

Task shifting HIV counseling and testing services in Zambia: The role of lay counselors

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Abstract

Background

The human resource shortage in Zambia is placing a heavy burden on the few health care workers (HCWs) available at health facilities. The Zambia Prevention, Care and Treatment Partnership (ZPCT) began training and placing community volunteers as lay counselors in order to complement the efforts of the HCWs in providing HIV counseling and testing (CT) services. These volunteers are trained using the standard national CT curriculum. This study was conducted to review the effectiveness of lay counselors in addressing staff shortages and the provision of HIV CT services.

Methods

Quantitative and qualitative data, using semi-structured interviews, was collected from all active lay counselors in each of the facilities and a facility manager or counseling supervisor overseeing CT services and CT clients. At each of the ten selected facilities, all CT record books for the month of May 2007 were examined and any record-keeping errors were tallied by cadre. Qualitative data was collected through focus group discussions with health care workers at each facility.

Results

Lay counselors provide quality CT services and relieve the workload of overstretched HCWs. Facility managers recognize and appreciate the services provided by lay counselors. Lay counselors provide up to 70 percent of CT services at health facilities. The data review revealed lower error rates for lay counselors compared to HCWs in completing the CT registers.

Conclusions

Community volunteers, with approved training and ongoing supervision, can play a major role at health facilities to provide quality CT services, and relieve the burden on already overstretched HCWs.

Background

Zambia is amongst the countries hardest hit by the HIV/AIDS epidemic in Africa. It is estimated that 1.2 million of the total Zambian population of ten million was infected with HIV by 2005 [1], [2]. Although declining HIV trends have been observed in young people since 1998, HIV/AIDS in Zambia is still a major threat to the lives of adults of reproductive age and their children [3]. Increasing access to HIV counseling and testing - the entry point to follow-on care, support and treatment services - could alter this trend.

Shortages of health care workers (HCWs) have been a bottleneck in provision of HIV/AIDS services in resource-limited settings. The World Health Organization/Ministry of Health establishment recommends a staff population ratio of 1:5000, 1:700, and 1: 8000 for doctors, nurses and pharmacists respectively. The existing human resource capacity in Zambia is far below the recommended cadre to population ratios with existing levels of 1:17,589, 1: 8,064 and 1:473,450 for doctors, nurses and pharmacists respectively [4]. With the rapid expansion of access to antiretroviral therapy (ART), the increasing patient load will put a strain in the existing fragile human resource base. Universal access to ART treatment is inextricably linked to availability of and access to HIV counseling and testing (CT) services. However, the human resource shortage in Zambia, coupled with a national HIV prevalence rate of 14.3% [1], is placing a heavy burden on the few health care workers (HCWs) that are available at health facilities to provide these services.

In May 2005, Family Health International's Zambia Prevention, Care and Treatment Partnership (ZPCT), funded by USAID through the U.S. President's Emergency Plan for AIDS Relief, began training and placing community volunteers as 'lay counselors' in order to complement the efforts of the HCWs in providing HIV counseling and help reduce their burden, using the national HIV CT curricula. This national training package includes a two-week classroom component followed by a four week supervised practicum component. The lay counselors are certified after the practicum.

Lay counselors were initially trained to provide only pre- and post-test HIV counseling because HIV testing could only be done by HCWs. In May 2006, after certification of an original cohort of lay counselors, the Zambian National HIV VCT guidelines were changed to allow non-health care workers to conduct HIV testing using finger prick methodology. As a result, ZPCT began training all new and previously certified lay counselors in HIV testing in addition to counseling.

Prior to the introduction of lay counselors, CT services were mostly provided by nurses during their free time. Existing human resource challenges and personnel shortages in many health facilities do not adequately address the importance of accessible, quality CT services. Most health facilities did not have staff dedicated to providing CT services – meaning that clients seeking the service may not have a HCW available to provide the service.

By focusing specifically on the CT aspect of HIV services, lay counselors are able to devote more time to each client than HCWs. Certified lay counselors are placed in health facilities to provide services 2-3 days per week. Although officially certified and integrated into the operation of their facilities, lay counselors are expected to maintain their status as

community-level volunteers. The lay counselor position is not part of the current MOH establishment. Under the direction of an appointed facility manager, lay counselors provide CT services on a part-time basis under the supervision of facility managers. ZPCT furnishes a stipend of 100,000 Zambian Kwacha (approximately \$25) a month to cover travel expenses for days worked at the facility.

