

**Voice for Humanity HIV/AIDS Education Program Using Small Media-based Technology
for Oral Communicators at the Community Level to Enhance HIV/AIDS Awareness and
Promote Risk Reduction**

Evaluation Report

By

Igho Ofotokun, MD, MSc
Assistant Professor of Medicine
Emory University School of Medicine
Atlanta GA

And

Jose Binongo, PhD
Kirk A Easley, MS
Jennifer Favaloro-Sabatier, MAppStat
Department of Biostatistics
Rollins School of Public Health
Emory University
Atlanta, GA

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Executive Summary

Issues: Notwithstanding the huge expenditure on prevention, the AIDS epidemic remains unabated and new cases of HIV-infection are rising in many regions. The brunt of the epidemic is borne by sub-Saharan African countries with more than two-third of all HIV cases. The level of HIV awareness in many African communities is low. The problem appears not to be paucity of HIV outreach programs, but that of lack of access and effective delivery of information to the largely rural, non-literate people that comprise over 75% of the population. Existing outreach programs are concentrated in the urban areas, and few have activities tailored to address the information needs of rural communities where modern communication technology is lacking. To reverse the rising trend in the AIDS epidemic in Africa, novel approaches to HIV education with built-in capacity for rapid access to remote locations in a cost effective manner are needed.

The Voice for Humanity (VFH) demonstration project, prospectively tested a novel approach to HIV education (the VFH approach) that exploits a unique quality of the rural African culture whereby learning occurs by oral-tradition in small closely related groups facilitated by family or spiritual leaders; and information is presented in the form of story telling, folk songs and parables to enhance comprehension. Consistency of the message was ensured by the use of solar powered digital-audio devices as a delivery tool. The hypothesis was “the integration of low cost digital-audio technology and orality-based culturally adapted HIV education delivered through established indigenous network will enhance HIV awareness in a manner superior to the widely used HIV awareness campaign (SHAC) delivered by pamphlets distribution and seminars”.

Description: Three African villages grouped into control and intervention communities were exposed to HIV education either by SHAC or by the VFH approach. Customized assessment tool for non-literate population was administered to 1193 volunteers from both groups at baseline, week-4 and week-8 post exposure. The assessment tool included among others 10 true-or-false questions designed to gauge the respondents’ overall awareness of the AIDS virus.

Lessons learned: Results presented in this report are limited to baseline and 4-weeks post exposure data. Respondents were predominantly Moslem (97%), married (71%), ages 15 - 45 years (75%), had a 47% - 50% female-male ratio, and had no formal education (53%).

Population characteristics and baseline HIV awareness level were similar for both groups (~ 59% of individuals had some level of awareness). Net gain in communal HIV awareness from baseline following exposure was superior in the VFH group (29% versus 6%). Community HIV enlightenment shift in the negative direction (measured by degree of change from the correct response at baseline to incorrect response post exposure) was 3.4 times more likely in the control group indicating a high degree of information uncertainty among respondents in this group. Among the uninformed villagers (the ~ 40% with incorrect response at baseline), post-exposure reduction in level of HIV-ignorance was significantly higher for the VFH group (93% versus 34%). At week-8 post intervention, almost all the villagers in the intervention community (94%) had participated or listened to the VFH program at least once.

Recommendations: The VFH HIV education approach is a low cost, feasible and superior method of raising HIV awareness among non-literate rural communities in Africa compared to the widely used approach of seminars and pamphlets distribution. A rapid deployment of the VFH HIV education program in rural communities in Africa could have significant benefit of raising awareness in a manner that leads to HIV risk behavior reduction, and lowering of HIV prevalence rate among this resource poor vulnerable group.

A. BACKGROUND AND SIGNIFICANCE:

Because the human immunodeficiency virus (HIV) infection is a preventable disease, huge amount of human effort and resources have been invested in prevention campaign in many parts of the world. Programs such as the ABC (abstinence, being faithful to one partner, and condom use) approach have been adopted by national and local authorities to reduce the spread of the AIDS epidemic. These prevention efforts have yielded favorable results in some countries where HIV prevalent rate reduction of 30% - 50% have been observed. While such successes are encouraging and provides evidence for the preventability of HIV infection, recent World Health Organization report indicates that the rate of new HIV infection in many parts of the world is still rising nevertheless. Many sub-Saharan African countries continue to record HIV prevalent rates in the double digits. HIV-infection remains the leading cost of death among young people ages 15 - 44 years in many regions of sub-Saharan Africa.

Further complicating the issue of HIV-infection control in Africa is the shift in the geographic distribution of HIV infection. Initially perceived as a disease of urban predominance, the AIDS epidemic has spread to rural communities where many of the new cases of HIV infection are now being reported. These communities that home majority of Africans lack basic health infrastructure, and are ill-equipped to take on the challenge of HIV infection control. Knowledge of HIV prevention measures is dismally low, and several myths and misconceptions about HIV infection are held. Some of these misconceptions have contributed to the escalation of the epidemic in some part of the continent.

Although reported successes in the control of the spread of HIV-infection in some parts of Africa underpins the effectiveness of prevention campaign, reproduction of similar successful experience in other parts of Africa has been difficult as the epidemic spreads inward to remote rural communities where new cultural and infrastructural challenges to effective campaign are emerging. Rural communities in Africa are in many cases inaccessible, lacking good road infrastructure, stable and steady electricity supply, and modern information technology such as electronic and print media and internet access. Literacy level is extremely low, cultural values are different, learning and information dissemination occurs mostly by oral tradition. People learn in small closely related group facilitated by family heads or spiritual leaders rather than

individually from mass media.

Because of the onerous challenge of inaccessibility, only very few HIV prevention outreach programs have activities tailored to address the information needs of rural communities. Majority of existing outreach programs in Africa are centered in the urban areas, and outreach methodology employed by these programs are often not applicable to the rural setting. Since the AIDS epidemic is spreading rapidly in these rural communities, its curtailment will require a rethinking of current outreach strategy. Novel approaches to HIV awareness campaign with built-in capacity for rapid access to remote locations in a cost effective manner will be needed. ***Such strategies should integrate local culture and delivery mechanisms adapted to disseminate accurate and consistent awareness, prevention and care information to oral communicating population with little or no exposure to western type education and information technology.***

In this VFH demonstration program, a novel HIV education program specifically designed for oral-communicating rural communities was tested. This program is based on the following three-pronged strategy.

- ***Orality-based Simple HIV message adapted to the local culture:*** The project exploits a unique quality of rural African culture whereby new information and ideas are disseminated by orality in small closely related groups, often facilitated by family heads, spiritual or community leaders; and information is presented in the form of story telling, proverbs, dramas, folk songs and parables to enhance comprehension and retention. Rich African traditions and history have been handed down generations in this format and rural Africans are adapted to learning by oral tradition. Because orality-based learning is deeply rooted in the African experience this model of HIV education may resonate through rural communities in this region, and may enhance acceptance, promote participation, and lead to large-scale risk behavior modification.
- ***Delivery by digital audio tool:*** One of the major limitations to information dissemination in rural communities is lost of accuracy and consistency of message by the time it gets to the grass root. To overcome this limitation, this program deploys information by means of specially designed low cost digital audio technology (DAT). A DAT resembles an M3-player; it uses compressed digital audio technology that allows several hours of information

to be stored in a microchip. The unit can be powered by easy to use solar rechargeable batteries. A DAT unit has no moving parts that can wear down or break off, it is water-resistant and sand-proof, and can withstand extreme elements. It is portable, small, and can fit into a shirt pocket. Because this device is easy to use, cheap, portable, and requires no maintenance or electricity, it is an ideal tool for remote communities with little or no technological knowledge.

- ***Distribution by established indigenous network:*** To facilitate collaboration, promote local participation, and enhance capacity building, this project engages established local network (churches, mosques, and other trusted community organizations) for the sole distribution of the VFH HIV education program.

B. HYPOTHESIS:

Integration of low cost digital-audio technology and orality-based culturally adapted HIV education delivered through established indigenous network will enhance HIV awareness in a manner superior to the widely used HIV awareness campaign (SHAC) delivered by pamphlets distribution and seminars.

C. KEY FOCUS OF EVALUATION:

The evaluation component of this project was designed to assess how the intervention impacted the following parameters in both the intervention and the control community.

- (1) The impact on communal level of basic HIV knowledge: Intervention vs Control
- (2) The impact on the HIV-informed segment of the studied population
- (3) The impact on the HIV-uninformed segment of the studied population
- (4) Overall direction of knowledge shift: Intervention vs control community

D. MATERIALS AND METHODS:

Implementation of this demonstration program involved the collaboration of multiple partners assembled by VFH. These partners included;

- The Federation of Muslim Women of Nigeria (FOMWAN)
- Society for Family Health International (SFHI)
- Evangelical Church of West Africa (ECWA)

- Emory University Schools of Medicine, Division of Infectious Diseases
- Emory University Rollins School of Public Health.
- Emory University Center for AIDS Research (Emory CFAR)

Selection of appropriate program sites in Africa was done in consultation with the indigenous partners. Since the main goal of this demonstration program was to test an education program adapted for HIV information needs of rural resources poor communities, the following characteristics were employed for the sites selection;

- Small rural community with population of less than 50,000 people
- Low literacy level and paucity of modern infrastructure such as good access roads, electricity, and access to electronic and print media
- No post primary (higher than 6-grade) learning institution.

