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Impact of family planning health talks by lay health workers on contraceptive knowledge and attitudes among HIV-infected patients in rural Kenya

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Abstract

Objective—To determine if a health talk on family planning (FP) by community clinic health assistants (CCHAs) will improve knowledge, attitudes and behavioral intentions about contraception in HIV-infected individuals.

Methods—A 15-min FP health talk was given by CCHAs in six rural HIV clinics to a sample of 49 HIV-infected men and women. Effects of the health talk were assessed through a questionnaire administered before the health talk and after completion of the participant's clinic visit.

Results—Following the health talk, there was a significant increase in knowledge about contraceptives ($p < .0001$), side-effects ($p < .0001$), and method-specific knowledge about IUCDs ($p < .001$), implants ($p < .0001$), and injectables ($p < .05$). Out of 31 women and 18 men enrolled, 14 (45%) women and 6 (33%) men intended to try a new contraceptive. Participant attitudes toward FP were high before and after the health talk (median 4 of 4).

Conclusion—A health talk delivered by CCHAs can increase knowledge of contraception and promote the intention to try new more effective contraception among HIV-infected individuals.

Practice implications—FP health talks administered by lay-health providers to HIV-infected individuals as they wait for HIV services can influence FP knowledge and intention to use FP.

Keywords

Health talk; Family planning; Contraception; HIV; Knowledge; Community health workers

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1. Introduction

Sub-Saharan Africa (SSA) has the lowest family planning (FP) use in the developing world. Approximately 30% of women in SSA have an unmet need for FP [1,2], which is even higher among women living with HIV [3–5]. Women's acceptance of modern contraception is often limited by misbeliefs about side effects, fear of impact on future fertility, partner opposition, lack of available services, and cost [6–8].

Evidence exists that well-designed and -implemented health communication programs can influence norms and behaviors and create demand for FP by increasing knowledge, awareness, availability, and access to contraception [9,10]. The Information Motivation and Behavioral framework portrays that motivation to adopt a practice and the provision of relevant information lead to the adoption and maintenance of behavior change [11]. Utilization of community health workers (CHWs) has emerged as a potentially effective approach for improving access to information and services, and improving health outcomes and behaviors [12–14]. In matters related to sexual and reproductive health, there is often reluctance to talk about sexuality and sometimes mistrust of the medical establishment [15]. With their in-depth knowledge of health behaviors and health care practices, CHWs can bridge the gap between clinicians and patients [16].

The Kenya Medical Research Institute (KEMRI), University of California San Francisco (UCSF), and Ibis Reproductive Health conducted a cluster-randomized trial (CRT) in Nyanza Province, Kenya to evaluate the impact of integrating FP into HIV care and treatment (ClinicalTrials.gov #NCT01001507). As part of the CRT, we piloted the use of clinic and community health assistants (CCHAs), who are CHWs based at the health facilities, to provide educational FP health talks to HIV-infected patients while waiting for their clinic visits. We hypothesized that the health talk would: (1) increase FP knowledge, (2) improve attitudes about contraception, and (3) promote contraceptive uptake in HIV-infected individuals.

2. Methods

Lay health workers were trained to conduct health talks at HIV clinics participating in the CRT [17]. We conducted a cross-sectional study with a pre- and post-design to evaluate the immediate impact of the talks and identify any necessary adjustments before incorporating the talks into the CRT. The study took place at six public health facilities supported by Family AIDS Care and Education Services (FACES) in Nyanza Province, Kenya and utilized a convenience sample of patients seeking HIV care between March and May 2010. Eligible participants included: HIV positive, non-pregnant women ages 18–45 years old or men ages 18 years and over seeking care at the HIV clinic, willing to participate in a group FP health talk and willing and able to give informed consent.

The FP health talk was delivered by a CCHA who attended a two-day training and had a content outline and low-literacy didactic aids. CCHAs in the FACES program are usually HIV-infected patients themselves. They start as volunteers and peer educators and are trained to perform duties such as taking vitals and dispensing anti-retroviral (ARVs) medications. A total of 93 CCHAs were trained (43 males and 50 females) to give FP health

talks. All CCHAs except two had completed high school education and four had post high school diplomas. The FP health talk covered: the importance of using contraception when pregnancy is not desired; all methods of contraception, including injectable, subdermal, intrauterine, oral, barrier, emergency and permanent methods; and common side effects, myths and misconceptions about contraception in Kenya. Health talks lasted 15 min and were delivered interactively to approximately 15–30 patients on a consecutive basis as patients entered the waiting bay.

