

RESEARCH UPDATE



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PREPARING COMMUNITIES FOR INCREASED AVAILABILITY OF ANTIRETROVIRAL THERAPY: INITIAL FINDINGS FROM ZAMBIA

In Zambia, an estimated 25 percent of people in urban areas and 13 percent of people in rural areas between the ages of 15 and 44 are HIV-positive (ZDHS 2003). In response to this crisis, the Government of Zambia has made antiretroviral therapy (ART) available in all provincial hospitals and has plans to eventually scale up the ART program to all district hospitals. In the private sector, antiretrovirals (ARVs) are accessible through mission hospitals, private clinics, and workplace programs. In August 2005, treatment and laboratory costs at public institutions became free (Government of the Republic of Zambia 2005), thus facilitating access to ART by a greater number of people. As of November 2006, an estimated 70,000 Zambians, mostly in urban areas, were receiving ART.

While the availability of ARVs is being scaled up, the health system must rely on a workforce increasingly affected by HIV morbidity and mortality, and a growing personal and professional care burden caused by the disease. It is clear then that the formal health system cannot carry out all the steps necessary to get increased numbers of people to initiate and maintain treatment successfully, and to prevent further transmission of HIV. Therefore, initiatives must involve more efficient coordination between hospitals, clinics, and community-based support services.

This research update presents initial findings from operations research to assess the outcomes of the ACER (Adherence, Community Engagement, and Referral) Project. The project's aim is to improve health-seeking behavior, equity of access to health care and ART, adherence to ART, and HIV prevention among commu-



The ACER project team from Lusaka and Ndola

Horizons is implemented by the Population Council with the International Center for Research on Women, the International HIV/AIDS Alliance, PATH, Tulane University, Family Health International, and Johns Hopkins University.

nity members through a community engagement strategy. Community engagement involves mobilizing and supporting communities to recognize their needs and to advocate for the development and utilization of quality services to reduce the spread of HIV and mitigate its impacts. An important component of the strategy is the meaningful involvement of community members, including people living with HIV and other vulnerable people. The strategy also promotes rights-based approaches and citizen participation in policy making and program planning, delivery, and evaluation; and recognizes that community responses are an integral part of the health system.

The ACER project is being implemented by the International HIV/AIDS Alliance in conjunction with local Zambian partners—the Traditional Health Practitioners Association of Zambia (THPAZ), the Network for Zambian People Living with HIV and AIDS (NZP+), the Archdiocese of Lusaka and the Catholic Diocese of Ndola, and Africa Directions. The research component is being conducted by the Institute for Economic and Social Research and the Horizons Program.

Methods

The study uses a quasi-experimental, comparative pre- and post-test intervention design to measure the effects of the intervention on individuals' knowledge, attitudes, and experiences with regard to VCT, STI, and other HIV-related services; ARV access and treatment adherence; HIV-related stigma and discrimination; and HIV prevention methods. Study sites include one intervention and one control site in Lusaka (Ng'ombe and Bauleni) and in Ndola (Nkwazi and Kaloko). All peri-urban, high-density, low-income settlements in Lusaka and Ndola were randomized to select the four study sites. The study obtained ethical approval from the Zambian Research Ethics Committee and underwent Population Council ethical review process.

This research update presents findings from a community survey conducted at baseline and from focus group discussions (FGDs) with project partners soon after the initiation of intervention activities. The survey was administered to a randomly-selected sample of people in the four sites at baseline. The households in the study sites were mapped to develop a sampling frame and stratified random sampling was employed to select respondents between 18 and 55 years of age. A total sample of 1,200 was selected, equally divided among the four sites. The sample was stratified by age (18–30 years, 31–55 years) and sex. Data were collected during January and February 2005, and were entered using Epidata and analyzed in SPSS.

Intervention activities, which began in February 2005, include educational and skills-building sessions for members of the partner organizations. These sessions focused on ART, VCT, stigma reduction, HIV prevention, and referring patients to and from the community, health system, and HIV support providers.