The objective of this study was to assess the effectiveness of lay counselors in addressing human resource shortages in the provision of HIV CT services in selected health facilities. We also aimed to identify the extent and quality of the services provided by lay counselors in health facilities and to assess differences in quality of services, client counseling satisfaction and accuracy of data recording.

Methods

The study was conducted in ten health facilities in two provinces in Zambia. A multi-stage purposive sampling process, of two of the five provinces in which ZPCT operates, was selected. Luapula province lies in the northern section of the country and represents a rural population base with an overall density of 15.3 people/km² [5]. The second, Copperbelt province, contains many of Zambia's larger urban areas and represents a population base with an overall density of 50.5 people/km² [5]. One predominantly urban and one predominantly rural province were selected in order to encompass variability in HIV prevalence rates as well as potential differences in the implementation and acceptability of lay counselor CT services. Within these two provinces, all ZPCT-supported health facilities in which lay counselors had been trained, placed, and active for at least one year prior to study initiation were selected for evaluation (a total of ten health facilities). Four of the selected health facilities were located in Luapula province, and six were located in Copperbelt province. This final sample included

facilities serving a range of population catchment sizes and was comprised of rural health centers, urban clinics, and secondary and tertiary-level government hospitals. Health facility staff selected participating lay counselors from among volunteers with existing ties to the facility for at least one year.

Following is a list of the facilities selected for the study:

Table 1

The study used both quantitative and qualitative methods. Using semi-structured interviews, data was collected from all active ZPCT-trained lay counselors in each of the facilities, a facility manager or counseling supervisor overseeing CT services and CT clients. All interviews were conducted at the facilities during times convenient to those interviewed; generally in-between clients or meetings for counselors or managers, and between or following service appointments for clients. All those interviewed were reminded of their confidentiality and the unbiased interpretation of their responses.

CT record keeping was evaluated as a quality assurance measure. At each of the ten selected facilities, all CT record books for the month of May 2007 (one month prior to study initiation) were examined and any record-keeping errors were tallied. Standardized logs and instructions are provided to each of the facilities to promote monitoring and evaluation as well as record the number of clients seeking services and their basic demographics. The standardization of these logs allowed for the generation of a list of mistakes to be considered recording errors. This list of pre-determined errors was then used to tally all those found in each log book used at these ten facilities. A total of 1083 entries were reviewed using a data accuracy checklist. In addition, CT uptake data from October 2005 to September 2006 and

October 2006 to September 2007 before and after the introduction of lay counselors were reviewed to assess service statistics trends.

Qualitative data was collected through focus group discussions with health care workers at each facility.

Table 2

Data collected from semi-structured interviews with lay counselors, clients and facility managers were analyzed both quantitatively and qualitatively. All quantitative data analyses were performed using SAS statistical software, version 9.1 (SAS Institute, Cary, NC, USA). All qualitative, open-ended question responses were coded by hand to look for common themes and then analyzed to draw conclusions. Data gathered from the quality assurance portion of the evaluation were used to calculate error rates at the level of the facility and of the province. Since these errors were also tallied according to the initials of the recording CT provider, they were also split by provider to assess differences between lay counselors and health care workers.

Results

Of the 19 lay counselors interviewed, six were based at health facilities in Luapula and 13 at Copperbelt health facilities. The average age of the lay counselors was 44.8 years, ranging from 32 to 59 years. 11 of the lay counselors interviewed were male (57.9%) and eight were female (42.1%). More than half (57.9%) of lay counselors provided services at the health facility prior to training and placement as a lay counselor. Fifteen lay counselors (78.9%) still

assist with other services at their assigned health facility, including community health education and assisting with child health days.

Job Motivation

Lay counselors were dedicated to their work and consider themselves professionals. They were confident in their counseling skills and found their work rewarding. When asked about their main motivation for being a counselor, the most common response given was the ability to “help people” and service their community, as well as allusions to how HIV/AIDS had touched them personally.

“Lots of people are dying without knowing their status. We are role models and we can impart information...knowledge is power.”