HIV Education Content Development: In keeping with the three-pronged strategies of orality-based culturally adapted information, the HIV education content was developed and formatted primarily by indigenous African partners (ECWA and FOMWAN) to ensure local relevance and cultural appropriateness. Emory University's Division of Infectious Diseases provided some guidance on the content development. The content was structured to contain basic HIV information including:

- Basic knowledge of the AIDS virus
- Symptoms and disease conditions commonly seen in association with HIV infection
- Transmission risk applicable to the community
- Practical risk reduction approaches
- Local myth and misinformation that fuel stigmatization of people living with HIV-infection (PLWH)
- Practical suggestions on ways individuals and community can work together to reduce the spread of HIV-infection

The education materials were adapted into short stories, proverbs, dramas, folk songs and parables with the assistance of participating African partners (ECWA and FOWAN) and recorded into audio form in the local language by voices of recognized community and spiritual leaders in order to promote acceptance and enhance comprehension. This locally produced audio-recorded HIV education materials were subsequently programmed into an electronic chip that could be played by the VFH digital-audio technology.

Education Content Distribution: To encourage local participation and to enhance acceptance and buy-in in the communities, the program adhered to its strategy of content distribution through trusted and established local network. Local facilitators were recruited, trained and charged with the responsibility of distributing the DAT content to the target community by organizing small listening groups of 10-20 people to listen to the content. All facilitators were recruited from the local membership of the participating organizations and other locally established groups and by the recommendation of local community leaders. Facilitators' training was held in the community, and was provided by local partners experienced in HIV education and VFH personnel with knowledge on how the DAT device works. The curriculum for the training included:

- Thorough review of the orality-based HIV education content
- Operation of the DAT device
- Organizing and leading of small listening group sessions

In the control community instead of DAT assisted HIV education, HIV awareness seminars were conducted, and pamphlets containing HIV awareness information with content similar to the ones recorded in the DAT were distributed (SHAC approach).

Program Assessment: This was performed by Emory University School of Medicine (Infectious Diseases Division) and Emory University Rollins School of Public Health (Biostatistics Department). The evaluation design was a prospective assessment and comparison of levels of HIV awareness in the two groups at baseline, and after exposure (4-week and 8-weeks) to HIV awareness program. One of the groups was exposed to the VFH education approach (the intervention community) and the other to SHAC (the control community).

The assessment tool included sets of questions designed to capture demographic information and to gauge the respondents' overall awareness of the AIDS virus. It was adapted from existing survey instruments developed by the University of California, San Francisco AIDSCAP/WHO Counseling and Testing Efficacy Study Instrument. It was simplified for non-literate population, translated to the local African (Hausa) language and pre-recorded into the digital audio device and played to respondents to ensure consistency. Because the population targeted was mostly non-literate, colors and/or easily recognizable objects represented choices of answer to each question. Participants responded to questions as the digital audio device played them out by

making a mark through the color/object answer on the questionnaire they consider appropriate for a given question.

The questionnaires were administered to the respondents by data collectors recruited from the local university in the near by city of Kano. The data collectors underwent a total of three days training provided by Emory University personnel. This training was focused on the following;

- Proper and ethical administration of evaluation tool to non-literate participants
- Informed consent procedure
- Simple technique of database development, management and data entering process

A total of 1193 subjects were recruited from the two communities (612 from the intervention community and 581 from the control village). Eligibility criteria included 12 years of age or older, no intention to relocate to a different village during the evaluation period, willing to participate and stay in the program for the entire duration expressed by oral consent, highest education grade attained not greater than sixth grade. Both communities were divided into roughly ten equal districts to which a data collector (escorted by a local guide from the district who knows the people) was assigned. Each data collector and his/her guided recruited sixty volunteers from homes and public places in their assigned district.

Statistical Analysis: All statistical analyses were performed with software from the SAS Institute (Cary, NC). Descriptive statistics, including mean, median, and percent of data (response) for demographic and HIV specific knowledge were generated. Changes in HIV specific awareness from baseline to week 4 post-exposure were compared within and between groups.

D. RESULTS:

Results presented in this report are limited to baseline and 4-weeks post exposure data. The population characteristics in both the control and the intervention villages were similar. Respondents were predominantly Moslem (97%), married (71%), aged less than 15 years (8%), 15 - 45 years (75%), and greater than 45 years (13%). They were 50% male and 47% female, and had a range of education from no formal education (53%), completed grades 1 -3 (6%), completed grades 4 – 5 (4%), to completed grade 6 (31%). Most of the respondents indicated they relied on radio (83.5%) for information. A smaller amount of respondents rely on a friend

(14.0%) for information. Very few respondents rely on newspaper (2.2%), television (9.4%), their community leader (5.9%), or their family (5.9%) for information Table 1.

Table 1: Characteristics of Respondents from the Control and the Intervention Communities

Characteristics	Control		Intervention	
	n	(%)	n	(%)
Gender				
Male	212	42.4	304	57.8
Female	269	53.8	209	39.7
Age				
<15 years	38	7.6	39	7.4
15 – 45 years	373	74.6	400	76.0
>45 years	69	13.8	65	12.4
Highest Education Level Attained				
No formal Education	301	60.2	247	47.0
Completed grades 1-3	35	7.0	24	4.6
Completed grades 4-5	12	2.4	24	4.6
Completed grade 6	121	24.2	198	37.6
Relied on as Source of Information				
Newspaper	9	1.8	14	2.7
TV	63	12.6	33	6.3
Radio	424	84.8	433	82.3
Community Leader	43	8.6	18	3.4
Family	35	7.0	26	4.9
Friends	61	12.2	83	15.8

Baseline Communal HIV Awareness Level: The level of HIV awareness at baseline as assessed by the proportion of correct response to a set of HIV knowledge based questions was on the average 59% (min: 32%, max: 71%) for the control group and 59% (min: 22%, max: 84%) for the intervention group Table 2. This level of baseline HIV awareness in these communities was encouraging and indicates exposure to some form of HIV education in the past.

Table 2. Improved Knowledge about HIV/AIDS transmission (n = 1026)

Q8A. Working near someone with the AIDS virus.

Control				Intervention			
Baseline	Post Intervention		Total	Baseline	Post Intervention		Total
	Correct	Incorrect*			Correct	Incorrect*	
Correct	288	67	355	Correct	328	8	336
Incorrect*	96	49	145	Incorrect*	174	16	190
Total	384	116	500	Total	502	24	526

Q8B. Eating food cooked by someone who has the AIDS virus.

Control				Intervention			
Baseline	Post Intervention		Total	Baseline	Post Intervention		Total
	Correct	Incorrect*			Correct	Incorrect*	
Correct	280	73	353	Correct	344	6	350
Incorrect*	88	59	147	Incorrect*	165	11	176
Total	368	132	500	Total	509	17	526

Q8C. Sharing plates forks or glasses with someone who has the AIDS virus.

Control				Intervention			
Baseline	Post Intervention		Total	Baseline	Post Intervention		Total
	Correct	Incorrect*			Correct	Incorrect*	
Correct	244	72	316	Correct	325	7	332
Incorrect*	105	79	184	Incorrect*	179	15	194
Total	349	151	500	Total	504	22	526

Q8D. Receiving injectable drugs with syringes or needles used by someone who has the AIDS virus.

Control				Intervention			
Baseline	Post Intervention		Total	Baseline	Post Intervention		Total
	Correct	Incorrect*			Correct	Incorrect*	
Correct	310	50	360	Correct	420	24	444
Incorrect*	85	55	140	Incorrect*	72	10	82
Total	395	105	500	Total	492	34	526

Q8E. An infant from his/her mother who has the AIDS virus.

Control				Intervention			
Baseline	Post Intervention		Total	Baseline	Post Intervention		Total
	Correct	Incorrect*			Correct	Incorrect*	
Correct	208	60	268	Correct	303	71	374
Incorrect*	136	96	232	Incorrect*	128	24	152
Total	344	156	500	Total	431	95	526

**Table 2. Improved Knowledge about HIV/AIDS transmission (n = 1026)
(continued)**

Q8F. Being coughed or sneezed on by someone who has the AIDS virus.

Control				Intervention			
Baseline	Post Intervention		Total	Baseline	Post Intervention		Total
	Correct	Incorrect*			Correct	Incorrect*	
Correct	142	106	248	Correct	222	10	232
Incorrect*	121	131	252	Incorrect*	248	46	294
Total	263	237	500	Total	470	56	526

Q8H. A baby breast-fed by his/her mother who has the AIDS virus.

Control				Intervention			
Baseline	Post Intervention		Total	Baseline	Post Intervention		Total
	Correct	Incorrect*			Correct	Incorrect*	
Correct	184	79	263	Correct	270	45	315
Incorrect*	111	126	237	Incorrect*	173	38	211
Total	295	205	500	Total	443	83	526

Q8I. Attending school with a child who has the AIDS virus.

