

Secondary distribution of HIV self-tests in Kenya: opportunity for health facilities to promote partner and couple testing

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Presentation Outline

- Questions motivating HVST studies in Kenya
- Results of two studies on secondary distribution in Kenya
- Ongoing/upcoming studies on secondary distribution strategy
- Other studies on HIVST by IRDO and collaborators

Questions motivating recent studies in Kenya

- What are optimal HIVST distribution strategies for furthering key HIV prevention goals? Specifically:
 - Male partner and couples testing
 - Testing of priority and key populations
 - Testing as part of PrEP delivery ???
- How can HIVST be used in cost-effective ways to achieve prevention objectives?
- How might HIVST affect sexual decision-making?
 - Can HIVST reduce new infections because individuals make safer sexual decisions on the basis of test results?
 - Can this lead to sero-sorting? Increase condom use? Reduce partners?

Secondary distribution of self-tests – 2 completed studies by IRDO-UNC team

- Provision of multiple self-tests to index persons accessing routine healthcare may be useful in enhancing access to HIV testing within social networks
 - Pilot study in Kenya to test this strategy among pregnant and postpartum women, and FSW (Thirumurthy et al *Lancet HIV* 2016)
 - A randomized trial among women seeking antenatal and postpartum care (Masters et al *PLOS Medicine* 2016)

Self-test provision and follow-up

- Index participants (IPs)
 - Given multiple OraQuick Rapid HIV Tests
 - Study 1 (Pilot): 3 kits for ANC/PPC, 5 for FSWs
 - Study 2 (RCT): 2 kits for all participants
 - Educated on how to use self-tests and provided with written and pictorial instructions
 - Some encouragement to distribute self-tests to partners and clients; others *at own discretion*
- Follow-up interviews at 1, 2, 3 months
 - Focus on self-test usage and experience, violence and adverse events
 - Qualitative in-depth interviews with selected ppts

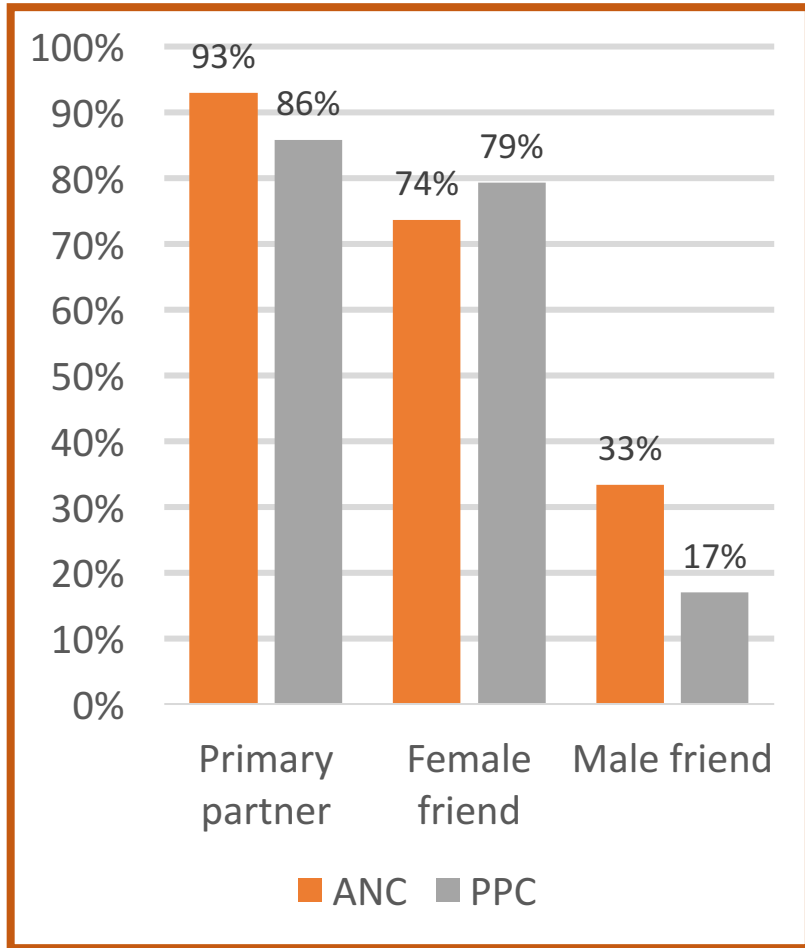


Aims of the two studies

- Both studies: Determine whether providing *multiple* self-tests to women who access routine healthcare services can promote partner and couple testing *and* facilitate safer sexual decision-making
 - Describe who receives self-tests through secondary distribution (sexual partners, FSWs' clients, friends, etc.)
 - Describe how self-tests are used (independently, as couple)
 - Describe decisions on sexual behavior following couple testing
 - Assess uptake of confirmatory testing and linkage to care
 - Assess safety of secondary distribution strategy
- Study 2 only: Evaluate the impact of HIVST on uptake of partner and couple testing compared to standard invitation coupons for testing at a clinic