Pre- and post- health talk questionnaires were administered and completed by participants on the same day. No one refused to participate. Assuming a baseline FP knowledge score of 50%, an alpha of 0.05, and a beta of 0.20, 49 individuals were needed to detect a 20% change in FP knowledge pre- and post-health talk. Difference in intention to initiate a new FP method, by FP method use prior to the health talk, was assessed using the Fisher's Exact Test. Odds ratios for knowledge questions were estimated from the ratio of discordant pairs of correct and incorrect responses following standard methods for matched-pairs data [18]. The binomial sign test was used to compare the proportion responding correctly to each knowledge item pre- and post-health talk. Knowledge scales were created by assigning 1 point to each correct response and 0 points to each incorrect response, summing all points for questions pertaining to a knowledge area, and re-scaling the range to 0–10. We calculated standardized Cronbach's alpha to measure the internal consistency of the scales. Because the data violated the normality assumption and the sample size was small, significance tests for change in knowledge scores and FP attitudes were conducted with the non-parametric Wilcoxon Signed Ranks Test. All analyses were conducted using SAS version 9.3.

3. Results

Median age of the 49 participants was 35 years (IQR 30–40) (Table 1). The majority was female (63%), had only a primary school education (86%), and was currently on ARVs (74%). Most participants reported current use of contraception (86%), with condoms most common, either alone (61%) or with an injectable (8%).

3.1. Contraceptive uptake

Following the health talk and clinic visit, 14 (45%) of 31 female participants and 6 (33%) of 18 male participants reported they wanted to try a new FP method (Table 2). Among females, the decision to try a new method was more commonly made by those who were using no method or only condoms than those using a more effective form of FP, (59% vs. 11%, $p < .02$). Among males, the proportion that decided they or their partner would try a new method did not differ by FP method use prior to the health talk (33% vs. 33%, $p = 1.0$).

3.2. Knowledge about contraception

Correct responses to all questions concerning safety of FP methods significantly increased following the health talk (Table 3). More respondents answered correctly that irregular bleeding associated with injectable use ($p < .001$) or implant use ($p < .001$) is not harmful and that neither IUCDs ($p < .001$) nor implants ($p < .001$) could travel around a woman's

body to other organs. More respondents answered that FP methods are unlikely to cause birth defects ($p = .03$).

3.3. Knowledge scale scores

The standardized Cronbach's alpha was 0.73 showing good internal consistency among the set of items. General knowledge about FP methods significantly increased after the health talk ($p < .001$). Knowledge about FP side effects and all long-acting reversible contraception (LARC) increased (Table 4).

3.4. Attitudes about FP methods and pregnancy

Respondents' attitudes toward FP were positive before the health talk and remained positive afterwards. The proportion of participants intending not to become pregnant during the next year did not change (65% vs. 65%) (Data not shown).

4. Discussion and conclusion

4.1. Discussion

Implementing a systematic evidence-based health communication strategy is one of several high impact practices in FP. A health talk given by lay health workers significantly increased knowledge of FP methods and their side effects and reduced myths and misconceptions about FP among HIV-infected individuals. Fear of FP-related side effects is a major hindrance to the uptake of contraception [19] and can outweigh the desire to delay pregnancy. Improving knowledge about possible side effects has been shown to increase length of use of injectables, while education centered on potential benefits alone only fosters short-term use [20]. Since HIV-infected women are at high risk for unintended pregnancy, efforts to dispel myths and increase knowledge about contraception are imperative.

Although we did not expect to see a change in uptake of methods after our health talk intervention, a significant proportion of female participants reported the desire to initiate more effective contraception. While education cannot address every obstacle impeding women's freedom to choose contraception, education can expose women to all contraceptive options [21]. FP/HIV programs should take responsibility for disseminating accurate information and correcting misinformation about FP [22].

Our small sample size and sampling method may limit generalizability of our findings to the broader HIV-infected population in Western Kenya. We did not collect information on willingness to try a new FP method before the health talk and only tested immediate knowledge, attitudes and FP intentions after the health talks, thus cannot infer from our results any definitive changes in contraceptive use over time. However, the CRT in which this study was nested demonstrated a significant increase in contraceptive prevalence over one year as a result of integrating FP into HIV care, of which FP health talks were an essential component [17].

4.2. Conclusion

To prevent pregnancy effectively, women and couples need to have access to correct information about contraception. Providing health talks by trained lay health workers on FP at an HIV clinic is feasible, increases FP knowledge and may influence FP use, however larger studies with longer follow-up periods are needed to assess the impact of these talks over time.

4.3. Practice implications

Our findings that a simple intervention using lay health workers can increase knowledge and understanding of FP among HIV-infected individuals are critical given the feasibility of this model in resource-poor settings. In addition, these health talks provide a unique opportunity to engage men in FP.

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Table 1

Participant characteristics and family planning use before health talk (*n*=49).

Measure	*n* or median	% or IQR
Age	35	30–40
Gender		
Female	31	63.3
Male	18	36.7
Educational achievement		
None or primary	42	85.7
Secondary	7	14.3
Currently on antiretroviral therapy	36	73.5
Currently using family planning	42	85.7
Oral contraceptives	1	2.0
Injectable progestin only	7	14.3
Injectable progestin+condom	4	8.2
Intrauterine contraception	0	0.0
Subdermal implant	0	0.0
Condom only	30	61.2
Not currently using family planning	7	14.3

IQR, interquartile ratio.