Control				Intervention			
Baseline	Post Intervention		Total	Baseline	Post Intervention		Total
	Correct	Incorrect*			Correct	Incorrect*	
Correct	264	69	333	Correct	332	11	343
Incorrect*	104	63	167	Incorrect*	159	24	183
Total	368	132	500	Total	491	35	526

Q8J. Bites by mosquitoes or other insects who have bitten a person who has the AIDS virus.

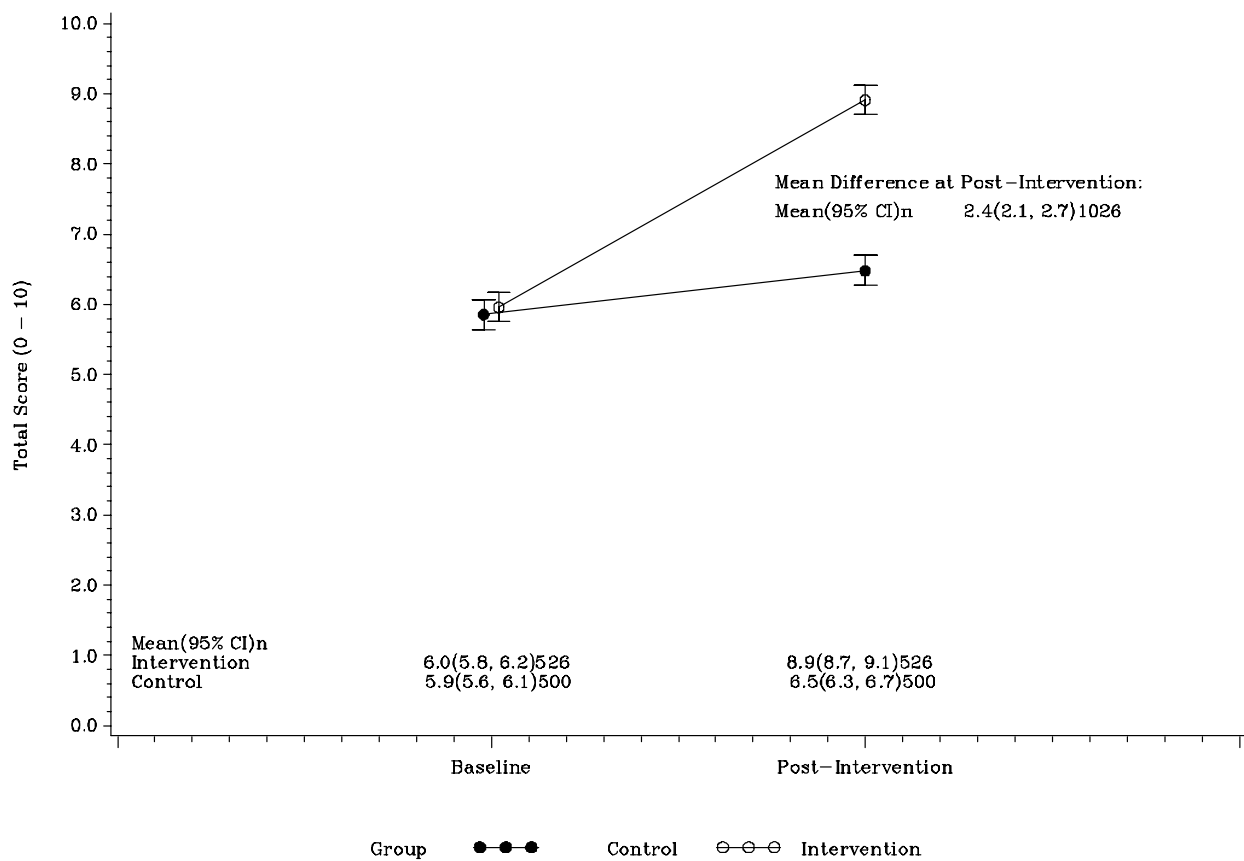
Control				Intervention			
Baseline	Post Intervention		Total	Baseline	Post Intervention		Total
	Correct	Incorrect*			Correct	Incorrect*	
Correct	86	74	160	Correct	98	18	116
Incorrect*	118	222	340	Incorrect*	295	115	410
Total	204	296	500	Total	393	133	526

Q8K. Sharing a bed with someone who has the AIDS virus.

Control				Intervention			
Baseline	Post Intervention		Total	Baseline	Post Intervention		Total
	Correct	Incorrect*			Correct	Incorrect*	
Correct	176	96	272	Correct	260	33	293
Incorrect*	93	135	228	Incorrect*	191	42	233
Total	269	231	500	Total	451	75	526

Net Communal Knowledge Gain Following Intervention: The average total score on the ten HIV knowledge based questions was 5.9/10 (59%) at baseline for the control group and 6.0/10 (60%) for the intervention group. At week 4 post-exposure (intervention) the average total score was 6.5/10 (65%) for the control group and 8.9/10 (89%) for the intervention group, with the intervention group averaging a score of 2.4 (24%) higher than the control group at week 4 post-exposure Figure 1.

Figure 1. HIV/AIDs Knowledge Score:
Change in Knowledge from Baseline to Post-Intervention



Impact on the HIV-informed (~60%) segment of the studied population: In this segment of the report, we focused on two of the knowledge based questions (Q8I and Q8E). The pattern of response to the other 8 questions was similar to that of the response to Q8I (table 2), response to Q8E was however different from the rest. Specifically, when asked if a child could be infected

with HIV by attending school with a child that has the virus (Q8I) 333 out of 500 (67%) of the control group and 343 out of 526 (65%) of the intervention group answered correctly at baseline Table 4.

Table 3. Shift in knowledge about HIV transmission (n = 1026).

Based on what you have heard about AIDS, do you think that a person can get AIDS or the AIDS virus from each of the following?

Q8I. Attending school with a child who has the AIDS virus.							
Control			Intervention				
Baseline	Post Intervention		Total	Baseline	Post Intervention		Total
	Correct	Incorrect			Correct	Incorrect	
Correct	264	69	333	Correct	332	11	343
Incorrect	104	63	167	Incorrect	159	24	183
Total	368	132	500	Total	491	35	526

To test the level of confidence with this knowledge, we compared the percentage of respondents who changed their mind (from correct answer to a wrong answer) between the baseline and the week 4 post-exposure evaluations in both groups Table 4.

Table 4: Change from correct to wrong response for Q8I following exposure

Community	Correct at Baseline	Wrong at Week-4	Proportion
Control	333	69	21%
Intervention	343	11	3%

Thus communal HIV enlightenment shift in the negative direction (measured as proportion of change from correct response at baseline to incorrect response post exposure for Q8I) was 7 times more likely in the control group indicating a high degree of information uncertainty among respondents in this group compared to respondents in the intervention group. Therefore, even in communities with some levels of prior HIV awareness the VFH program has the potential to further enhance confidence and increase the level of certainty about such knowledge.

Impact on the HIV-uninformed (~40%) segment of the studied population: To assess the impact of both types of HIV education on the segment of the study population that was uninformed at baseline we compared the reduction in incorrect response for Q8I from baseline to week-4 post intervention between the two groups as shown in Table 5.

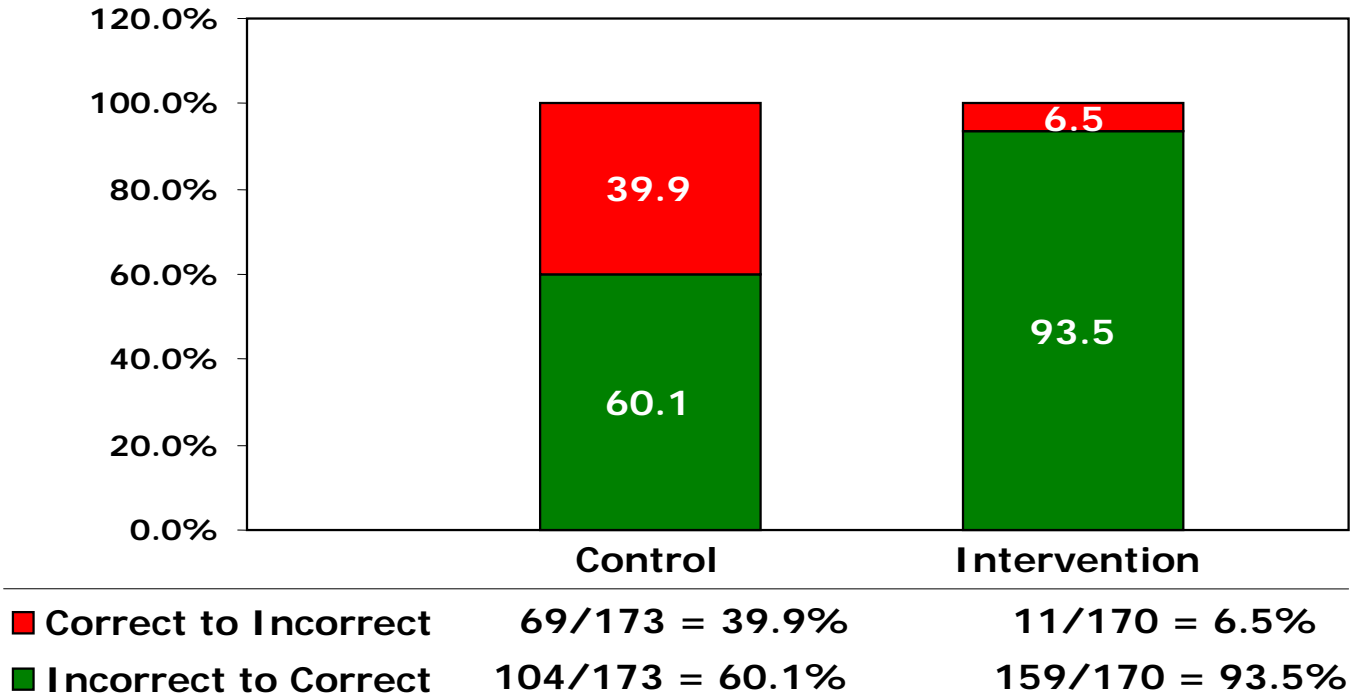
Table 5: Reduction in the proportion of wrong response for Q8I following exposure