Services by Lay Counselors

The data revealed that 70.5% of CT clients interviewed received CT from a lay counselor rather than a health care worker at the study sites. With an average of 2.4 lay counselors at each facility visited (ranging from one to four), lay counselors were available almost all the time to provide CT services. The lay counselors spent an average of 2.8 days (range 2 to 5) at their assigned health facility, providing CT services to an average of 5.6 clients (range 3 to 8) per day.

Quality of Services

The quality of counseling provided by lay counselors was high, and comparable to the CT services provided by HCWs. The table below provides a comparison of results from clients served by a lay counselor and a HCW, showing that there is no difference across a number of factors assessed (p-value >0.05). In addition, data indicates that clients who received CT

services from a lay counselor waited an average of almost 15 minutes less than clients who received CT services from a HCW.

Table 3

Facility managers also rated the CT services provided by lay counselors as average to excellent. None rated the services as below average.

Addressing the HCW Workload and Human Resource Issues

According to health facility managers interviewed, lay counselors have contributed significantly to reducing the workload of HCWs, even having a “tremendous” or “overwhelming” impact.

“They have given us a relief, coverage of CT services has gone up and we have been able to reach our targets.”

All facility managers interviewed mentioned that the presence of lay counselors has resulted in more clients accessing CT services, while simultaneously decreasing the workload of health care workers. Lay counselors were always or usually available to provide CT services. Uptake of CT services increase by about 27.3% and 101.3% in Luapula and Copperbelt provinces respectively after the introduction of lay counselors.

Table 4

Data quality

The review of CT records revealed that data accuracy was generally high among both lay counselors and HCWs. The error rate for lay counselors was lower than the error rate of HCWs (6.44 compared to 16.81 per 1,000 fields $p<0.05$).

Sustainability

Health center managers expressed concern about retention of lay counselors:

“The drawback is the amount of money they receive. They are here for 2-3 days, all day, and with no lunch. What they receive is too little. We may lose them if they find better payment in the future. If they leave us, this will impact negatively.”

In addition, sustaining the quality of services requires refresher training to maintain skills and knowledge. Although the training received by the lay counselors was rated as ‘good’ or ‘very good’, additional training needs were identified by almost 85% of the lay counselors interviewed.

Discussion

This paper has presented results from a formative evaluation based on data record reviews as well as interviews with several groups of key program stakeholders. This evaluation design was intended to capture the experience of those individuals who had been directly involved with program implementation and who had utilized the lay counselors’ services.

The results support the conclusion that lay counselors are actively providing services at ZPCT-supported facilities. We found a self-reported mean of 2.8 days spent at the facility each week, with some lay counselors reporting that they spent as many as 5 days per week at their facility. We also estimated that lay counselors are providing a significant proportion

(average of 70.5%) of the CT services conducted at these facilities, based on data gathered from interviews with facility managers as well as tabulations from CT record books.

A major reason for the use of lay counselors is the potential they have for relieving already over-burdened health care workers and increasing CT uptake rates. Medically trained nurses and physicians have numerous clinical responsibilities and often do not have the time to provide CT services which can be time-consuming. Since lay counselors are trained specifically and uniquely in CT, this degree of specialization allows them to focus exclusively on consistent quality service provision, while allowing health care workers to concentrate on other aspects of clinical care.

Community volunteers, with approved training and ongoing supervision, can play a major role at health facilities to provide quality CT services and relieve the burden on already overstretched HCWs. From the interviews of facility managers and clients, we found that the same facility managers endorsed the quality of the lay counselors' work and that there was no difference in satisfaction level between CT clients counseled by lay counselors as those counseled by other health care workers. These results support previous studies which have shown lay counselors to be an acceptable CT providers and readily utilized by clients [6], [7]. Additionally, our quality assurance assessment found that error rates in CT record keeping were lower for lay counselors than for other health care workers. The combination of this set of findings indicates that lay counselors are positively affecting the provision of CT services without compromising service quality or monitoring and evaluation standards.

A third important theme which emerged from these results arose from interviews conducted with lay counselors themselves. During interviews, some lay counselors spoke of their

influence in lessening stigma as well as representing community role models. These understandings reinforce their position of importance within the community and add significant weight and responsibility to their specified duties. This interpretation also supports the findings of Grinstead and colleagues [8] which highlight the perception of similar obligations and responsibilities. The broad conception of the lay counselor role as situated within larger professional structures also appeared during these interviews. Almost all of the lay counselors that we interviewed were interested in future trainings and continuing in what was considered a professional field, including obtaining advanced certificates and degrees.