Seven FGDs were conducted in Lusaka and Ndola between March and May 2005 with a purposive sample of 46 female and male representatives of the implementing partners. They included two groups with NZP+ members (one in Lusaka and one in Ndola), two with the home-based care (HBC) teams from the Archdiocese of Lusaka and the Catholic Diocese of Ndola, and three with THPAZ (two in Lusaka and one in Ndola).

Respondent Characteristics

As shown in Table 1, the majority of survey respondents were female (54–55 percent). The mean age of females was between 29 and 31 years, and for males, it was between 30 and 33 years. The majority of respondents were married (66–70 percent), but more were never married in Lusaka compared to Ndola (26 percent vs. 15 percent). There were also a greater number of separated/divorced and widowed respondents in the Ndola sites compared to the Lusaka sites. The majority of people across all sites had gone to primary school (Grades 1–7). Primary education levels were higher in Lusaka than in Ndola.

Table 1 Sociodemographic characteristics of survey respondents

		Lusaka (n = 603)	Ndola (n = 600)
Sex	Females	54%	55%
	Males	46%	45%
Age (mean)	Female	29	31
	Male	30.5	32.5
Marital status	Married (mono)	66%	70%
	Married (poly)	1%	1%
	Single (never married)	26.5%	15%
	Divorced/ Separated	4.5%	8%
	Widowed	2%	5.5%
Education	Never been to school	7%	5.5%
	Grades 1 – 7	42%	60.5%
	Grades 8 – 9	26%	21%
	Grades 10 – 12	20.5%	12%
	College	5%	0.5%

The age range of respondents in the FGDs was 27 to 83 years. Half the respondents were women. Education ranged from those with no education to those who had been to college. Thirty-two respondents were married, the remaining were either widowed (9) or divorced/separated (5).

Key Findings

HIV treatment knowledge is greater in Lusaka than Ndola, but there are major gaps among survey respondents in both sites.

As shown in Table 2, the majority of survey respondents in Lusaka (85 percent) agreed that ARVs can prolong life while less than half (42 percent) of those in Ndola agreed. Similarly, 81 percent of people in Lusaka agreed that ARVs can make a person well again; only 38 percent agreed with this

statement in Ndola. Although there were differences by site, differences between women and men were negligible. Areas in which there was a great deal of uncertainty among all respondents was whether ARV medications are worth taking because of serious side effects, whether ARV medications allow for HIV/AIDS to be managed as a chronic disease, and whether ARV side effects are short term and can be managed.

Table 2 HIV treatment knowledge

		Lusaka (n = 603) %	Ndola (n = 600) %	Women (n = 654) %	Men (n = 546) %
ARV medications can prolong life	Agree	85	42	68	65
	Disagree	5	0	2	3
	I don't know	10	56	35	32
Taking ARV medications as prescribed by the doctor can make a person well again	Agree	81	38	59	61
	Disagree	8	3	2	6
	I don't know	10	59	36	33
HIV/AIDS has become less serious because of ARV medications	Agree	44	18	33	29
	Disagree	43	22	29	37
	I don't know	12	59	38	33
ARV medications are not worth taking because of serious side effects	Agree	15	9	12	13
	Disagree	46	20	32	35
	I don't know	38	70	56	52
ARV medications can eliminate the virus from the body	Agree	8	6	8	7
	Disagree	79	31	52	59
	I don't know	12	62	40	34
With ARV medications HIV/AIDS can be managed now like any other chronic illness	Agree	34	23	29	28
	Disagree	45	13	27	33
	I don't know	20	63	44	39
If taken within a few months after being infected, ARV medications can eliminate the virus from the body	Agree	17	3	11	9
	Disagree	65	35	47	55
	I don't know	17	61	43	35
Most side effects of ARVs are short term and can be managed	Agree	31	18	24	26
	Disagree	18	10	14	14
	I don't know	51	71	61	60
It is necessary to use a condom even when a person has become healthy again after treatment	Agree	77	34	54	59
	Disagree	12	7	9	10
	I don't know	10	58	37	31

Although radio is the main source of information about HIV treatment, many survey respondents prefer to get information face-to-face.

