HIV Outcomes Among Partners Reached by Phone vs In-person for Assisted Partner Services in Kenya

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BACKGROUND

- Assisted partner services (APS) are effective in identifying people living with HIV and linking them to testing and as needed, care.
- APS is traditionally conducted primarily over phone with in-person tracing for those unreachable by phone.
- Due to this dual method of implementation, APS may be resource-intensive.
- We compared the sociodemographic characteristics and HIV outcomes among sexual partners reached by phone vs. in-person for APS in Western Kenya.

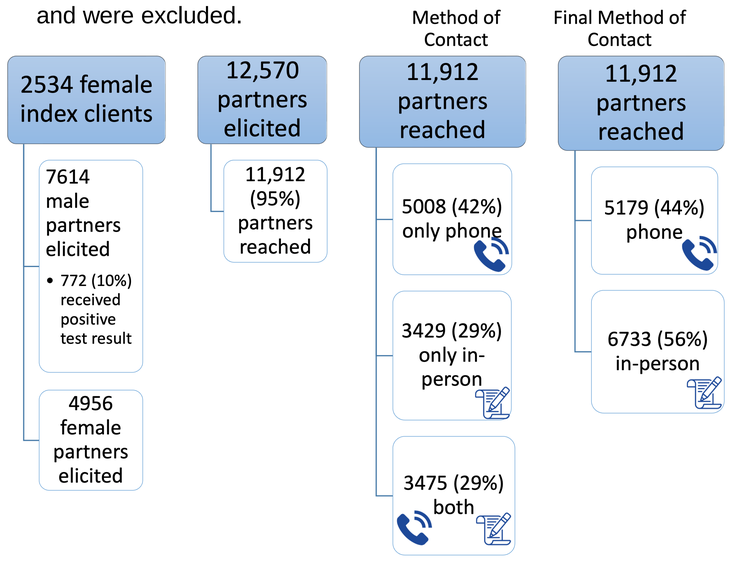
METHODS

- A hybrid type-2 implementation-effectiveness study.
- Index clients newly testing positive for HIV in 31 healthcare facilities in Kisumu and Homa Bay counties, Kenya were offered APS.

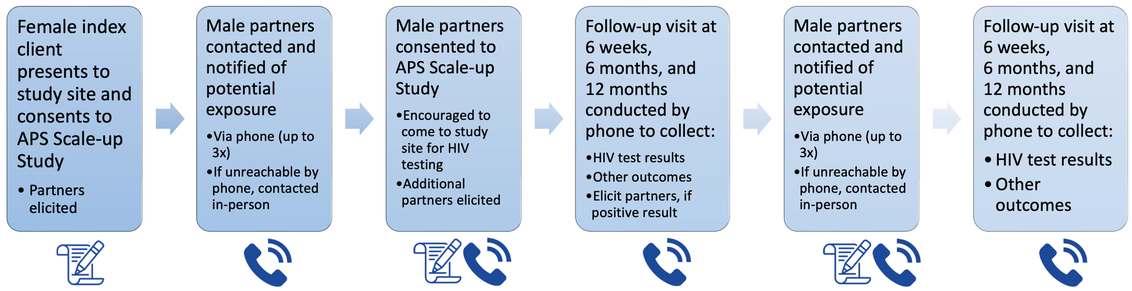
- Used log-linear mixed models, accounting for facility clustering, to estimate the relative risk between phone being final contact method and demographics and HIV outcomes (adjusting for age and sex).

RESULTS

- 3836 (32%) partners reported previous HIV diagnosis and were excluded.



STUDY PROCEDURES



- *Fewer than 50%* of partners were reached for APS by phone only.
- *Men and those with lower education were more likely to be reached by phone.*
- *Partners receiving a new HIV diagnosis* were more likely to be reached in-person.

Exposures	Phone (N=5179) Mean (SD) or N (row%)	In-person (N=6733) Mean (SD) or N (row%)	RR (95% CI)
Age	34.2 (8.7)	34.2 (8.7)	1.00 (1.00, 1.00)
Sex			
Female	1843 (38.1)	2994 (61.9)	Ref.
Male	3336 (47.2)	3739 (52.8)	**1.25 (1.17, 1.35)***
Monthly Income (1 USD = ~123 KSh)	3581 (44.3)	4498 (55.7)	Ref.
0 to 10,000 KSh	1597 (41.7)	2235 (58.3)	0.98 (0.91, 1.05)
10,000 KSh and higher			
Education			
Did not complete Primary School	605 (33.5)	1203 (66.5)	Ref.
Primary School	2043 (39.2)	3173 (60.8)	0.96 (0.87, 1.09)
Secondary School	1785 (53.9)	1529 (46.1)	**1.22 (1.09, 1.38)***
Post-Secondary School	746 (47.4)	828 (52.6)	**1.21 (1.05, 1.37)****
Key populations§			
No	5059 (43.7)	6508 (56.3)	Ref.
Yes	120 (34.8)	225 (65.2)	0.86 (0.70, 1.04)
Urban clinic			
Rural	3394 (39.7)	5153 (60.3)	Ref.
Urban	1785 (53.0)	1580 (47.0)	1.45 (0.88, 2.40)

Table 1. Comparison of demographic characteristics of partners reached by phone vs. in-person
**Significant at p<0.001 level. **Significant at p<0.01 level. §Key populations were collectively included if they self-reported as any of the following: female sex worker, person who injects drugs, fisherfolk, or adolescent girls and young women.*

RESULTS CONT.

Table 2. Association between final contact method of phone and HIV outcomes

Outcome	N	Phone (n, row%)	In-person (n, row%)	Overall (N, col%)	Crude RR (95% CI)	Adjusted§ RR (95% CI)
HIV Tested	8076	3701 (99.7)	4353 (99.7)	8054 (99.7)	1.00 (0.96,1.04)	1.00 (0.96,1.04)
First-time Tested	8076	372 (10.0)	529 (12.1)	901 (11.2)	0.90 (0.78,1.04)	0.90 (0.78,1.04)
New HIV diagnosis	8054	362 (9.8)	690 (15.9)	1052 (13.1)	0.64 (0.56,0.73)	0.61 (0.53,0.70)
Linked to HIV Care	1052	342 (94.5)	572 (82.9)	914 (87.0)	1.13 (0.98,1.30)	1.13 (0.98,1.30)

CONCLUSIONS

- Majority of those reached by APS were ultimately contacted in-person after at least 3 phone attempts and those reached in-person were more likely to receive a new HIV diagnosis.
- Policymakers should consider how best to support phone-based APS while maintaining support for in-person APS to ensure equitable and effective access to these essential HIV testing services
- Future studies should look at the costs and cost-effectiveness of phone, in-person, and combined approaches to partner notification, the potential to use additional forms of contact such as text and mobile apps, and to understand contact method preferences and potential impacts among key populations.

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