Community	Wrong at baseline	Wrong at week-4	HIV-ignorance Reduction	(%)
Control	167	63	104	(62%)
Intervention	183	24	159	(87%)

There was a reduction in level of HIV ignorance with regard to question Q8I of 62% in the control group as compared to 87% in the intervention group, indicating the VFH HIV education approach was about 1.4 times more likely to reduce HIV-ignorance level at 4-weeks post exposure compared to SHAC approach among the HIV uninformed segment of the target population. This observation suggests that the VFH program is highly likely to be very effective mode of raising HIV awareness (or reducing HIV-ignorance) in remote communities with little or no exposure to prior HIV education.

Overall direction of knowledge shift: Who got it right initially, but subsequently change their mind in the wrong direction, and who got it wrong initially, but later changed their mind in the right direction with regard to Q8I? As shown in figure 3, change in general was in the direction of knowledge improvement for the intervention community (93.5% who changed their response after exposure made the change from wrong to the correct response, as compared to only 6.5% that changed from the right response to the incorrect one). Whereas in the control community, the pattern of change was less predictable (60.1% who changed their response after exposure made the change in the right direction, and 39.9% did in the wrong direction) suggesting that many respondents in the control community were likely relying on guess work and therefore less confident about their HIV knowledge.

Fig 3: Transmission of HIV/AIDS from attending school with a child who has the AIDS virus



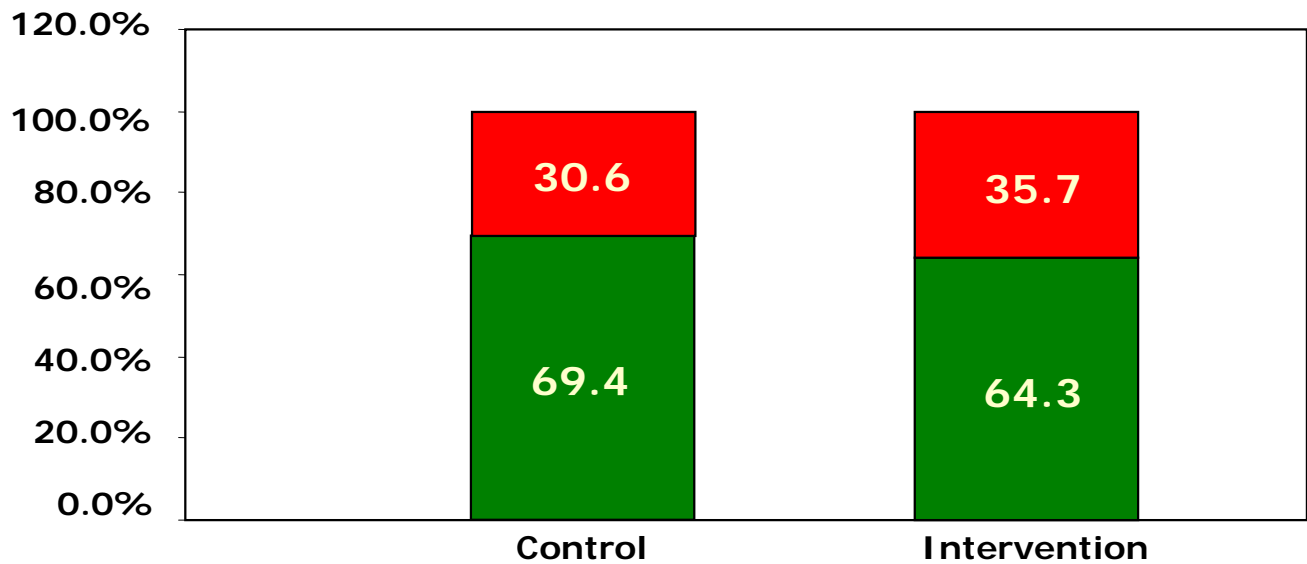
Question Q8E (The Placebo Question?): Unlike the responses to the other 9 out of the 10 questions administered to assess the level of HIV knowledge in the study population where there marked difference between the two groups after knowledge exposure, there was no appreciable difference between the groups in the response to Q8E Table 6, Figure 4. The likely explanation for this finding is that the information required to answer this question correctly was either not presented in the education materials, or if it was present, it was presented in manner that it was difficult for the respondents to comprehend and to retain.

Table 6. Shift in knowledge about HIV transmission (n = 1026).

Based on what you have heard about AIDS, do you think that a person can get AIDS or the AIDS virus from each of the following?

Q8E. An infant from his/her mother who has the AIDS virus							
Control			Intervention				
Baseline	Post Intervention		Total	Baseline	Post Intervention		Total
	Correct	Incorrect			Correct	Incorrect	
Correct	208	60	268	Correct	303	71	374
Incorrect	136	96	232	Incorrect	128	24	152
Total	344	156	500	Total	431	95	526

Transmission of HIV/AIDS from mother to infant



■ Correct to Incorrect	60/196 = 30.6%	71/199 = 35.7%
■ Incorrect to Correct	136/196 = 69.4%	128/199 = 64.3%

Communal Reach of the VFH Demonstration Program:

A poll conducted from a sample of 476 villagers at week-8 post VFH intervention indicates most of the villagers in the intervention community (94%) had participated or listened to the VFH program at least once in the past month since post-exposure assessment.

E. CONCLUSION:

The VFH digital-audio technology assisted HIV education was superior to the HIV education delivered by seminar and pamphlets (SHAC). Compared to HIV education delivered by seminars and pamphlet distribution, the VFH approach resulted in

- (1) A 24% increase in net communal HIV awareness, thus demonstrating the superiority of this approach to HIV education over the SHAC in this study population.
- (2) Demonstrable benefit among individuals with previous exposure to some HIV knowledge as evident by a 7 times higher levels of confidence and information certainty among volunteers exposed to this mode of HIV education compared to exposure to SHAC.
- (3) A more significant gain in HIV-ignorance reduction (1.4-fold more reduction) with this approach compared to SHAC, and hence this method may be by far the more suitable approach to HIV education in remote and rural communities in Africa.
- (4) The VFH approach was feasible and resulted in a rapid reach of about 94% of the target population within 8 weeks of program implementation.

A rapid deployment of the VFH HIV education program in rural communities in Africa could have significant benefit of raising awareness in a manner that leads to HIV risk behavior reduction, and lowering of HIV prevalence rate among this resource poor venerable group.

Continuing Analyses of data generated from this project are in progress. A scientific abstract of this work was submitted to the 2006 World AIDS Conference in Toronto. Three manuscripts on this work are being prepared for publication in peer review scientific journal.