Nearly half the respondents in Ndola and 29 percent in Lusaka cited the radio as one of their main sources of information on HIV treatment (Table 3). But fewer respondents in both cities preferred to get information this way. In fact, more respondents in each city preferred to get HIV treatment information from health workers and peer educators than those who said that these were currently their main sources of information.

Table 3 Sources of HIV treatment information

		Lusaka (n = 603) %	Ndola (n = 600) %
Main sources of HIV treatment information	Radio	29	49
	Health workers at clinic	26	18
	Television	15	3
	Peer educators	10	10
	Friends	5	10
	Church	1	4
	Other	13	5
Preferred sources of HIV treatment information	Radio	15	37
	Health workers at clinic	42	26
	Television	9	3
	Peer educators	19	21
	Friends	1	6
	Church	1	2
	Other	11	3

Many more survey respondents would encourage others to get tested than have been tested themselves.

As shown in Table 4, about a fourth to a third of respondents had been tested. A significantly greater proportion of females had been tested compared to males (36 percent vs. 21 percent; $p < .05$). The most common reason for getting tested among all respondents was wanting to know their status. But more than three times as many respondents in Ndola and twice as many in Lusaka would encourage others to get tested than have been tested themselves.

Table 4 VCT uptake among survey respondents

	Lusaka (n = 603) %	Ndola (n = 600) %
Have had an HIV test	35	24
Would encourage others to get a test	80	86
Of those who have had a test...	n = 211	n = 144
Main reason for being tested		
Just wanted to know status	50	46
Tested at ANC	33	26
Worried about symptoms	8	8
Had unprotected sex	1	2
Marriage/new relationship	1	2
Employment requirement	1	7
Other/no answer	5	6

Overall, survey respondents have correct knowledge about key aspects of HIV/AIDS.

The vast majority of respondents knew about HIV transmission through sexual contact and from mother to child, and that HIV cannot be cured (Table 5). Nevertheless, 33 percent of respondents from Ndola and 41 percent from Lusaka did not know that mosquitoes cannot transmit HIV. Knowledge about HIV was roughly similar among men and women. However, fewer women (59 percent) than men (68 percent) knew that mosquitoes cannot transmit HIV. Although most respondents acknowledged that condoms can prevent HIV, there were sizable proportions in each site, and among women and men, that did not answer this question correctly.

Table 5 HIV transmission and prevention knowledge

Knew correctly that...	Lusaka (n = 603) %	Ndola (n = 600) %	Women (n = 654) %	Men (n = 546) %
A person can be exposed to the AIDS virus in one sexual contact	89.5	84	87	87
Most people who have HIV do not quickly show symptoms of the illness	74.5	62.5	66	70
People who get HIV through needles can transmit via sexual intercourse	89	92	90	91
Someone can be HIV-infected, yet look healthy	83.5	79	79	84
Likelihood of HIV infection can be reduced by having only one sexual partner	88	85.5	86	87
Condoms can reduce the likelihood of getting HIV	67	57	61	63
Mosquitoes cannot transmit HIV	59	67	59	68
HIV can be transmitted from mother to child	86	91	87	90
HIV cannot be cured	88.5	95	90.5	94

FGD participants have basic knowledge about ART, but there are different views about getting pregnant while on ART.

Generally, FGD participants, including traditional healers, home-based care providers, and members of NZP+, had correct knowledge about how to take ARVs. They highlighted the need to adhere to instructions given by the doctor and to take the medicine at the right time along with a balanced diet. Respondents also talked about the dangers of taking medicine inconsistently and emphasized the need for patients on ART to be adequately prepared before commencing therapy.

...what we are emphasizing very much to our friends who want to start the medicine or if they are already on medication, is that they must concentrate on what we call 'first line treatment', which is not difficult to manage...a person must be serious. When you decide to start taking ARVs, you must also stick to them to avoid developing resistance—the medicine stops to work.

