strategy, suggesting that such comorbidities can be effectively managed by HIV providers.

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