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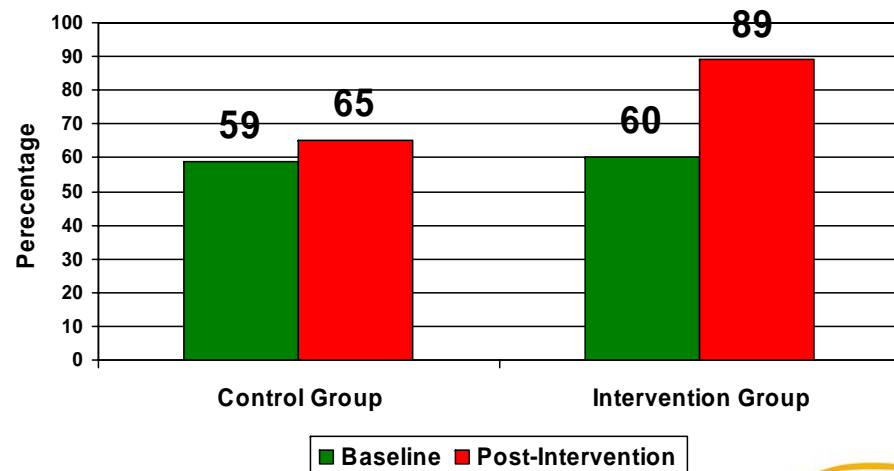
REFERENCES:

1. A Factsheet - December 2004: The IMF's Role in the Fight Against HIV/AIDS: <http://www.imf.org/external/np/exr/facts/hiv aids.htm>
2. Bessinger R, Akwara P, Halperin D. Sexual behavior, HIV and fertility trends: A comparative analysis of six countries. Phase I of the ABC Study. Washington, D.C.: Measure Evaluation/USAID, 2003. <http://www.cpc.unc.edu/measure/publications/special/special.htm>
3. USAID. The "ABCs" of HIV prevention: Report of a USAID technical meeting on behavior change approaches to primary prevention of HIV/AIDS. Washington, D.C.: Population, Health and Nutrition Information Project, 2003. http://www.usaid.gov/pop_health/aids/TechAreas/prevention/abc.pdf
4. Hogle J, Green EC, Nantulya V, Stoneburner R, Stover J. What happened in Uganda? Declining HIV prevalence, behavior change and the national response. Washington, D.C.: USAID, 2002. http://www.usaid.gov/pop_health/aids/Countries/africa/uganda_report.pdf
5. Low-Ber D, Stoneburner RL. Behaviour and communication change in reducing HIV: Is Uganda unique? African J AIDS Research 2003;2:9-21 (www.hsph.harvard.edu/hcpds/PublicationsWeb/Low-Ber1.pdf).
6. UNAIDS: AIDS epidemic update : 2004. http://www.unaids.org/wad2004/EPIupdate2004_html_en/epi04_00_en.htm
7. Kim JC, Martin LJ, Denny L. Rape and HIV post-exposure prophylaxis: addressing the dual epidemics in South Africa. *Reprod Health Matters*. 2003 Nov;11(22):101-12
8. MIGRATION, SEXUALITY, AND THE SPREAD OF HIV/AIDS IN RURAL SOUTH AFRICA Series Editor: Jonathan Crush Southern African Migration Project Migration Policy Series No. 31
9. Cohen, J. A power primer. *Psychological Bulletin* 1992; 112: 160-164.
10. Donner A. and Klar N. Statistical considerations in the design and analysis of community intervention trials. *The Journal of Clinical Epidemiology* 1996; 49: 435-439.
11. Liang KY and Zeger SL. Longitudinal data analysis using generalized linear models. *Biometrika* 73: 13-22, 1986.
12. Diggle PJ, Liang KY, Zeger SL. *Analysis of Longitudinal Data*. Oxford: Clarendon Press, 1994.

+24% Net Communal Knowledge Gain

The baseline level of HIV awareness as assessed by the proportion of correct responses to a set of HIV knowledge questions (AIDSCAP/WHO Counseling and Testing Efficacy Study Instrument) showed that both groups had some form of HIV education in the past. The 4-week post-survey showed that the intervention group receiving education via the VFH approach was 24 percentage points higher than the control group who received the same education through a standard seminar training and pamphlet distribution program.

Characteristics of Respondents from the Control and Intervention Communities.					
Characteristics		Baseline		Intervention	
		n	(%)	n	(%)
Gender	Male	212	42.4	304	57.8
	Female	269	53.8	209	39.7
Age	< 15 years	38	7.6	39	7.4
	15 - 45 years	373	74.6	400	76.0
	> 45 years	69	13.8	65	12.4
Highest Education Attained					
	No formal education	301	60.2	247	47.0
	Completed grades 1-3	35	7.0	24	4.6
	Completed grades 4-5	12	2.4	24	4.6
	Completed grade 6	121	24.2	198	37.6
Relied on as Source of Information					
	Newspaper	9	1.8	14	2.7
	TV	63	12.6	33	6.3
	Radio	424	84.8	433	82.3
	Community Leader	43	8.6	18	3.4
	Family	35	7.0	26	4.9
	Friends	61	12.2	83	15.8

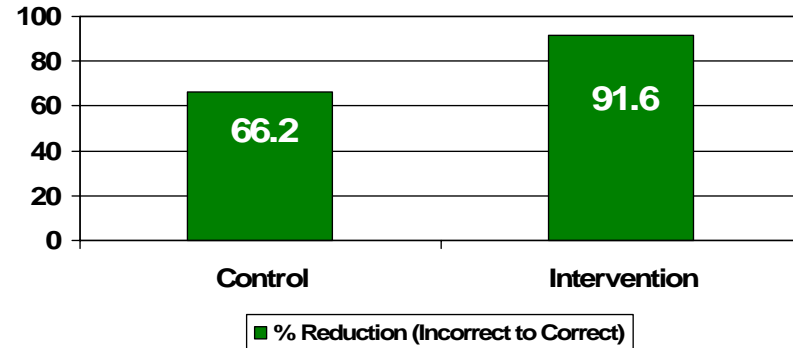


Knowledge About HIV/AIDS

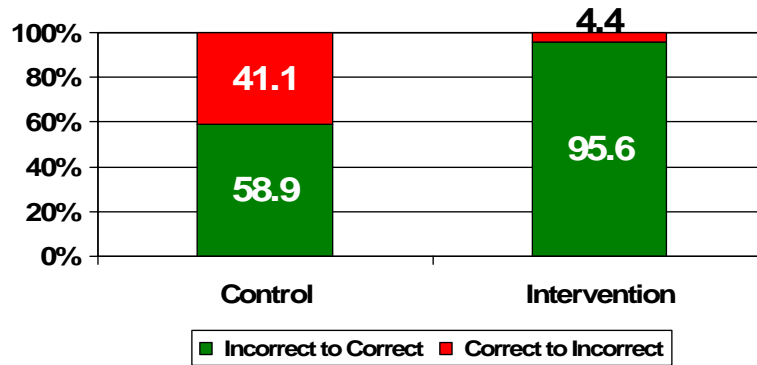
Q8A: Working near someone with the AIDS virus.

Control Group				Intervention Group			
Baseline	Post Intervention		Total	Baseline	Post Intervention		Total
	Correct	Incorrect			Correct	Incorrect	
Correct	288	67	355	Correct	328	8	336
Incorrect	96	49	145	Incorrect	174	16	190
Total	384	116	500	Total	502	24	526

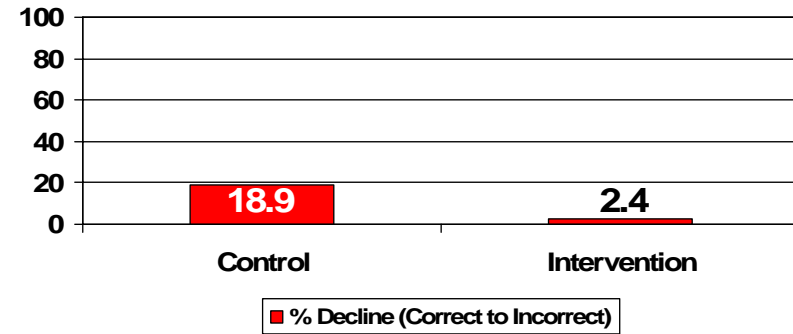
Impact on the Uninformed Segment of the Community



Overall Impact on the Community



Impact on the Informed Segment of the Community

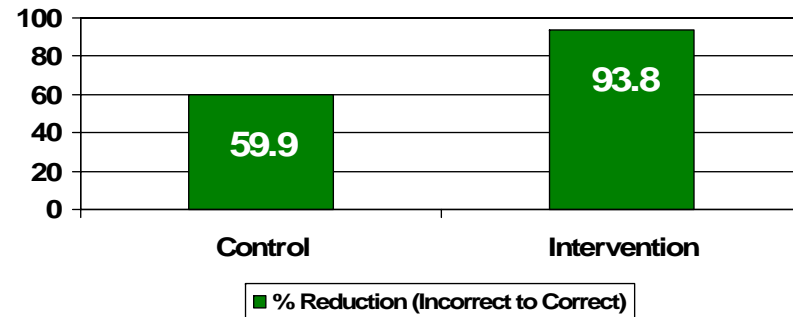


Knowledge About HIV/AIDS

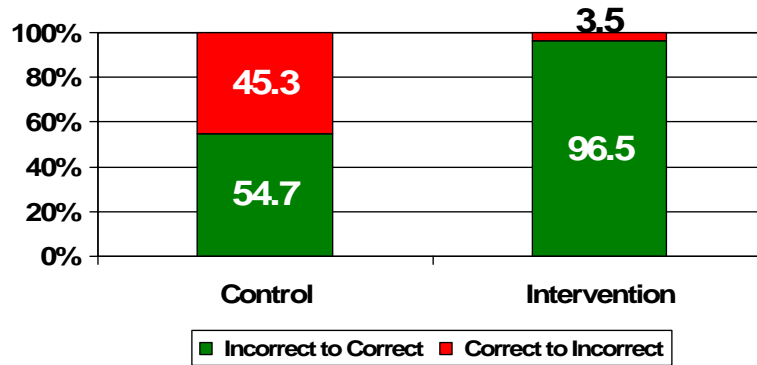
Q8B: Eating food cooked by someone who has the AIDS virus.

