

# Preferred Methods of Assisted Partner Notification Services in Seme and Kisumu West Sub Counties, Kenya

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## Abstract

No one method of partner notification is universally preferred. Preferences differ by population, age (specifically young people) and partner type (primary or non-primary). We aim to examine the preferred methods of assisted partner notification service among HIV positive clients in Kisumu county. We conducted a descriptive cross-sectional research study in 3 health facilities on a sample of 423 HIV positive clients. Findings indicated that 40.4% of the participants indicated that the preferred method of referral was provider referral. However, there existed no statistical association between participation in PNS and the preferred methods.

## I. INTRODUCTION

Assisted partner notification service (aPNS) is a targeted public health strategy used to curb the spread of sexually transmitted infections (STIs) by tracking, testing and treating infected partners of index clients. This public health strategy entails a health worker interviewing persons identified with an STI (index cases) about their sexual partner(s) and/or contacts and then providing the index case with some level of assistance notifying their partner(s) and assuring their testing. Some health departments in parts of the United States (US) and Europe developed aPNS programs targeting HIV as early as the 1980s, and they have demonstrated that aPNS is an effective strategy towards HIV case finding and promotion of safer behaviours [1]. Despite the strategy being resource intensive, studies suggest that aPNS can be cost-effective and cost saving as a result of HIV prevention potential and the consequent cost of HIV care [2]. Findings from a Cameroonian aPNS program indicated identification of one new case of HIV in every 3.2 index cases interviewed [3]. Findings from a Malawian small (n=245) randomized controlled trial within an STI clinic, indicated a two fold increase/doubling of the number of sexual partners testing for HIV as a result of

aPNS in comparison to standard HTS practices, with < 50% of these partners were identified HIV positive [4]. At national level, Kenya is working towards establishing a national aPNS program through training of health care workers, development of policy guidelines and tools as well as utilization of available local study findings to design an effective aPNS strategy framework thus the need to examine the preferred methods.

Existing literature indicates that no one method of partner notification is universally preferred. Preferences differ by population, age (specifically young people) and partner type (primary or non-primary). A study indicated that clients and providers preferred passive referral (73–94%) [5]. Other studies showed that clients preferred assisted approaches and found provider referral acceptability range of between 11% to 71% [6]–[8] Among MSM and FSWs, contract or provider referral was also perceived to be defensive against impending guilt, violence and stigma [9]. One study among PWIDs reported that, provided the choice between passive or provider referral by an outreach worker, 71% of HIV-positive persons nominated provider referral [10].

Partner alerting via Internet applications and text messages may be more satisfactory to young people and to MSM than other groups, particularly when persons do not have additional contact information for their sex companions [7], [9], [11]. Studies in Singapore and United States showed that individuals preferred face to face alert over the telephone or using text message options [12], [13]. Therefore, this paper aims to determine the preferred method(s) of assisted partner notification among HIV infected adults on HIV care in Seme and Kisumu West sub counties.

## **II. METHODS**

The study site was Kisumu County is one of the 47 Counties in Kenya and the study areas included Seme and Kisumu West sub counties. The area of study was selected purposively because the area covers the demographics surveillance area that is in Seme and Kisumu West sub counties. The study adopted a descriptive cross sectional research design. The inclusion criteria of the study was Clients aged above 18 years attending HIV clinical care in the sampled health facilities in Seme and Kisumu West sub counties and had participated or not participated in the aPNS or and were willing to consent to participate in the study. The sample consisted of 423 participants from the target population. These was obtained from among HIV infected male and female individual's adults accessing HIV care and treatment services or had been tested for HIV and found to be newly identified HIV positive within 3 randomly selected public health