Table 2

Participants who decided to try a new method after the health talk, by gender and FP use before the health talk (*n*=49).

Measure	Females				Males			
	Total (*n*=31)	FP use before the health talk			Total (*n*=18)	FP use before the health talk		
		No method or condom only (*n*=22)	More effective FP[a] (*n*=9)	*p*-Value		No method or condom only (*n*=15)	More effective FP (*n*=3)	*p*-Value
Decided to try new method, *n* (%)	14 (45.2)	13 (59.2)	1 (11.1)	.02	6 (33.3)	5 (33.3)	1 (33.3)	1.0
Method decided to try, *n* (%)								
Oral contraceptives	3 (21.4)	3 (23.1)	0 (0.0)		0 (0.0)	0 (0.0)	0 (0.0)	
Injectable Progestin	4 (28.6)	4 (30.8)	0 (0.0)		1 (16.7)	1 (20.0)	0 (0.0)	
Intrauterine contraception	0 (0.0)	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)	0 (0.0)	
Subdermal implant	4 (28.6)	4 (30.8)	0 (0.0)		3 (50.0)	3 (60.0)	0 (0.0)	
Tubal ligation	2 (14.3)	1 (7.7)	1 (100.0)		0 (0.0)	0 (0.0)	0 (0.0)	
Vasectomy	0 (0.0)	0 (0.0)	0 (0.0)		1 (16.7)	1 (20.0)	0 (0.0)	
Condom	1 (7.1)	1 (7.7)	0 (0.0)		1 (16.7)	0 (0.0)	1 (100.0)	

[a]More effective FP refers to tubal ligation, vasectomy, subdermal implants, injectable progestins, IUDs and oral contraceptive pills.

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Table 3

FP knowledge before and after the health talk (*n*=49).

Measure (correct answer Y or N)	Responded correctly		OR	95% CI
	Before *n* (%)	After *n* (%)		
1. Have you heard of injectables (“Depo-Provera”)? (Y)	49 (100.0)	49 (100.0)	1.0	0.02–50.40
2. Can women who use injectables get pregnant once they stop using the injectable? (Y)	47 (95.9)	49 (100.0)	5.0	0.24–104.15
3. Sometimes women who use injectables (“Depo-Provera”) have irregular bleeding (bleeding not at the normal time a woman should have her cycle), is this bleeding harmful? (N)*	25 (51.0)	37 (75.5)	7.0	1.59–30.80
4. Have you heard of an IUCD? (“Intrauterine contraceptive device?”) (Y)	45 (91.8)	49 (100.0)	9.0	0.48–167.17
5. Can IUCDs move around inside the woman's body and travel to other places, such as the heart or brain? (N)*	33 (67.4)	43 (87.8)	6.0	1.34–26.81
6. Have you heard of implants (“Implanon” or “Jadelle” or “Norplant”)? (Y)	46 (93.9)	48 (100.0)	7.0	0.36–135.52
7. Sometimes women who use implants have irregular bleeding (bleeding not at the normal time a woman should have her cycle), is this bleeding harmful? (N)**	26 (53.1)	41 (83.7)	16.0	2.12–120.65
8. Can implants move around inside the woman's body and travel to other places, such as the heart or brain? (N)*	36 (73.5)	45 (91.8)	10.0	1.28–78.12
9. Is using family planning methods, such as injectables, implants or IUCDs, likely to cause birth defects? (N)**	31 (63.3)	41 (85.4)	23.0	1.36–390.32
10. Can women who use implants or IUCDs get pregnant again after the device has been removed? (Y)	47 (95.9)	49 (100.0)	5.0	0.24–104.15
11. Most women with HIV infection who are healthy can use any family planning method they want (Y)	44 (89.8)	48 (98.0)	9.0	0.48–167.17

* $p<.01$.

** $p<.001$.

Table 4

FP knowledge before and after the health talk (*n*=49).

Knowledge scale	Before health talk Median (IQR)[a]	After health talk Median (IQR)[a]	*p*-Value
Total knowledge (all questions)	8 (6–8)	10 (9–10)	<.0001
Knowledge about IUCDs (**q4, q5, q6**)	10 (5–10)	10 (10–10)	.0021
Knowledge about implants (**q7, q8, q9**)	7 (3–10)	10 (10–10)	<.0001
Knowledge about injectables (**q1, q2, q3**)	7 (7–10)	10 (10–10)	.013
Knowledge about side effects of family planning (**q3, q5, q6, q8, q9 q10**)	6 (4–10)	10 (8–10)	<.0001
Knowledge about LARC methods (**q1, q4, q7**)	10 (10–10)	10 (10–10)	.063
Knowledge about return to fertility (q2, **q11**)	10 (10–10)	10 (10–10)	.25

[a] Scale 0–10.