**Title**

Who Remains Untested Following Near-Universal (>95%) Population HIV Testing?

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**Background**

As HIV testing and treatment uptake increases in sub-Saharan Africa, with some settings achieving UNAIDS 90-90-90 targets, HIV-infected persons who remain unaware of their status are likely to contribute disproportionately to HIV-associated morbidity and transmission. We sought to characterize persons that remain untested for HIV despite living in communities that have achieved near-universal (>95%) population HIV testing in the SEARCH Trial.

**Methods**

Over two years, the SEARCH “test and treat” trial (NCT01864683) achieved UNAIDs 90-90-90 targets in 16 intervention communities in Kenya and Uganda using a community-based HIV testing strategy of annual multidisease community health campaigns (CHC) followed by home-based testing for CHC non-attendees, and universal antiretroviral treatment (ART) via streamlined care, as previously described. We sought to characterize stable (≥6 months in community), adult (≥15) residents of SEARCH intervention communities that were enumerated by door-to-door census at study baseline, but did not test with SEARCH over two years of intervention, and to compare characteristics of these “non-testers” to adults who tested at least once. Univariate comparisons used χ2 tests or t-tests as appropriate, and multivariate logistic regression was used to evaluate factors associated with the outcome of never testing.

**Results**

At study baseline, 77,774 stable adult residents were enumerated by door-to-door census. After two years of intervention, 74,324 (95.6%) residents had tested for HIV at least once, and 3,446 (4.4%) had not tested. Compared to ever testers (T), non-testers (NT) were significantly younger (mean age NT: 32.5 vs. T: 35.2 years; p=), and greater proportions were male (NT: 63% vs. T: 44%), and single (NT: 71% vs. T: 36%). Non-testers reported greater mobility in the year prior to the baseline study census than testers (NT: x months out of community vs. y in T), and a higher proportion worked in high-risk, non-formal sector jobs (awaiting #s). Non-testing was more common in southwestern Uganda (5.6%) and Kenya (5.2%) than eastern Uganda (3.0%).

**Conclusions**

Following a two-year “test and treat” intervention that exceeded UNAIDS 90-90-90 targets, adults who did not participate in HIV testing tended to be ((more mobile, younger, male and single)), in comparison with adults who tested for HIV.  Risk factors for non-testing may reflect mobility out of the community, as well as greater difficulty in engaging younger, mobile populations in HIV and health care-related outreach.