Control Group			Intervention Group				
Baseline	Post Intervention		Total	Baseline	Post Intervention		Total
	Correct	Incorrect			Correct	Incorrect	
Correct	280	73	353	Correct	344	6	350
Incorrect	88	59	147	Incorrect	165	11	176
Total	368	132	500	Total	509	17	526

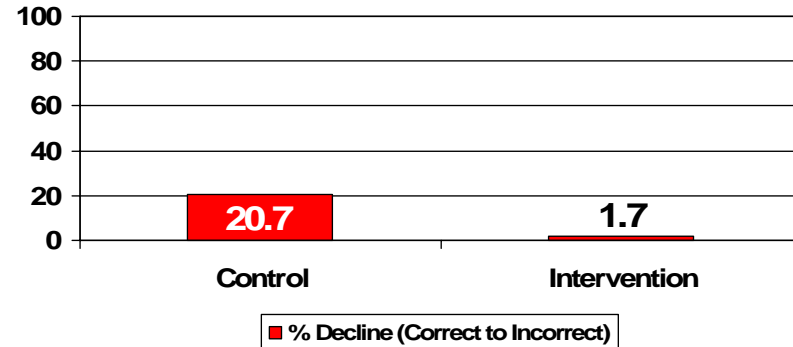
Impact on the Uninformed Segment of the Community



Overall Impact on the Community



Impact on the Informed Segment of the Community

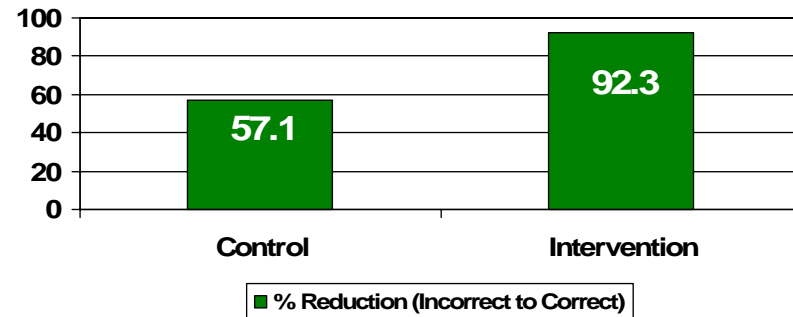


Knowledge About HIV/AIDS

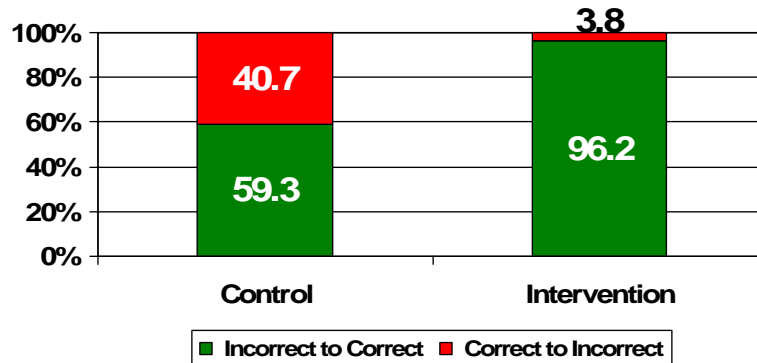
Q8C: Sharing plates, forks, or glasses with someone who has the AIDS virus.

Control Group				Intervention Group			
Baseline	Post Intervention		Total	Baseline	Post Intervention		Total
	Correct	Incorrect			Correct	Incorrect	
Correct	244	72	316	Correct	325	7	332
Incorrect	105	79	184	Incorrect	179	15	194
Total	349	151	500	Total	504	22	526

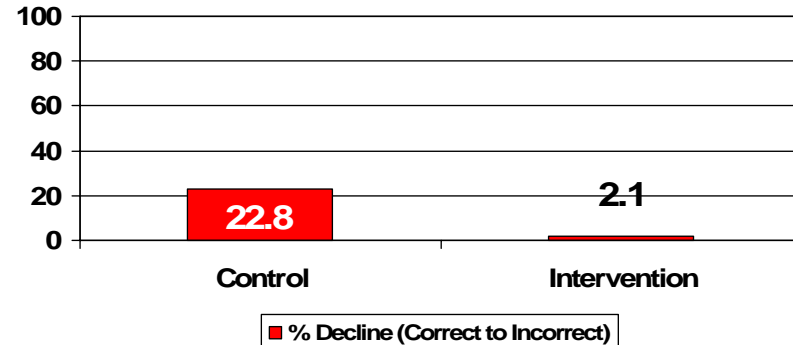
Impact on the Uninformed Segment of the Community



Overall Impact on the Community



Impact on the Informed Segment of the Community

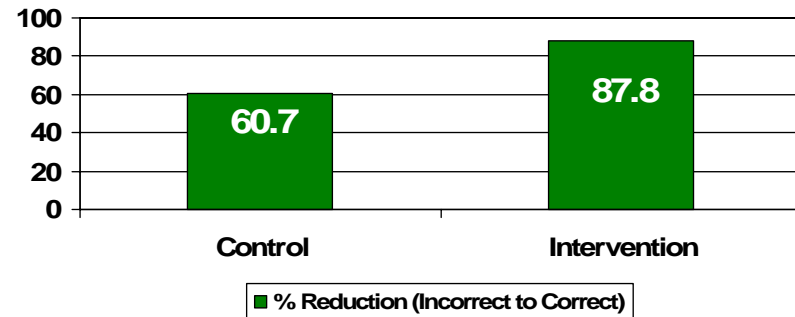


Knowledge About HIV/AIDS

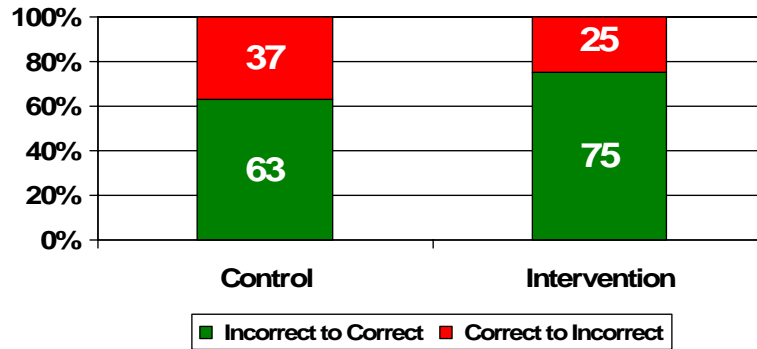
Q8D: Receiving injectable drugs with syringes or needles used by someone who has the AIDS virus.

Baseline	Post Intervention		Total	Baseline	Post Intervention		Total
	Correct	Incorrect			Correct	Incorrect	
Correct	310	50	360	Correct	420	24	444
Incorrect	85	55	140	Incorrect	72	10	82
Total	395	105	500	Total	492	34	526

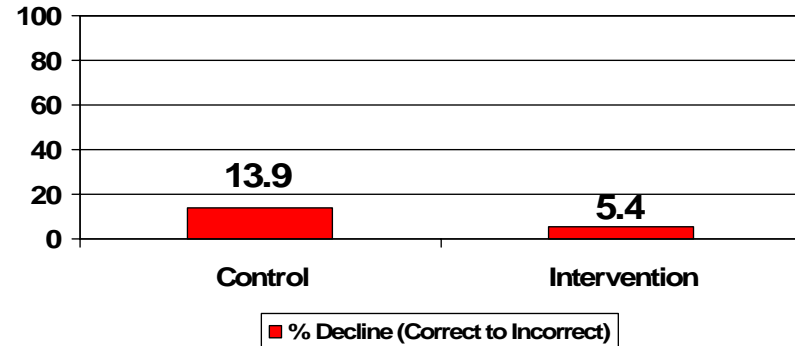
Impact on the Uninformed Segment of the Community



Overall Impact on the Community



Impact on the Informed Segment of the Community

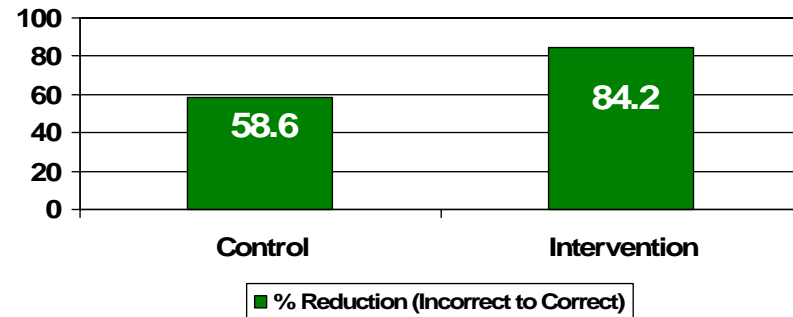


Knowledge About HIV/AIDS

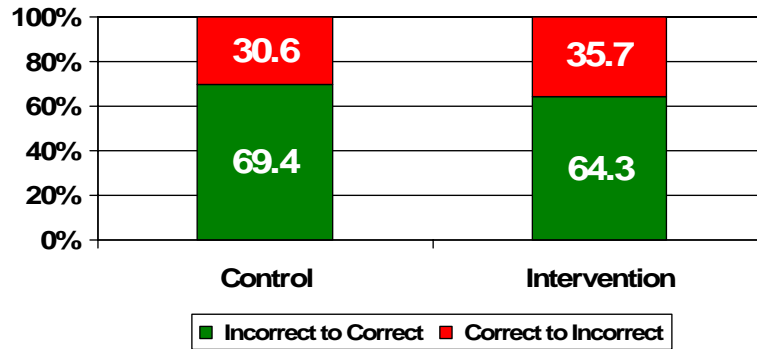
Q8E: An infant from his/her mother who has the AIDS virus.

