**Title**

Effect of a patient-centered phone call by a clinical officer at time of HIV testing or re-contact on linkage to care in rural Kenya

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**Background**

In the SEARCH HIV test-and-treat study, linkage to care rates declined after two years. After achieving '90-90-90', we noted that prior non-linkers and new infection cases were harder to link to care. We had separately observed that patients who linked but subsequently defaulted from care often re-engaged after a personal phone call from a clinical officer. We therefore tested whether a phone call to patients at time of initial HIV diagnosis or, among those not currently in care, at time of re-contact at community health campaigns (CHC) or home-based testing (HBT) could improve linkage.

**Methods**

We conducted a nested randomized controlled trial during year two of the SEARCH study (NCT01864603; August-December 2016). Previously diagnosed HIV+ adults currently not engaged in care (Never linked and Lost to follow up) and newly diagnosed HIV+ adults were randomized at CHC or HBT to receive an immediate phone call from a clinical officer or no phone call. All participants received ART messaging and a one-time transport voucher for linkage. Intervention participants also received a phone call establishing a personal connection, reinforcing ART messaging, discussing linkage barriers and scheduling appointment. Linkage was defined as clinic enrollment and completion of first clinic visit. We compared the proportion linking by 7 and 30 days after randomization between intervention and control arms using Pearson chi-square tests without continuity correction.

**Results**

A total of 130 participants were randomized (68 intervention, 62 control); 88 (68%) were newly diagnosed and 42 (32%) were not currently in care. Median age was 31 years (IQR 27-40), 26.9% were male. Participants in the intervention group were more likely than those in the control group to link to care by 7 days (24/68, 35.3% vs. 12/62,19.4%, p=0.043). The effect of the intervention was maintained at 30 days (28/68, 41.1% vs. 15/62, 24.2%, p=0.040).

**Conclusion**

A single phone call from a clinical officer to participants at the time of HIV testing or re-contact significantly improved linkage to care. However, overall linkage rates were low two years after initiation of universal test-and-treat. As the demographics of new diagnoses change and 'hard to engage' patients comprise an increasing proportion of those not linked, additional innovative linkage interventions are needed.