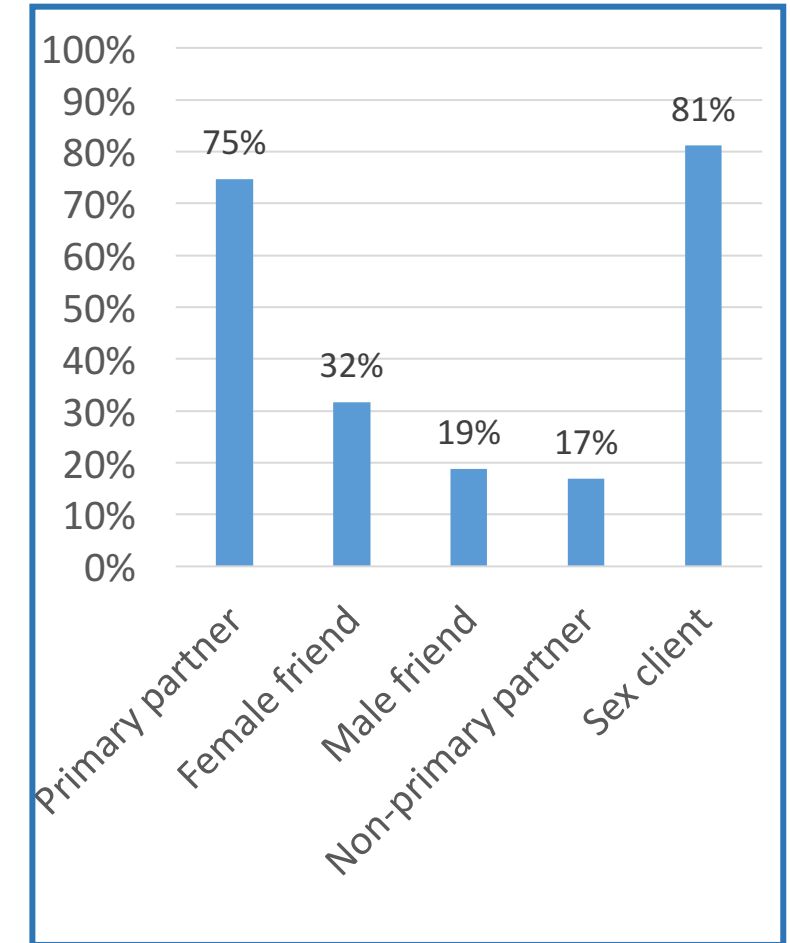
Study 1: Key findings

How self-test kits were distributed and used



Distribution by ANC and PPC women

- **280** enrolled (61 ANC, 117 PPC, 102 FSW)
- Total of 901 self-tests reported used by IPs or distributed by IPs to others
 - 192 self-tests used by IPs
 - 709 self-tests distributed to others (97%, 691 used)
- About 20% of kits offered were declined, and 15% of test kits distributed did not get used



Distribution by FSW

Couples testing occurred frequently

- For each self-test given to other persons, IPs were asked how self-testing took place (n=709)

	Antenatal care	Post-partum care	Female sex workers
Self-tests distributed by participant to male sexual partners, n	53	91	301
Self-tests distributed to and used by male sexual partners, n	53	91	298
Relationship to participant of sexual partner who used self-test			
Primary sexual partner*	53 (100%)	91 (100%)	64 (21%)
Non-primary sexual partner	..	..	23 (8%)
Commercial sex client	..	..	211 (71%)
Participant reported being present when sexual partner used self-test	53 (100%)	88 (97%)	248 (83%)
Participant reported couples testing with primary sexual partner†	27 (51%)	62 (68%)	53 (83%)
Participant reported couples testing with non-primary sexual partner or commercial sex client‡	..	..	39 (17%)

- Couples testing occurred with 51-83% of primary partners in the 3 study groups
- 4/280 (1.4%) IPs reported adverse events