A final point of interest is the challenge of maintaining the long-term sustainability of the lay counselor program, as it has been implemented. As health facilities become increasingly dependent on community volunteers, the issue of sustainability must be critically examined. Interviews conducted with both facility managers and lay counselors raised several programmatic issues which echo those found in the community health worker literature. First is the degree to which counselor remuneration will continue to affect the course of this program in terms of retention rates and the ultimate impact of lay counselors on these facilities. Several facility managers and almost all lay counselors felt that a volunteer-based program with a travel stipend was not enough compensation for the services provided. Maintaining a volunteer-based program may force participants to choose between continuing as a lay counselor and the economic necessity of finding additional paid employment elsewhere, a concern raised by Zachariah et al. [9]. Although participants were not asked directly about the issue of financial stability, many raised the conditional nature of their continuation in this program. We can further speculate, although additional research would be needed, that more formalized job and payment structures are desired given the extent of the training required for the provision of quality, HIV-specific services and in the context of

strong beliefs regarding the important contributions that lay counselors are making at the community level. These factors may serve to increasingly foster a professional identity around lay counseling.

Conclusions

Lay counsellors, when provided with the approved and appropriate training, can play a key role in HIV counseling services. While they can support the provision of quality counselling and testing services to relieve overburdened health care workers, they will require ongoing supervision to further enhance their performance. In order to make this strategy sustainable, efforts must be made to mainstream their activities and formalize their relationship with the health facilities.

Competing interests

The authors declare that they have no competing interests

Authors' contributions

PS, KT, AS and CS conceived the study, participated in the design and helped draft the manuscript. PK, LN, DK, MS, MK, CT participated in the design and helped draft the manuscript. LN and MK did the statistical analysis. All authors read and approved the final manuscript.

Acknowledgements

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Tables

Table 1: List of health facilities included in the study sample in Luapula and Copperbelt provinces, Zambia.

Luapula Province	Copperbelt Province
<ul style="list-style-type: none"> ▪ Mansa General Hospital ▪ Mansa Central Urban Clinic ▪ Chembe Rural Health Center ▪ Senama Health Center 	<ul style="list-style-type: none"> ▪ Ndola Central Hospital ▪ Chipokota Mayamba Clinic ▪ Lubuto Health Centre ▪ Mushili Clinic ▪ Kawama Health Centre ▪ Ndeke Clinic

Table 2: Summary of respondents and sample size, Zambia.

<i>Respondents</i>	<i>Data Collection</i>	<i>Sample Size</i>	<i>Comments</i>
Lay counselors	Semi-structured interview	19	Maximum number available at each site (1-3 counselors per site)
Health Care Workers	Focus Group Discussion	16	Eight focus groups (one per health center)
Health Facility Managers	Semi-structured interview	10	One per site
CT Health Facility Clients	Exit interview	95	Convenience sample of (5-11 clients per site)

Table 3: Comparison of Counseling Provided by Lay Counselors and HCWs from Client Exit Interviews (n=95)

Question	% of clients responding 'yes' who were counseled by		p-value
	Lay Counselors	HCWs	
Did staff/counselor fully explain what to expect at the CT site?	98.5%	96.4%	p>0.05
Did the counselor make you comfortable talking to him/her?	97.0%	100.0%	p>0.05
Did the counselor display good skills in his/her counseling session?	98.5%	96.4%	p>0.05
Were you given the necessary information you need about HIV/AIDS?	94.0%	100.0%	p>0.05
Did the counselor help you to identify ways of reducing your exposure to HIV?	94.0%	100.0%	p>0.05
Overall, were the services you received at the CT center satisfactory?	97.0%	100.0%	p>0.05

Table 4: Uptake of CT services before and after the introduction of lay counselors

Province	Number of clients counseled, tested and received results		Percent Increase
	Oct 2005 to Sep 2006 (Before)	Nov 2006 to Oct 2007 (After)	
Copperbelt	5,298	10,665	101.3%
Luapula	5,414	6,893	27.3%
Grand Total	10,713	17,558	63.9%