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Publication Date

2008



California Center for Population Research
University of California - Los Angeles

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PWP-CCPR-2008-002

January 2008

***California Center for Population Research
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Word count: 2,415 words

Abstract

As part of a study that tested individuals for sexually transmitted infections in rural Malawi, we examine the reactions to the provision of voluntary counseling and testing (VCT). This paper presents response rates as well as summarizing qualitative data on community comments. Our primary substantive conclusion is that despite mixed community opinions about the value of VCT, there was unexpectedly high participation in VCT. This has important implications for current methods of assessing the acceptability of VCT based on research that poses hypothetical questions rather than measuring actual behavior.

Introduction

In Malawi, as elsewhere in high HIV-prevalence countries of sub-Saharan Africa, residents of rural areas have little opportunity to be tested for HIV and to learn their results. Voluntary counseling and testing (VCT) for HIV has been available in freestanding facilities in Malawi for about five years, but most VCT centers are located in major urban areas. In conjunction with the expected availability of antiretrovirals through programs such as the Global Fund, the Malawi Ministry of Health and Population plans the rapid expansion of VCT facilities as soon as technically feasible. To permit evaluating the impact of these programs, it is crucial to distinguish between what people say about the acceptability of VCT and what they do when it is provided.

There have been relatively few studies on reactions to the availability of VCT, especially in the rural areas of highly AIDS-affected areas of sub-Saharan Africa. Several studies examine the determinants of HIV testing and returning for results, the majority of which either take place in urban testing centers or ask individuals to discuss hypothetically why they would or would not get tested. The findings are mixed and often indicate respondents' fears of testing and worries about learning they are infected [1-3].

Data from the nationally-representative 2000 Malawi Demographic and Health Survey (MDHS) show that 8 percent of people in rural areas report having been tested for HIV, compared to 18 percent of people in urban areas [4]. In rural areas there seems to be a higher demand for testing than in urban areas (74 percent of people in rural areas who had never been tested would have liked to, versus 66 percent of people in urban areas), and a lower knowledge of the availability of testing facilities (66 percent of respondents in rural areas said that they knew a source for a HIV test, compared to 88 percent in urban areas). Another study that also asked hypothetical questions came to more pessimistic conclusions. Based on survey questions and semi-structured is more pessimistic. In 2003, approximately 200 rural and urban Malawians were asked about the acceptability of HIV testing and counseling and whether they would want to learn their results. [5]. This study found that respondents were knowledgeable about HIV/AIDS and most were aware of the existence of testing facilities. They concluded, however, that testing was not yet acceptable to the general public: most respondents said that they might be tested at some point in their lives, but they were not yet ready.

We examine the reactions to VCT in the rural communities of our research project. Despite mixed verbal feedback, we find an overall acceptance of VCT. This has important implications on the conclusions drawn from research that asks for opinions rather than measuring actual behavior.

Methods

This study occurred in the context of a larger project, the Malawi Diffusion and Ideational Change Project (MDICP). A core activity of the MDICP is an ongoing panel survey. The project was approved by ethical review boards at the University of Pennsylvania and the University of Malawi. The main sample consists of ever-married women and their current husbands. In 2004,

this sample was augmented by a randomly chosen sample of adolescents (married and unmarried) aged 15-24 years. The MDICP is conducted in the rural areas of three districts, each taken to represent one of the three regions of the country, North, Center and South. However, a comparison of the characteristics of the MDICP sample with those of the rural population surveyed in the MDHS indicates that the MDICP sample is representative of the national rural population (more details on sampling and fieldwork procedures, as well as the survey data, are available for free download from the project's website: <http://malawi.pop.upenn.edu>).

Between April and August 2004, MDICP respondents were offered the opportunity to be tested for HIV and other sexually transmitted infections (STIs) [6]. A total of 2,816 respondents were tested for HIV or at least one STI. The results show that HIV prevalence is about 7 percent for the entire sample (adults and adolescents of either sex in all three sites), varying from 4.5 percent in the Northern region to 8.2 percent in the Southern region (Table 1).

Table 1 about here

Consent was asked separately for the HIV and STI tests; for never-married adolescents, consent from a parent or guardian was also asked. Respondents who agreed to be tested were counseled by a trained nurse. The nurse collected HIV samples using oral swabs (ORASURE).¹ For STIs, men were asked to provide urine samples (for gonorrhea and Chlamydia), while women were asked to provide vaginal swabs (for Chlamydia, gonorrhea and trichomonas). The specimens were analyzed at the University of North Carolina laboratory in the capital, Lilongwe. Testing was not anonymous in order to permit linking the HIV and STI results with the survey responses. However, to preserve the respondent's confidentiality, the specimens were given a special identification number, such that only the MDICP Biomarker Coordinator could link the test and survey results. This identification number was recorded on a Polaroid picture of the respondent taken by the nurse, and given to the respondent as identification required to be presented in order to receive results. When results were available, typically about five to seven weeks after testing occurred, nurses trained in VCT counseling returned to the villages in order to communicate the results to those who wished them.