HIVST and safer sexual decision-making

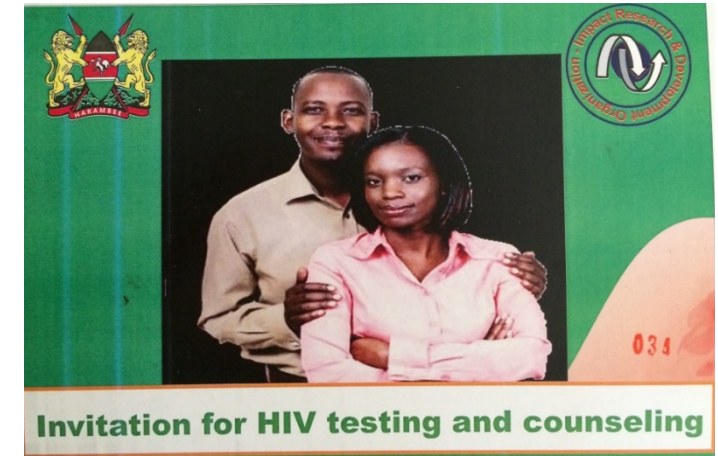
- Sexual intercourse less likely and condom use more likely when partner tested HIV-positive

	Antenatal care	Post-partum care	Female sex workers	Total
Participant had sexual intercourse with sexual partner after he used a self-test				
HIV-negative self-test result	38/51 (75%)	66/87 (76%)	131/242 (54%)	235/380 (62%)
HIV-positive self-test result	0	1/2 (50%)	7/41 (17%)	8/45 (18%)
p value†	..	..	..	<0.0001
Condom used during last sexual intercourse with sexual partner*				
HIV-negative self-test result	1/38 (3%)	12/66 (18%)	91/131 (69%)	104/235 (44%)
HIV-positive self-test result	..	1/1 (100%)	7/7 (100%)	8/8 (100%)
p value†	..	..	..	0.0018
Data are n (%), unless otherwise specified. *Among participants who reported sexual intercourse with sexual partner after he used a self-test. †p value from Fisher's exact test comparing means for participants whose sexual partners obtained an HIV-negative and HIV-positive self-test result.				
Table 5: Sexual decision making of participants				

Study 2: Design and Key findings

Study design

- Women recruited from 3 ANC and PPC clinics in Kisumu
- Randomized to one of two groups
 - Intervention: Shown how to correctly use HIV self-tests (Oraquick) and given two self-tests
 - Written & pictorial instructions provided with each self-test
 - Modest encouragement to distribute self-tests to male partner at their own discretion
 - Control: Given referral cards that invited their partner to obtain HIV testing at VCT clinics, alone or as a couple



ENGLISH:	KISWAHILI:	DHOLUO:
We encourage you to go for HIV testing and counseling at this facility.	Tuna baliwika kwenda kujipima kaulika kila hachi cha mababa.	Mogwai munda iliki e pin mar kute mag Ayaki kad hecho e kar thiechi.
You may accompany your wife or partner to her next clinic visit or you may visit the VCT clinic by yourself.	Ukwenda kuandama na bibi yako sio kute ya kaulika kila zi anaweka kaulika paka yako.	Ingeli e ki kanyala kad jardi e calichelege mar kliniki kuta nyalo dhi karochi.
Please bring this referral voucher with you. Kindly provide it to the VCT counselor or the study personnel. Your name and other information will be recorded.	Tafadhali kuja na kadi hii na umpe mshauri wa afya una mtoto wa biko na mawazo mengine yanayoye kuhusu hivyo. Oni kwa mshauri.	Bi kad e kote ni cheng ma kibi, chawe na jachecho kuta jati nono. Nyingi kuta viche ni mawazo ok bi kute e andika.
Please commit to memory the ID number below in case you forget to carry this card when you go for HIV testing at this facility. You may call 020-881188 if you have any questions.	Tafadhali kumbuka namba yako ya kipekee ambaye imetolewa kipa chini alibitika kutoka kadi hii. Unapenda kujipima kwenye kliniki chini afya. Unaweka kupiga namba 020-881188 ikiwa una maswali yoyote.	Kiwayi munda ipar namba si malingi ma ondi pia e kadu. Kipe ni waji ewi ting'e ku kibi e pin mar ngogo chini mar e kar thiechi. Ingeli gogo namba ni 020-881188 ku in kad paji mawo jamaa.
ID number: _____	ID number: _____	ID number: _____
Participant instructions: Tick whether voucher given to: <input type="checkbox"/> Partner <input type="checkbox"/> Wife/boyfriend or other partner	Mzungu kwa kaulika kila hachi: Wika aliku kuma imetoka kadi hii: <input type="checkbox"/> Biama yako <input type="checkbox"/> Mtu mwingine	Wacha na jachikwa: Kati kanyo bi kad ichiwa na: <input type="checkbox"/> Jari <input type="checkbox"/> Ngat mshauri mawo en jardi
Facility personnel instructions: Please record date voucher was presented (DD/MM/YYYY): _____	Mzungu kwa mshauri wa afya Tafadhali andika tarehe kad imetoka (DD/MM/YYYY): _____	Wacha na jati thiechi Kila e cheng ma kad dhi (DD/MM/YYYY): _____

