Increasing Adolescent HIV Testing with a Hybrid Mobile Strategy in Uganda and Kenya

K Kadede, T Ruel, E Bukusi, TD Clark, ED Charlebois, M Petersen, MR Kamya, DV Havlir, G Chamie, and SEARCH team

SEARCH
SUSTAINABLE EAST AFRICA RESEARCH IN COMMUNITY HEALTH

Background

- Ensuring adequate HIV testing coverage among adolescents in sub-Saharan Africa is crucial given the increased HIV risk faced during transition into adulthood.
- National survey data estimate that <20% of African adolescents know their HIV status.

Study Objectives

- We sought:
  - To increase adolescent HIV testing across rural communities in Uganda and Kenya using a hybrid mobile testing approach, and
  - To identify predictors of undiagnosed HIV among the HIV-infected adolescents.

Methods

Study Population

- From 2013-2014 we enumerated 116,326 adolescents (10-24 years) residents of 32 communities in eastern Uganda and western Kenya (N=16) and assessed HIV testing coverage and predictors of HIV testing.

Health (SEARCH) Trial (NCT01864603) is an NIH- and
al that will quantify the health, economic and educational
viral therapy (ART) using a streamlined care delivery
ndependent control cluster-randomized trial
nponents of the SEARCH intervention (N=16) and
umcision and 24-week community wide
idelines. cluster-randomized HIV test and treat trial
04 count with streamlined delivery compared to CD4-
incidence, population health, and economic
HIV testing campaigns
pulation of approximately
ree regions: a)
Uganda (n=10), and c)
Randomization to
es matched based on
mmunity trial. HIV
ity cohort design
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ehold; b) annual testing campaigns (offering population-

- 88,694 adolescents (85%) were enumerated stable residents living in community ≥6 months in the year prior to the cer

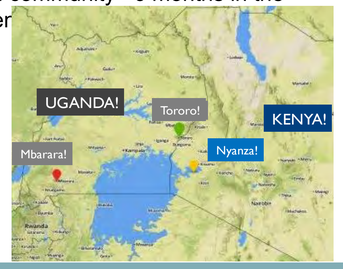


Figure 1: Map of the three regional sites of community enrollment in the SEARCH Trial.

Methods

- In each community we performed a hybrid testing strategy of 2-week mobile, multi-disease community health campaign (CHC) that included HIV testing, counseling (HTC) and linkage to care, as well as multi-disease (e.g. malaria, hypertension, diabetes) prevention, treatment and referral services.
- CHC non-participants were then approached for HBT over an average of 1-2 months.

Analysis

- We measured stable adolescent HIV testing coverage and prevalence among all enumerated adolescents.
- We determined factors associated with prevalent HIV and predictors of self-reported newly diagnosed HIV among HIV+ adolescents, using multivariable logistic regression and accounting for clustering by household.

Results

HIV Testing Coverage

- **88%** (86,421) of 98,694 stable adolescent residents tested for HIV using a hybrid strategy
- **86%**, **90%**, and **88%** in early (10-14 years), mid (15-17) and late (18-24) stable adolescents tested for HIV, respectively.
- Self-reported prior HIV testing was 9%, 24%, and 50% in early, mid and late adolescents who tested for HIV, respectively

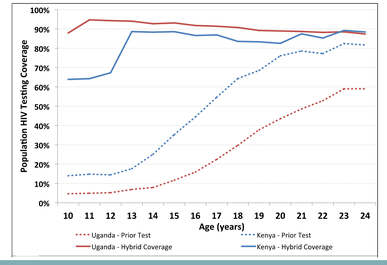


Figure 2: HIV testing coverage and self-reported prior HIV testing by age and country

Results continued

HIV Prevalence

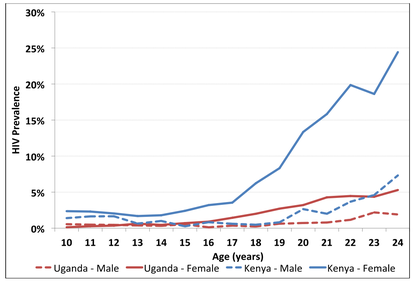


Figure 3: HIV prevalence among adolescents by age, country and gender

Factors associated with increased risk of HIV among stable adolescents

- Female (aOR=3.0, 95% CI: 2.6-3.5) vs. male
- Kenya (aOR=4.0, 95% CI: 3.5-4.4) vs. Uganda residence
- Late Adolescence (aOR=2.6, 95% CI: 1.9-3.5) vs. early
- Non-single marital status: Married aOR=2.7, 95% CI: 2.3-3.1; Widowed/Divorced/Separated aOR=7.4, 95% CI: 5.7-9.6, vs. single
- Self-reported prior HIV testing (aOr=1.6, 95% CI: 1.4-1.9) vs. no prior testing
- Mobility in the year prior to census enumeration (aOR=1.1 for each month away from the community, 95% CI: 1.02-1.13, up to 5 months away, vs. no mobility)

New HIV Diagnosis

- In early, mid and late HIV+ adolescents, **61%, 69%** and **56%** reported newly diagnosed HIV, respectively.

Table 1: Percent of new HIV diagnoses by age and country, among all HIV+ adolescents

Adolescent Stage	Uganda	%	Kenya	%
Early (10-14)	68/120	57%	130/203	64%
No prior test	60/68	88%	99/130	76%
Last test Negative	8/68	12%	31/130	24%
Mid (15-17)	56/74	76%	63/99	64%
No prior test	36/56	64%	29/63	46%
Last test Negative	20/56	36%	34/63	54%
Late (18-24)	370/513	72%	425/918	46%
No prior test	204/371	55%	119/425	28%
Last test Negative	166/371	45%	306/425	72%

Results continued

- Overall, 51% of newly diagnosed HIV+ adolescents reported ever having a prior HIV test.

Predictors of new HIV Diagnosis among stable HIV+ adolescents who participated in HIV testing

- Male gender (aOR=2.0, 95% CI: 1.4-2.7)
- Ugandan residence (aOR=2.6, 95% CI: 2.1-3.3)
- Single status (OR=1.6, 95% CI: 1.2-2.1 vs. married)







Conclusions

- A hybrid mobile HIV testing strategy achieved significant increases in adolescent testing coverage (88%) compared to self-reported prior testing.
- The high proportion of HIV+ adolescents with newly diagnosed HIV (>50%) is likely due to a combination of increasing HIV risk with age and inadequate prior testing.
- Community-based, mobile testing initiatives to reach 90% of HIV+ adults can and should be leveraged to test adolescents and offer combination HIV prevention services.

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Contact: kevinadede@gmail.com; kkadede@kemri-ucsf.org