Results were made available throughout each study area in small portable tents, which provided privacy. There were several VCT (tent) sites in each surveyed area, so that all respondents' homes were within five kilometers from at least one site. A few days before the results were to be available, the VCT team (consisting of local Form-4 graduates) visited all respondents in their homes to communicate the location of the tent and the specific week the team would be in their village. Precautions were taken to ensure that respondents received their correct results, and that

¹ The accuracy of saliva for detection of HIV antibodies has been shown to be comparable to serum-based tests [7-12]. For epidemiological purposes in particular, use of saliva seems to offer several advantages over serum. An important motivation for using saliva in population-based surveys is the assumption that a non-invasive method might contribute significantly in reducing selection bias due to non-consent. Studies that have used saliva for detection of HIV antibodies have generally achieved higher consent rates, but data are still lacking to make a sound evaluation of the ways in which saliva and serum compete with regard to acceptability [13].

confidentiality and privacy were maintained. Nurses at each VCT site carefully checked each person's Polaroid picture; no results were provided to respondents who could not present their identification. Post-test counseling and results were then provided. Respondents who tested positive for a STI were given the appropriate treatment at no cost; respondents who tested positive for HIV were encouraged to go to the nearest district hospital for a second test and for more information about availability of treatment with antiretrovirals. All respondents also received free multi-vitamins after receiving results. The counseling procedure lasted approximately 45 minutes for each respondent.

To assess the reactions to VCT, we adapted ethnography to our purposes, since our previous experience suggested that survey respondents are reluctant to criticize our project. We relied on local ethnographers, identified as members of the MDICP field team by their project T-shirts, who kept journals in which they wrote what they heard people say about VCT. In one site, the ethnographers directly asked people for their opinions. In a second site, the ethnographers simply listened to what was being said publicly, for example a conversation overheard at a local market. In both sites, however, names were not recorded, nor did the ethnographers know whether the participants in a conversation were members of the MDIPC sample, and thus whether they had been tested for HIV or other STIs.

Results

The majority of the 2004 MDICP respondents who were present for the survey agreed to be tested for HIV and/or STIs (Table 2). The refusal rates are overall quite low, and similar (or even lower) than those recorded by the 2004 Kenya DHS (11.9 for women and 11.2 for men).

Table 2 about here

The 2001 MDICP survey showed that respondents vastly overestimate the transmission probabilities of HIV: approximately two-thirds believed that unprotected sex with an infected person was certain to lead to one's own infection, with virtually all of the others saying that infection was very likely. This suggests that many respondents expected to find that they were HIV+, and were probably very worried about receiving their results. Nonetheless, the majority of the respondents who were tested returned (Table 3).

Table 3 about here

Comments in the ethnographic journals about the acceptability of VCT were quite mixed, and varied by the circumstances in which the comments were heard. When respondents made positive comments, they often used the concepts of VCT promotion in Malawi and that the MDICP nurses had used in counseling. For example, people said that it is good to know one's body status so that one can plan for the future; that those who are told they are HIV positive can

follow the instructions that will lead them to a longer life; and that those who are negative can change their behavior to avoid subsequent infection. In contrast, when an ethnographer happened to be passing by someone talking with others about the VCT, the comments were less formulaic and appeared to be more genuine. The comment below was overheard by an ethnographer when she was in a local trading center:

“As I was waiting at Ulongwe Trading Center for the minibus to come and pick me up, I decided to have a snack....The people who were around playing *bawo* at the veranda of this shop started talking about the MDICP minibus. One of the men said >People have started getting their results=. Another asked, 'Do they come to your house and give you the results?' Another said >You go to their tents=. Then one said that >This is better because when you have the results that you are HIV positive, you can just go to a nearby place and have beer and reduce the worry.= The other said >Haa, HIV is HIV. Even if you drink, once you get it that=s all=. Then one man said, >The young guys who have their results are happy.=”

The negative comments were primarily related to the fact that testing and counseling were unwanted, unnecessary, or possibly malicious (e.g. Satanism, the project was pumping blood and selling it for the project’s benefit). A second criticism was that the project was discriminatory. Only some villages were included in the sample, and within the sampled villages only some households were included in the survey, yet other respondents in the same household or village also wanted to know their HIV status. (This comment can therefore be interpreted positively, as it indicates that individuals were eager to be tested and to know their results). A third, and particularly interesting, critique raised the issue of inequalities in access to treatment. Although respondents who were HIV-positive were counseled to eat a nutritious diet and to go to the district hospital for further testing and treatment, there were complaints that people were too poor either to afford nutritious foods (“the good food which needs much money”, in the word of one respondent) or to pay for transport to the district hospital. This view was sometimes associated with the complaint that the MDICP was not helping people in the villages because it was not providing antiretrovirals to those infected with HIV. An ethnographer wrote that a man “was then telling me that we [the MDICP] are doing nothing in the villages. We are doing the VCT but we are not helping them. Had it been that we have medicine to give them if they have HIV it would have been helpful.”²

It is of methodological interest that the comments varied according to the circumstances in which they were heard. If the ethnographer asked a direct question, the responses typically presented only one extreme view: either that the MDICP is doing good and that it should come more often, or that it is bad or useless and thus it should stop bothering the villagers.³ When the ethnographers were simply listening, and especially on the few occasions when they were not recognized as part of the MDICP team (for example, if they were not wearing the MDICP t-shirt because they had washed it), villagers were overheard debating the VCT with their friends and neighbors, making arguments for and against it.