Impact of HIVST on uptake of partner and couple testing in Kenya

	Partner invitation group, No. (%) (N=286)	Self-testing group, No. (%) (N=284)	Absolute difference, % (95% CI)*	Risk Ratio, RR (95% CI)**	P-value*
Primary outcome					
Male partner HIV testing	148 (51.7)	258 (90.8)	39.1% (32.4% to 45.8%)	1.76 (1.56-1.98)	<0.001
Couples testing for HIV	95 (33.2)	214 (75.4)	42.1% (34.7% to 49.6%)	2.27 (1.90-2.71)	<0.001

Abbreviations: CI, confidence interval

*-Estimates and CI are marginal effects from unadjusted modified Poisson regression

** -Estimates and CI are risk ratios from unadjusted modified Poisson regression

- **Partner testing** was 90.8% in HIVST group and 51.7% in the comparison group; the proportion of partners tested was 39% higher in the HIVST group
- **Couples testing** also significantly higher in HIVST group (75% vs. 33%, p<0.01)

Intervention effective even among women who reported IPV at baseline

	Control Group N	Control group, No. (%) (n=286)	Self-testing group N	Self-testing group, No. (%) (n=284)	Absolute difference, % (95% CI) *	P-value for subgroup*	P-value for interaction* *
Intimate partner violence at baseline							
No	210	114 (54.3%)	206	185 (89.8%)	48.9% (36.4% to 61.3%)	<0.001	-
Yes	76	34 (44.7%)	78	73 (93.6%)	35.5% (27.6% to 43.4%)	<0.001	0.111

Notes: *-Estimates are marginal effects from a modified Poisson regression of outcome on study group for the subsample described.

** -P-value from interaction coefficient between subsample and first category (urban clinic, or no IPV)

Also effective among women whose partner had not tested recently

	Control Group N	Control group, No. (%) (n=286)	Self-testing group N	Self-testing group, No. (%) (n=284)	Absolute difference, % (95% CI) *	P-value for subgroup*	P-value for interaction* *
Partner HIV testing in 12 months prior to enrollment							
Tested ≥ 1 time	173	102 (59%)	149	142 (95.3%)	36.3% (28.3% to 44.4%)	<0.001	-
Did not test	35	16 (45.7%)	42	37 (88.1%)	42.4% (23.1% to 61.7%)	<0.001	0.389
Do not know if tested	78	30 (38.5%)	93	79 (84.9%)	46.5% (33.5% to 59.5%)	<0.001	0.057

Notes: *-Estimates are marginal effects from a modified Poisson regression of outcome on study group for the subsample described.

** -P-value from interaction coefficient between subsample and first category (yes ever tested or yes tested in past 12 months)