Control Group			Intervention Group				
Baseline	Post Intervention		Total	Baseline	Post Intervention		Total
	Correct	Incorrect			Correct	Incorrect	
Correct	208	60	268	Correct	303	71	374
Incorrect	136	96	232	Incorrect	128	24	152
Total	344	156	500	Total	431	95	526

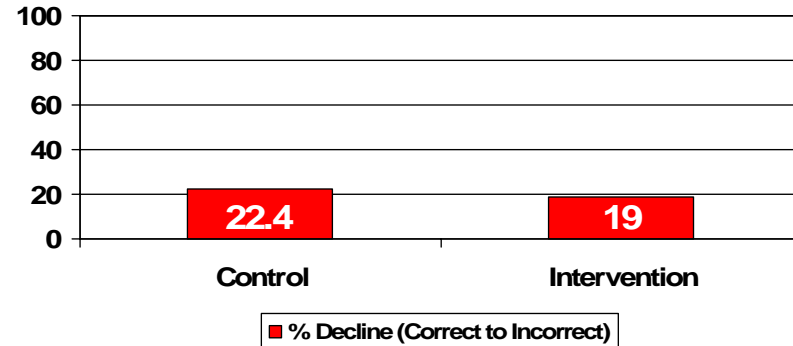
Impact on the Uninformed Segment of the Community



Overall Impact on the Community



Impact on the Informed Segment of the Community

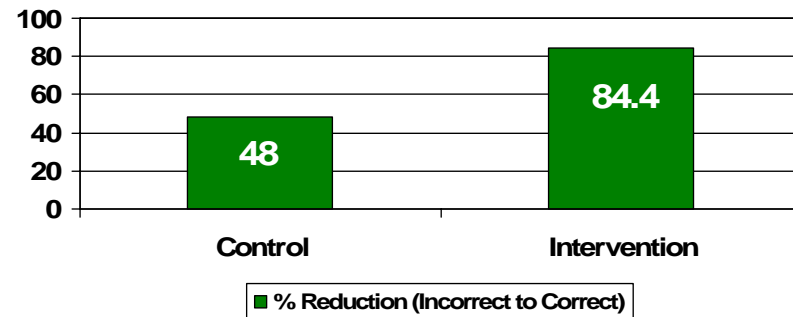


Knowledge About HIV/AIDS

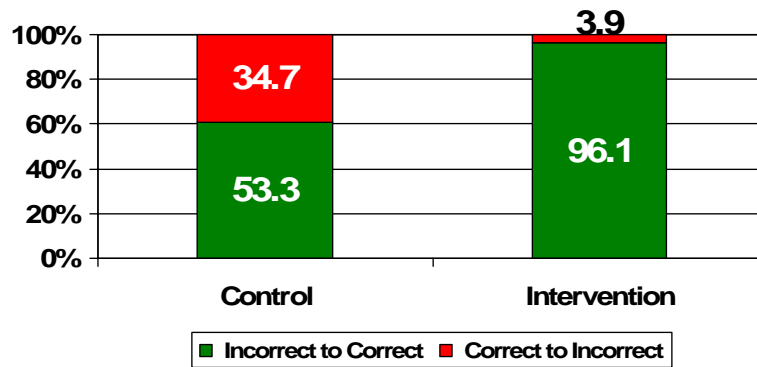
Q8F: Being coughed or sneezed on by someone who has the AIDS virus.

Control Group				Intervention Group			
Baseline	Post Intervention		Total	Baseline	Post Intervention		Total
	Correct	Incorrect			Correct	Incorrect	
Correct	142	106	248	Correct	222	10	232
Incorrect	121	131	252	Incorrect	248	46	294
Total	263	237	500	Total	470	56	526

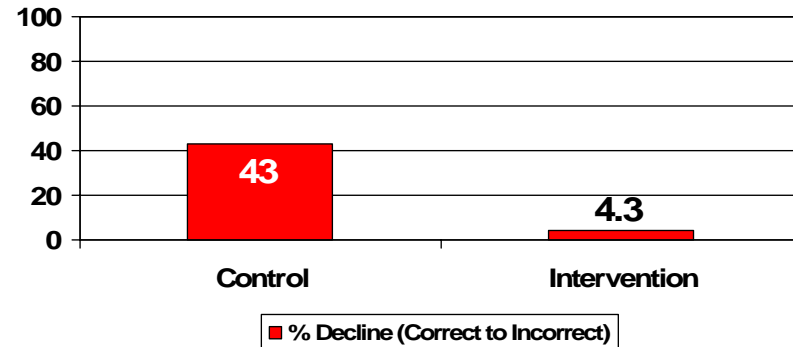
Impact on the Uninformed Segment of the Community



Overall Impact on the Community



Impact on the Informed Segment of the Community

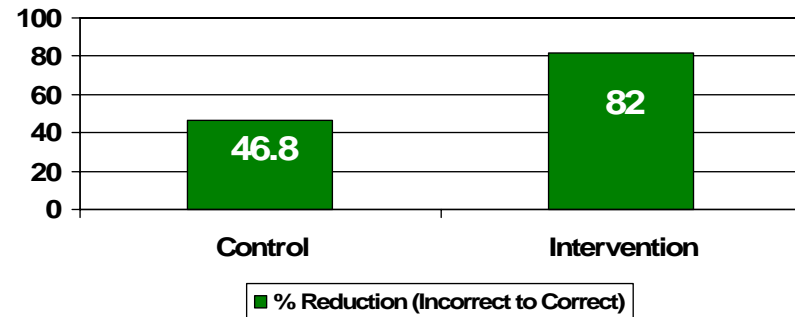


Knowledge About HIV/AIDS

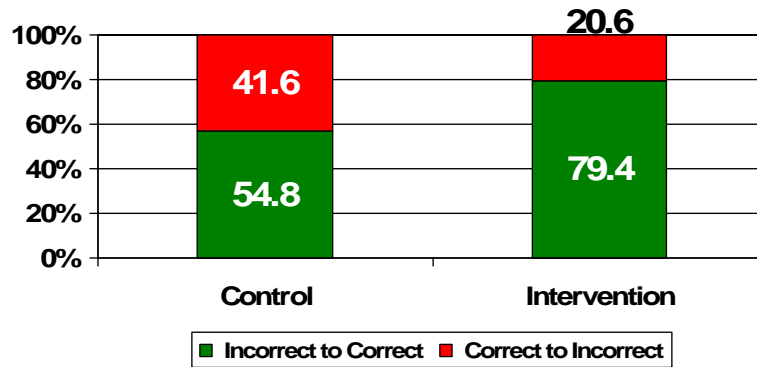
Q8H: A baby breast-fed by his/her mother who has the AIDS virus.

Control Group				Intervention Group			
Baseline	Post Intervention		Total	Baseline	Post Intervention		Total
	Correct	Incorrect			Correct	Incorrect	
Correct	184	79	263	Correct	270	45	315
Incorrect	111	126	237	Incorrect	173	38	211
Total	295	205	500	Total	443	83	526

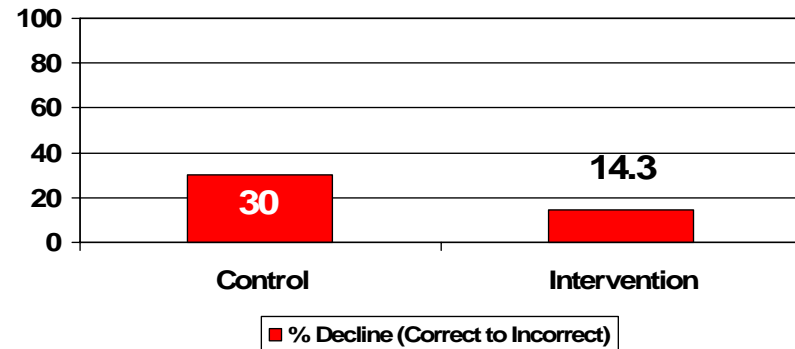
Impact on the Uninformed Segment of the Community