NZP+ member, Nkwazi, Ndola

But there were different views among respondents about getting pregnant while on ART. According to one traditional healer:

...a person on ARVs can become pregnant. As long as she follows the instructions given by the doctor, the child will be just fine...during pregnancy there is a drug which they give to the mother. Then within 72 hours after the child is born, the child is given the same medicine to prevent transmission to the child. In addition, there is another drug...which is also given before the child is born to prevent mother-to-child transmission...the person on ARVs does not stop having sex. You know ARVs make somebody quite strong and healthy. So of course they can have sex and get pregnant. What is important is, in the early stages of the pregnancy (about 3 months) they should start going for antenatal care.

Traditional healer, N'gombe, Lusaka

A home-based care provider noted:

...if a person is sick and is on ARVs they should not become pregnant and have a child...what we see in people who are on ARVs in this community is that they do have miscarriages and this is just increasing their problems. So it is not advisable to become pregnant and have a child....

HBC provider, Ng'ombe, Lusaka

Traditional healers, together with the other project partners, are starting to refer their clients to VCT and other health services.

The FGDs highlighted increasing awareness among respondents, particularly the traditional healers, of the importance of getting tested for HIV as an entry point for treatment.

We help the person and provide them with information on how to go to VCT and getting started. So when they go for VCT, they will see the doctor and get counseled...we refer somebody for VCT, there they get tested and the CD4 count done. If it is below 200 then they are put on ARVs. It is there at the clinic where they decide when to put somebody on ART or not, not us traditional healers.

Traditional healer,
N'gombe, Lusaka



Launch of the ACER project in Ndola

INTERNATIONAL HIV/AIDS ALLIANCE

Intervention partners have contrasting views about condoms.

In the FGDs, some respondents said that condoms were effective in protecting against HIV and STI transmission, while others felt that they were ineffective and unsafe. Overall, respondents from NZP+ felt that condoms reduce the risk of HIV infection, but many were concerned about the quality of condoms available.

...condoms minimize the disease of HIV and AIDS but they are not 100 percent safe; the reason being, considering the distance from where they are manufactured, by the time they are reaching us here some may already have expired.

NZP+ member, Ngombe, Lusaka

On the other hand, most traditional healers and HBC providers felt that condoms were ineffective in controlling the epidemic and were, in fact, responsible for promiscuous behavior among the youth.

...I know that a condom has no use at all. A condom is not safe...we have seen and have heard about it and we know about it and we have seen that it does not work at all. If a condom was working, diseases here in Zambia should have come to an end or would have reduced...a condom is not effective especially these days. You find that the lives of both girls and boys have shortened because of condoms.


HBC provider, Ng'ombe, Lusaka

...a condom is the one responsible for AIDS.... Condoms do not work...because just at the time you have sex with someone there is that sweat between skins and that sweat is responsible for HIV transmission.

Traditional healer, Bauleni, Lusaka

To reduce HIV infection rates, all FGD participants felt that abstinence and sticking to one sexual partner were key. However, they did agree on the role of condoms in family planning.

Conclusions

- Knowledge about ART is filtering through, particularly in Lusaka, but it is still incomplete.
- Although knowledge about HIV transmission is generally high, efforts are needed to work with those who have incorrect information and beliefs.
- With few exceptions, males and females were equally knowledgeable about ART and HIV transmission.
- Radio programs are an important source of disseminating information, but face-to-face communication is preferred, particularly in Lusaka.
- VCT uptake is relatively high, given that the sample for the community survey was randomly selected and thus representative of the communities; nevertheless, efforts still need to be made to increase uptake since it is an entry point to treatment.
- Traditional healers appear to be responding to the intervention's message about referring clients to VCT and other health services.
- Intervention activities need to place more emphasis on clarifying the role of condoms in HIV prevention among project partners. 

Next Steps

Endline data was collected between July and September 2006. Data is currently being analyzed. Final results will be available early to mid 2007 and a series of dissemination events are being planned for that period.

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