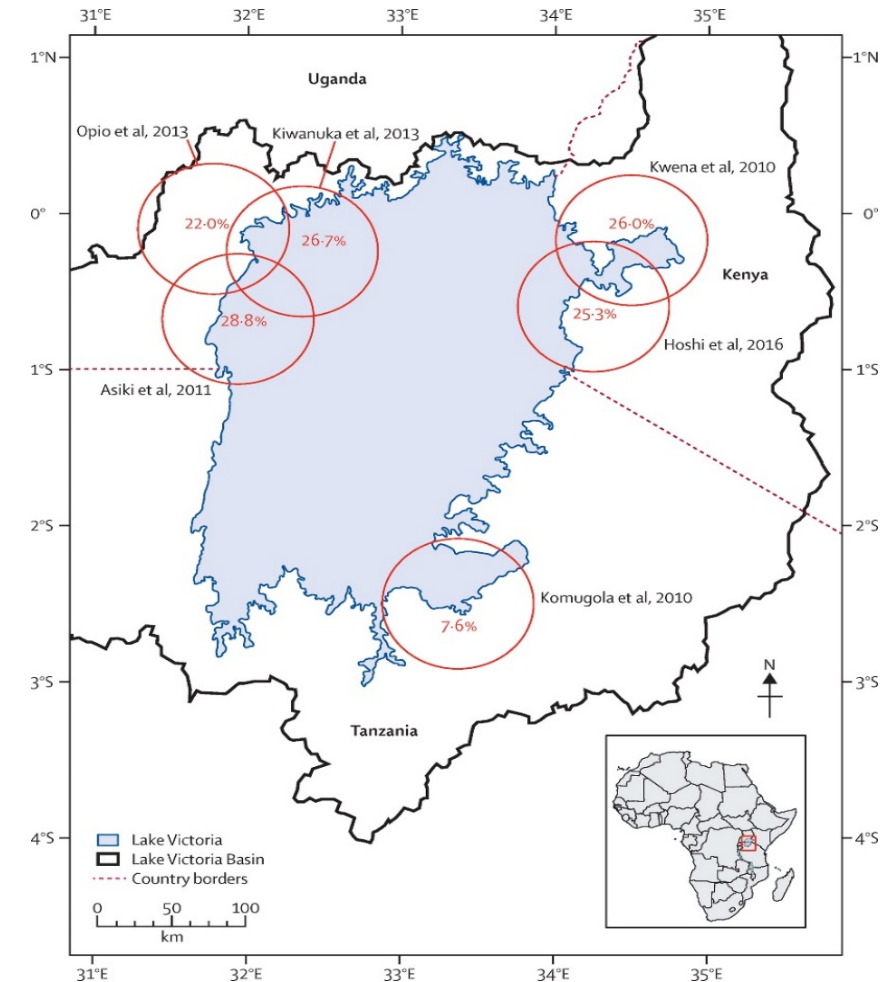
Conclusions

- Secondary distribution of HIV self-tests by women is promising strategy for promoting male partner testing compared to the current practice of partner invitation to clinic-based testing
 - Facilities can utilize this approach given that women access health services more than their partners
 - The approach is potentially cheaper than facility-based or home-based partner and couple testing
- The strategy has potential for facilitating safer sexual decision-making and reducing HIV incidence among high-risk individuals hence needs further testing

Ongoing/Upcoming studies

Cluster randomized trial among FSW and women in fishing communities in Kenya (starts in May 2017)

- Condomless sex can be more lucrative for FSW and women in fishing communities who engage in transactional sex, resulting in greater risk-taking for financial reasons (Jakubowski et al *JAIDS* 2016)
- Given the high HIV incidence among women in Nyanza region, self-tests may be useful for facilitating safer sexual-decision making
- Cluster randomized trial planned for 2017 to test this hypothesis (R01MH111602)
 - Study population will include FSW and women in fishing communities
 - Multiple self-test kits to women in intervention clusters over a period of 18 months
 - Proposed activities include cost-effectiveness modeling



Other studies testing the secondary distribution strategy

- Two other studies have explored the feasibility and impact of secondary distribution of HIVST to promote partner testing:
 - Factors Associated with Acceptability of HIV Self-Testing Among Health Care Workers in Kenya (Kalibala et al, *AIDS Beh.*)
 - Provision of Oral HIV Self-test Kits Triples Uptake of HIV Testing among Male Partners of Antenatal Care Clients: Results of a Randomized Trial in Kenya (Gichangi et al, JHPIEGO and Medical University of South Carolina)
- A randomized controlled study to determine the impact of HIVST on uptake of HIV testing by partners of adolescent girls age 15-19 years living in Siaya County, Nyanza region
 - Feasibility phase completed; funds being sought for the main study (RCT)
 - Partially funded by the University of North Carolina at Chapel Hill & implemented by Impact Research and Development Organization (IRDO)
- DREAMS Innovation Challenge and other NIH-funded studies led by the University of Washington
 - In 8 public sector MCH and FP clinics, all women will be offered multiple self-tests – partner self-testing will be used to refine identification of women at high risk for HIV that could benefit from PrEP counseling in addition to standard of care PrEP delivery
 - Similar approach to be tested in Uganda

Other HIVST studies in Kenya

- GIRLS study – different testing modalities (HIVST, community-based testing, home-based testing) and linkage strategies (SMS vs incentive) will be tested among AGYW age 15-24 years in Homabay County
 - To start in April, 2017
 - Funded by NIH, through Yale University (implemented by University of Nairobi and IRDO)
- KPIS Study – implementation science study to assess the impact of HIVST on enrollment of FSWs to drop-in centers (Kisumu, Siaya, Homabay, Migori, Kisii, Nairobi, Mombasa, Kilifi and Kwale counties)
 - Ongoing, to be completed in September 2017.
 - Funded by PEPFAR, through CDC (Implemented by CDC, USAID, NASCOP, IRDO, University of Nairobi, IMC and ICRH)

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