facilities 2 in Seme Sub County and 1 in Kisumu West Sub County. This was derived from those clients registered in HIV care clinics in Chulaimbo Sub County Hospital in Kisumu west and Kombewa and Manyuanda Sub county Hospitals in Seme sub county. Stratified sampling method was used to generate the sample size. At each health facility, potential participants were approached as they attended HIV care clinics in the facilities. Simple random sampling was used to select the participants from each facility. The research assistants assigned serial numbers against clients booked for clinical visits per day, wrote the serial numbers on flip ruffle cards and mixed them in a ruffle box before randomly picking each card and developing a line list of clients to be approached for consenting to the study on that day. Questionnaires were read out for the participants by the research assistants in the language they best understand- either English or *Dholuo*. Structured questionnaires was the main tool for data collection. The researcher engaged research assistants who were trained on the background of the study, its objectives, on the use of the instrument and proper data collection methods through conducting a small scale trial of data collection instruments (questionnaire) to determine clarity of the questions and whether the said questions elicited the desired information. Selection of research assistants was done from within Kisumu County. Data was analyzed using STATA version 14.2 and logistic regression was employed, P-values <0.05 were considered statistically significant results.

### III. RESULTS

Findings indicated that 423 adults on care were interviewed, majority (33.5%) were between the ages 26-35 years and 54.5% of them were female, married (63.4%) and Christians (95%). Majority of the respondents in the study resided in the rural setting (73.3%) and most of them were self-employed (40%). Moreover, 50.5% of them had primary level education and were from the general population (83.9%)

*Table 1: Distribution of Sociodemographic characteristics of respondents*

<b>Socio demographic characteristics</b>		
	N	%
<b>Age category</b>		
18-25 yrs	72	17.1
26-35 yrs	141	33.5
36-45 yrs	129	30.6
Above 45 yrs	79	18.8
<b>Gender</b>		
Male	190	45.5
Female	228	54.5

<b>Marital status</b>		
Single	70	16.9
Married	262	63.4
Cohabiting	2	0.5
Separated/Divorced/Widowed	79	19.1
<b>Residence</b>		
Permanently residing in rural setting/home	307	73.3
Permanently resides in urban setting/home	64	15.3
Works in urban centre and resides in rural home	37	8.8
Works in rural setting and resides in urban home	11	2.6
<b>Occupation</b>		
Self employed	167	40
Employed	96	23
Peasant	97	23.3
Unemployed	57	13.7
<b>Religion</b>		
<b>Christian</b>	397	95
Islam	6	1.4
Traditional Religion	9	2.2
Pagan	6	1.4
<b>Population type</b>		
Sex worker	2	0.5
Uninformed forces	2	0.5
Truck driver	2	0.5
Adolescent girl and young women	22	5.3
General population	349	83.9
Fisher folk	17	4.1
Bodaboda driver	20	4.8
Other	2	0.5
<b>Highest level of education</b>		
None	13	3.1
Primary level	212	50.5
Secondary level	124	29.5
College/University level	71	16.9

Overall, a high proportion (40.4%) indicated that the preferred method of referral was provider referral. Moreover client referral was also among the preferred methods (26.0%).Contract referral was the least preferred method of referral (20.8%).However, client referral method was the most preferred among those

who had participated in PNS(75.5%) while dual referral method was the preferred among those who had not participated in PNS. However, there existed no statistically difference between different referral methods and participation in partner notification service ( $p>0.05$ ).

*Table 2: Preferred method of partner notification services*

Method	Total(N)	aPNS non beneficiaries	aPNS beneficiaries	OR(95% CI)	p value
		n(%)	n(%)		
<b>Provider referral</b>					
Yes	171(40.4)	56(32.7)	115(67.3)	0.87(0.57 - 1.32)	0.515
No	252(59.6)	75(29.8)	177(70.2)	Ref	
<b>Contract referral</b>					
Yes	88(20.8)	28(31.8)	60(68.2)	0.95(0.57 - 1.58)	0.847
No	335(79.2)	103(30.7)	232(69.3)	Ref	
<b>Dual referral</b>					
Yes	89(21.0)	33(37.1)	56(62.9)	0.70(0.43 - 1.15)	0.162
No	334(79.0)	98(29.3)	236(70.7)	Ref	
<b>Client referral</b>					
Yes	110(26.0)	27(24.5)	83(75.5)	1.53(0.93 - 2.51)	0.092
No	313(74.0)	104(33.2)	209(66.8)	Ref	

#### IV. DISCUSSION

The findings indicated that provider referral methods was the most preferred method overall. The findings are consistent with studies such as [5], [8] which recommended that provider referral may be helpful for notifying non-primary partners. Similarly, the findings also were in agreement with a study among PWIDs which reported that, 71% of HIV-positive persons nominated provider referral over other methods used to contact partners[10]. However, the findings were in contrast with a study from the Tanzania where 93% of HIV-positive persons favored passive methodologies over contract or provider referrals [14]. On comparison of the preferred methods between those who had participated in aPNS and those who did not participate in aPNS, there was no significant difference between the two groups in terms of the preferred method. The preference of the provider referral method is due the fact that the method is guided by confidentiality and high level of professionalism.