² Our research design does not allow us to study whether offering ARV treatment increases return rates. See [14] for a review.

³ We think the negative comments may appear disproportionately in the ethnographic journals for several reasons. Perhaps they were found them more worthy of recording; or perhaps those with objections voiced them openly and strongly, whereas respondents who wanted to be tested and to know their results might have kept quiet. Lastly, it is worth noting that many negative comments were overheard by those who were not part of the tested sample.

Discussion and conclusions

Our most important methodological conclusion is that actually offering VCT rather than posing hypothetical questions is likely to be the only valid way to assess its acceptability. We also conclude that when researchers attempt to assess reactions to an innovation, particularly one promoted by the government or other outsiders (such as VCT in rural areas in Malawi), questions posed directly by a member of a research project are likely to produce favorable responses. The type of ethnography we used to assess reactions probably more accurately reflects real ambivalence in rural communities in Malawi.

Our overall substantive conclusion is that while there is considerable fear of testing and anxiety about learning one's HIV status, these can be overcome, at least in studies similar to ours.

When respondents were offered testing in their homes and results were given within their communities, most respondents agreed to be tested and of those, the majority voluntarily came for their results. Because survey respondents overestimated the transmission probabilities of HIV, many were probably delighted to learn that they were HIV negative, and thus may be emboldened to seek re-testing in the future.

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Table 1: Prevalence of STIs and HIV in the 2004 MDICP, by survey site and sex (respondents aged 15 years and above)

	TOTAL		MEN		WOMEN	
	%	N	%	N	%	N
Chlamydia						
South	0.5	974	0.2	447	0.8	527
Center	0.3	771	0.0	371	0.5	400
North	0.1	896	0.2	435	0.0	456
Total	0.3	2,641	0.2	1,253	0.4	1,383
Gonorrhea						
South	5.6	977	0.5	447	10.0	530
Center	2.3	772	0.0	371	4.5	401
North	1.1	896	0.5	435	1.8	456
Total	3.1	2,645	0.3	1,253	5.7	1,387
Trichomonas						
South	2.7	513	—	—	2.7	513
Center	4.1	418	—	—	4.1	418
North	0.6	489	—	—	0.6	489
Total	2.3	1,458	—	—	2.3	1,458
HIV						
South	8.2	1007	7.2	445	9.1	562
Center	7.5	848	6.7	390	8.3	458
North	4.5	961	3.4	440	5.4	516
Total	6.7	2,816	5.7	1,275	7.6	1,536

Table 2: Coverage of STI and HIV testing (proportion of respondents who were found and who agreed to be tested), by survey site, sex and sample

TOTAL						
	Adults			Adolescents		
	STI	HIV	N	STI	HIV	N
South	91.4	91.8	759	88.1	89.8	352
Center	87.6	89.2	631	85.4	88.7	295
North	90.4	91.7	687	91.1	96.0	348
Total	89.9	90.9	2077	88.3	91.6	879
MEN						
	Adults			Adolescents		
	STI	HIV	N	STI	HIV	N
South	92.3	91.7	312	92.0	91.4	174
Center	90.6	90.4	254	91.2	90.7	159
North	89.0	89.3	299	96.1	97.8	178
Total	90.6	90.5	865	93.2	93.4	511
WOMEN						
	Adults			Adolescents		
	STI	HIV	N	STI	HIV	N
South	90.8	92.0	447	84.3	86.2	178
Center	86.1	88.8	375	78.7	86.2	136
North	91.5	93.6	388	85.5	93.9	165
Total	89.6	91.4	1210	83.1	89.6	479

Table 3: Proportion of respondents tested for HIV or at least one STI who returned for their results, by survey site, sex and sample

TOTAL				
	Adults		Adolescents	
	STI	HIV	STI	HIV
South	74.3	74.2	58.2	58.7
Center	81.1	73.9	80.0	77.8
North	61.9	61.4	50.8	50.4
Total	72.2	69.9	59.8	59.5
MEN				
	Adults		Adolescents	
	STI	HIV	STI	HIV
South	74.7	74.2	68.1	68.6
Center	80.4	72.3	83.4	81.6
North	61.7	61.8	52.0	52.3
Total	71.9	69.5	67.0	66.6
WOMEN				
	Adults		Adolescents	
	STI	HIV	STI	HIV
South	73.9	74.2	48.2	48.8
Center	81.8	75.5	76.6	73.9
North	62.0	60.9	49.6	48.4
Total	72.4	70.3	52.5	52.4