Overall Impact on the Community



Impact on the Informed Segment of the Community

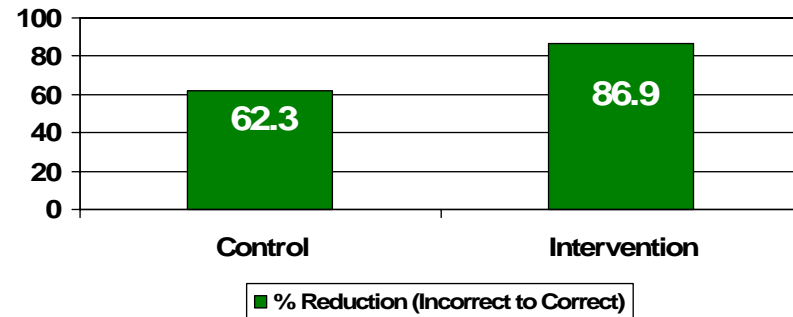


Knowledge About HIV/AIDS

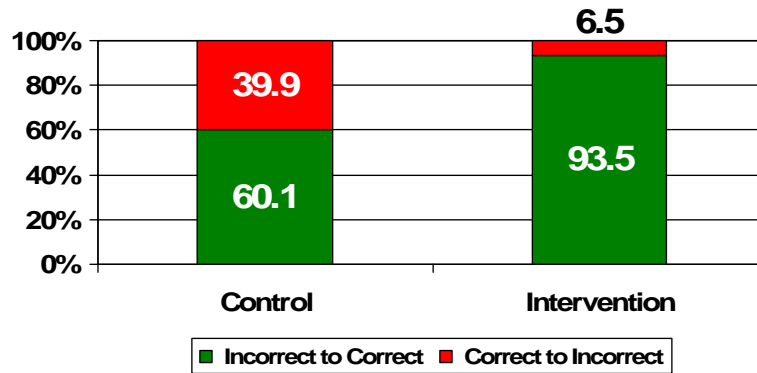
Q8I: Attending school with a child who has the AIDS virus.

Control Group				Intervention Group			
Baseline	Post-Intervention		Total	Baseline	Post Intervention		Total
	Correct	Incorrect			Correct	Incorrect	
Correct	264	69	333	Correct	332	11	343
Incorrect	104	63	167	Incorrect	159	24	183
Total	368	132	500	Total	491	35	526

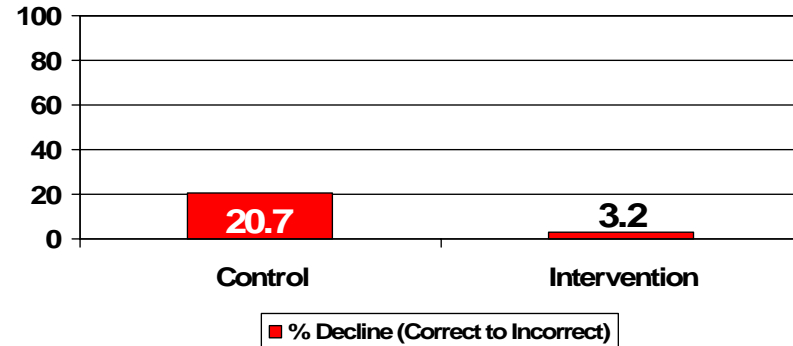
Impact on the Uninformed Segment of the Community



Overall Impact on the Community



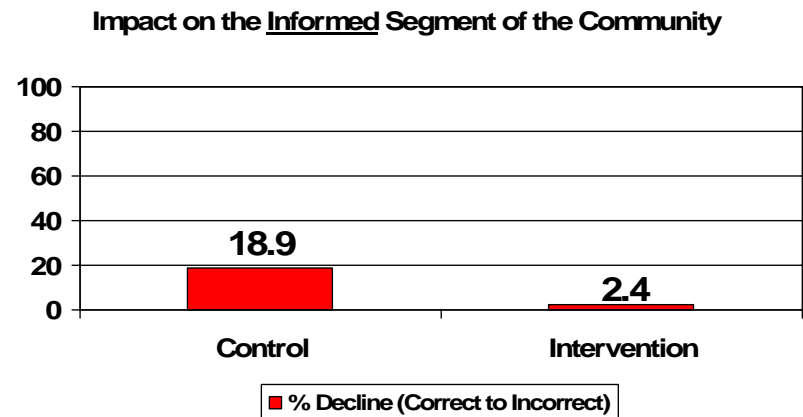
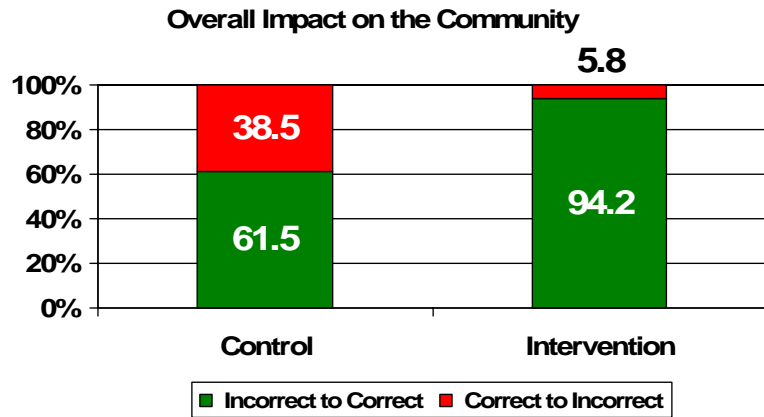
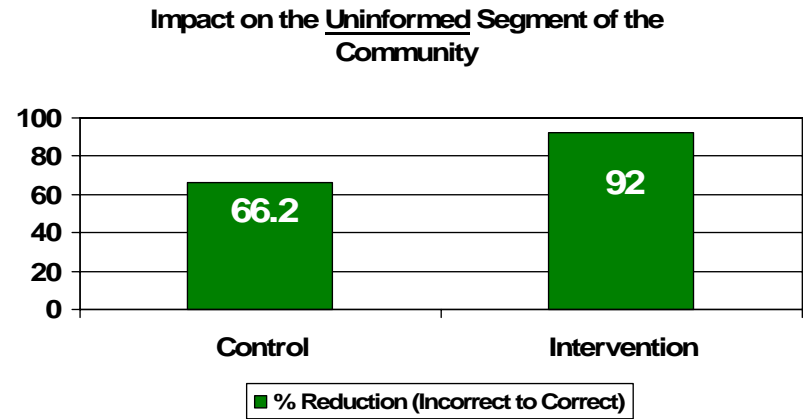
Impact on the Informed Segment of the Community



Knowledge About HIV/AIDS

Q8J: Bites by mosquitos or other insects who have bitten a person who has the AIDS virus.

Control Group				Intervention Group			
Baseline	Post Intervention		Total	Baseline	Post Intervention		Total
	Correct	Incorrect			Correct	Incorrect	
Correct	288	67	355	Correct	328	8	336
Incorrect	96	49	145	Incorrect	174	16	190
Total	384	116	500	Total	502	24	526

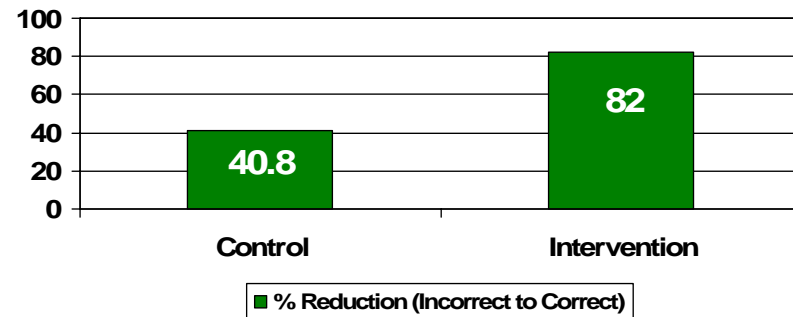


Knowledge About HIV/AIDS

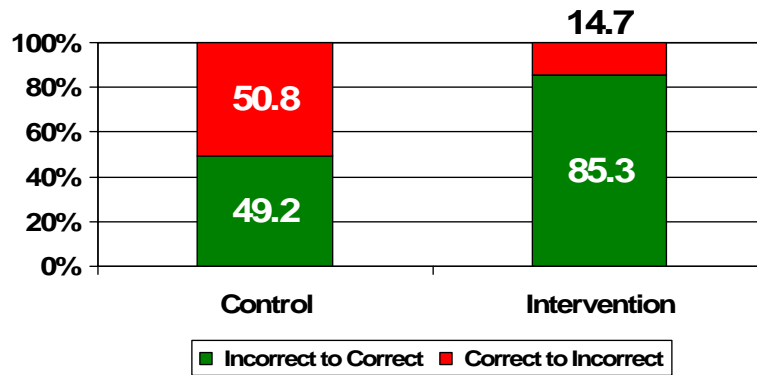
Q8K: Sharing a bed with someone who has the AIDS virus.

Control Group			Intervention Group				
Baseline	Post Intervention		Total	Baseline	Post Intervention		Total
	Correct	Incorrect			Correct	Incorrect	
Correct	176	96	272	Correct	260	33	293
Incorrect	93	135	228	Incorrect	191	42	233
Total	269	231	500	Total	451	75	526

Impact on the Uninformed Segment of the Community



Overall Impact on the Community



Impact on the Informed Segment of the Community