## V. CONCLUSION

Provider referral methods should be adopted in implementation of the assisted partner notification.

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## REFERENCES

- [1] M. Hogben, T. McNally, M. McPheeters, A. B. Hutchinson, and T. F. on C. P. Services, "The effectiveness of HIV partner counseling and referral services in increasing identification of HIV-positive individuals: a systematic review," *Am. J. Prev. Med.*, vol. 33, no. 2, pp. S89–S100, 2007.
- [2] B. Varghese, T. A. Peterman, and D. R. Holtgrave, "Cost-effectiveness of counseling and testing and partner notification: a decision analysis," *AIDS Lond. Engl.*, vol. 13, no. 13, pp. 1745–1751, Sep. 1999.
- [3] C. Henley *et al.*, "Scale-Up and Case-Finding Effectiveness of an HIV Partner Services Program in Cameroon: An Innovative HIV Prevention Intervention for Developing Countries," *Sex. Transm. Dis.*, vol. 40, no. 12, pp. 909–914, Dec. 2013.
- [4] L. B. Brown *et al.*, "HIV partner notification is effective and feasible in sub-Saharan Africa: Opportunities for HIV treatment and prevention," *J. Acquir. Immune Defic. Syndr.* 1999, vol. 56, no. 5, pp. 437–442, Apr. 2011.
- [5] D. Carnicer-Pont *et al.*, "Use of new technologies to notify possible contagion of sexually-transmitted infections among men," *Gac. Sanit.*, vol. 29, no. 3, pp. 190–197, May 2015.
- [6] F. N. Dalle, F. L. Di, A. Sanfilippo, E. N. Dalle, N. Arena, and T. Prestileo, "Contact tracing and partner notification among a cohort of HIV-1 infected patients. A prospective study carried out in Palermo in 2012," *Recenti Prog. Med.*, vol. 105, no. 9, pp. 327–332, 2014.
- [7] M. J. Mimiaga *et al.*, "HIV and STD status among MSM and attitudes about Internet partner notification for STD exposure," *Sex. Transm. Dis.*, vol. 35, no. 2, pp. 111–116, 2008.
- [8] S. Wayal, G. Hart, A. Copas, S. Edwards, and J. Cassell, "Sexual behaviour, partnership patterns and STI diagnoses among HIV/STIS transmission and partner notification," 2012.
- [9] S. Wayal, J. Cassell, G. Scambler, G. Hart, and N. Low, "O5-S3. 05 Partner notification for STI And HIV: patients' views and experiences of notifying partners," *Sex Transm Infect*, vol. 87, no. Suppl 1, pp. A95–A96, 2011.
- [10] J. A. Levy and S. E. Fox, "The outreach-assisted model of partner notification with IDUs.," *Public Health Rep.*, vol. 113, no. Suppl 1, p. 160, 1998.
- [11] M. Doull *et al.*, *P04. 01 Similarities and differences in perceptions of models for online partner notification for sexually transmitted infections: potential users versus care providers*. BMJ Publishing Group Ltd, 2015.

- [12] C. Scott, A. Teague, A. Menon-Johanssen, R. Jones, and A. Sullivan, "A study to assess acceptability of partner notification via Short Message Service text messaging (SMS): P90," *Hiv Med.*, vol. 11, 2010.
- [13] W. S. Tan and T. W. Chio, *P04. 03 Which partner notification method do patients prefer? results of a patient preference survey at the national sti clinic in singapore*. BMJ Publishing Group Ltd, 2015.
- [14] M. Plotkin *et al.*, "Effective, high-yield HIV testing for partners of newly diagnosed persons in Tanzania," in *Conference on Retroviruses and Opportunistic Infections*. Boston, MA, USA, 2016.