

HOSENG TRIAL (HOME BASED ORAL SELF-TESTING)

Evidence-Based Structural Intervention

INTERVENTION DESCRIPTION

Intended Population

- Underserved populations at risk for HIV infection

Goal of Intervention

- Increase HIV testing coverage

Brief Description

Home-Based Self-Testing (HOSENG) is a structural-level intervention aimed at increasing HIV testing through distribution of HIV self-test kits in rural Lesotho using a holistic approach. Oral fluid HIV self-test kits were left for household members who were not at home or declined testing during a home visit by an HIV testing campaign team. The prepacked kit includes pictorial and written instruction for use in the local language (Sesotho), along with a written request to consult the village health worker within 2 weeks after use of the test, irrespective of the result. The kit contains the name of the absent household member before dispensation. One present household member is trained to correctly use the HIV self-testing kit and offered testing using the kit. The village health workers received a list of all household members with dispensed self-testing kits and dates due to return. The village health worker revisited all households 2–4 weeks after the reported date of the absent family member's return to collect the HIV self-testing kit if it had not been returned before. There was a follow-up period of 120 days after the home visit. The village health workers reread the result of the oral-fluid HIV self-test strip and documented the outcome. Multi-disease screening (i.e., tuberculosis, alcohol use) and HIV prevention services (e.g., male circumcision, condoms) were also offered. In the case of a reactive test, the health worker coordinated further blood-based testing to confirm the outcome. Persons with a reactive test on the day of the campaign were also given the opportunity to participate in Village-Based Anti-retroviral Therapy Trial (VIBRA) that tested village-based ART initiation with text reminders vs. the standard of care.

Theoretical Basis

- None reported

Intervention Duration

- At least one home visit after 2-4 weeks and follow-up within 120 days

Intervention Setting

- Community (rural Lesotho)

Deliverer

- Specifically trained team of a Lay Counselor, Nurse, and Campaign organizer for the campaigns
- Specifically trained Village Health Workers from the pre-existing Village Health Worker program

Delivery Methods

- HIV self-testing
- HIV testing
- Counseling
- Skills building

Structural Component

Access

- Increased access to HIV testing and counseling

Capacity Building

- Village health workers were trained in HIV testing and counseling, oral fluid self-testing, and handling stigma and disclosure

Physical Structure

- Services provided in non-traditional setting - HIV self-tests provided for testing at home
- Integrated services – HIV self-testing kits made available in antenatal clinic

INTERVENTION PACKAGE INFORMATION

An intervention package is not available at this time. Please contact **Niklaus D. Labhardt**, Division of Clinical Epidemiology, Department of Clinical Research, University Hospital Basel, Totengässlein 3, 4051 Basel, Switzerland.

Email: niklaus.labhardt@usb.ch for details on intervention materials.

EVALUATION STUDY AND RESULTS

Study Location Information

The original evaluation study was conducted in the Kingdom of Lesotho (Butha-Buthe and Mokhotlong districts); between July 2018 and December 2018.

Key Intervention Effect

- Increased HIV testing coverage

Study Sample

The study samples are categorized by participants aged 12 and older who are present during the day of the home visit and participants aged 12 and older who are absent during the day of the home visit. The baseline characteristics for the total sample were as follows:

Aged ≥ 12 years and present during home visit (n = 4459)

- 10% 12-19 years old; 11% 20-24 years old; 79% ≥ 25 years old
- Median age of 41 years (age range: 27 years to 62 years)
- 30% male persons; 70% female persons

Aged ≥ 12 years and absent during home visit (n = 3357)

- 38% 12-19 years old, 15% 20-24 years old, 48% ≥ 25 years old
- Median age of 24 years (age range 16years to 38 years)
- 64% male persons; 36% female persons

Recruitment Settings

Rural villages in the catchment areas of 20 health facilities of two districts

Eligibility Criteria

Participants were eligible if they resided in one of the two study location rural districts in Lesotho with a consenting village chief and at least one registered village health worker who agreed to participate and passed a skill assessment. Eligibility criteria also included being ages 12 or older, with a consenting representative aged 18 years or older in the household for those under 18 years old.

Assignment Method

This is a cluster-randomized study with individual villages being defined as a cluster except in cases where several villages shared one village health worker. 159 village clusters were randomly assigned to 1 of 2 study groups: the control (n = 79) or intervention group (n = 80). The authors stratified the randomization by district (Butha-Buthe vs. Mokhotlong), village size (≥ 30 households vs. < 30 households), and access to the nearest health facility (easy to reach vs. hard to reach). The villages were sampled (randomly selected proportional to the randomization stratification factors). An independent statistician was responsible for the computer-generated randomization list.

Comparison Group

Participants in the comparison arm received the standard of care during home-based HIV testing; every absent household member and those declining to test were referred to a nearby health facility for testing. Participants in both comparison and intervention arms received blood-based HIV testing and counseling, multi-disease screening, and HIV prevention services (e.g., voluntary male medical circumcision, condom distribution).

Relevant Outcomes Measured and Follow-up Time

- HIV testing coverage among household members aged 12 years or older within 120 days after the home visit defined as the proportion of household members aged 12 years or older living in a household of the surveyed area with a confirmed blood-based HIV test result.
- Blood-based HIV testing uptake irrespective of age, defined as the proportion of all household members eligible for blood-based HIV testing who were unaware of their HIV status and consented to blood-based point-of-care HIV testing.
- Oral-fluid HIV self-test uptake by household members aged 12 years or older, defined as the proportion of household members aged 12 years or older for whom a self-testing kit was left behind and who had a documented self-testing result within 120 days.

Participant Retention

Participant retention is not a criterion for the Structural Interventions Chapter.

Significant Findings on Relevant Outcomes

- HIV testing coverage of household members aged 12 years and older within 120 days was greater in the intervention group than the control group (81% vs 60%, Adjusted Odds Ratio [AOR] = 3.00, 95% confidence Interval [CI]: 2.52-3.59, $p < 0.0001$).
 - HIV testing coverage was higher in intervention households than control households for the following subgroups: male persons, adolescents 12-19 years old, and persons with primary education.

Considerations

Non-significant findings on relevant outcomes

- None reported

Negative findings

- No negative findings reported.

Other related findings

- 58% of absent household members who were aged 12 years or older and for whom an oral-fluid HIV test kit was left behind reported a HIV self-test result within 120 days and 42% of members who declined initial blood-based testing reported a HIV self-test within 120 days.
- The overall HIV positivity yield among absent or declining household members aged 12 years or older during the 120-day follow-up period was 1%.

Implementation research-related findings

- None reported

Process/study execution findings

- None reported

Adverse events

- None reported

Funding

Swiss National Science Foundation (grant numbers IZ07Z0_160876/1 and PCEFP3_181355)

REFERENCES AND CONTACT INFORMATION

Amstutz, A., Lejone, T. I., Khesa, L., Muhairwe, J., Bresser, M., Vanobberghen, F., Kopo, M., Kao, M., Nsakala, B. L., Tlali, K., Klimkait, T., Battegay, M., Labhardt, N. D., & Glass, T. R. (2020). [Home-based oral self-testing for absent and declining individuals during a door-to-door HIV testing campaign in rural Lesotho \(HOSENG\): A cluster-randomised trial](#). *Lancet HIV*, 7(11), e752-e761. doi: 10.1016/S2352-3018(20)30233-2

Researcher: Professor Niklaus D. Labhardt

Division of Clinical Epidemiology
Department of Clinical Research
University Hospital Basel
4051 Basel, Switzerland

Email: niklaus.labhardt@usb.ch

