

Making the Connections: AIDS and Water

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ABSTRACT

Objective: Acknowledging AIDS as a crosscutting development issue, a Zambian rural water supply project that provides safe accessible water to rural communities embarked on a new initiative to mainstream AIDS into the water sector.

Setting and Participants: The work of providing safe water takes the predominantly male workforce away from their spouses and families, into the rural villages of Zambia's Eastern Province, for long periods of time. With an HIV prevalence rate of 16.1%, the risk of HIV exposure exists for both employees and rural villagers. AIDS mainstreaming activities were designed to target both groups.

Intervention: An AIDS mainstreaming strategy was developed by identifying components that could be influenced in the external domain (the organization's usual work) and the internal domain (the workplace). Basic questions were addressed such as: how does AIDS affect the organization, how might the usual work aggravate susceptibility to HIV infection, and where is the comparative advantage?

Outcomes: A workplace program including peer education, employee health education (including condoms) and a workplace policy was established for employees. For the target population, a series of five messages connecting safe water and AIDS was developed and disseminated through educational drama, community meetings and trainings, and integrated into the regular water, sanitation and hygiene activities.

Conclusions: As an efficient utilization of resources that makes a broad impact, AIDS mainstreaming does not change the sector's mandate but takes advantage of the extensive geographic coverage and natural distribution system of water projects to disseminate AIDS information and make linkages with AIDS partners.

MeSH terms: AIDS; water supply; Zambia; public health; health education; rural development

La traduction du résumé se trouve à la fin de l'article.

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Access to safe water and adequate sanitation is considered a basic human need. For those with AIDS, this is even more important as it is essential to sustain good health and to provide adequate care during illness. The UN Millennium Development Goals (MDG) (see Appendix, pg. 31 this issue) highlight the importance of both these issues and advocate to halt and reverse the spread of AIDS by 2015 (6th MDG) while concurrently halving the proportion of people without sustainable access to safe drinking water and basic sanitation (7th MDG). The complex linkages between AIDS and development have been widely acknowledged. UNAIDS states "development gaps increase people's susceptibility to HIV transmission and their vulnerability of the impact of AIDS; inversely the epidemic itself hampers or even reverses development progress so as to pose a major obstacle to the achievement of the Millennium Development Goals".¹

AIDS Mainstreaming aims to improve development practice by integrating an AIDS response into all aspects of programming. This has not been a priority in the water and sanitation sector, compared to other sectors, yet the linkages are clear. The questions of how the AIDS epidemic affects water and sanitation programs and how these programs themselves influence the AIDS epidemic in terms of target groups, objectives, strategies, activities, human and financial resources are pivotal.²

The following paper documents the experiences of a large water project in the Eastern Province of Zambia that embarked on the challenge of AIDS mainstreaming with these considerations in mind.

PARTICIPANTS, SETTING AND INTERVENTION

Zambia has a total population of 10.3 million people with 1.3 million living in the Eastern Province.³ Poverty is widely prevalent. Water-borne and water-related diseases are main causes of illness for Zambians. Diarrhea is the third most common cause of out-patient attendance to health centres and hospitals.⁴ Health problems associated with poor water and sanitation include bacterial and viral infections (e.g., diarrhea, cholera, dysentery), parasitic infections (e.g., amoeba, giardia,

hookworm, bilharzia), and other infections (e.g., trachoma and scabies).

The Zambian Government has declared AIDS as a crosscutting issue to be addressed by all sectors. The HIV prevalence rate among 15-49 year olds is estimated at 15.6%.⁵ Women experience higher HIV prevalence rates than men (17.8% vs. 12.9%) and young women are more likely to be HIV positive than young men. In the Eastern Province, the HIV prevalence rate is 16.1%.

Rural Water Supply Project (RWS)

The principal objective of the project is to reduce the risk of water-borne diseases among the rural population in the Eastern Province. This is accomplished by increasing access to safe, reliable water supply (boreholes and wells) and encouraging the adoption of improved health, hygiene and sanitation practices through an extensive community motivation and training program. Aiming for a coverage rate of 48% (people having access to a reliable water source), the project has established over 1,300 water points fitted with hand pumps in eight years. The technology is simple and communities are trained to finance, maintain and repair the hand pumps.

The RWS project workforce of 117 employees is predominantly male (96%), married (90%), and between the ages of 25 to 39 years.⁶ The majority (90%) has only primary education. Most employees (60%) work in field locations as far as 300 kilometres from their spouses and families (see Table I). The impact of AIDS on the project work force has been clear: decreased productivity and increased costs due to time off for illness, nursing sick relatives and funerals. As employees die (13 deaths in six years), there is the loss of trained, skilled personnel and the cost of recruiting and training replacement workers.

After the German funding agency (KfW) issued the directive that all projects were expected to mainstream AIDS, a strategy paper was developed and presented to key stakeholders in 2003. The lack of sectoral experience to guide the process resulted in a skeptical response to this new initiative.

Developing the strategy to initiate the AIDS mainstreaming process involved an examination of components in the external and internal domains.¹ The external

TABLE I

Composition and Location of Project Workforce

RWS Grouping/Team	No. Employees	Location
Office staff	4	Central base
Workshop	17	Central & Field-based
General workers	27	Central base
Motivation and health team (including actors and motivators)	23	Field-based
Maintenance team	3	Central & Field-based
Siting team	4	Field-based
Pump installation teams	6	Field-based
Drilling supervisors	5	Field-based
District production units	16	Field-based
Well-digging teams	12	Field-based
TOTAL	117	

domain is the organization's mandate and usual work and includes the people that it serves. The internal domain is the organization's workplace including employees, procedures and resources. The basic questions to be addressed included:

1. How does AIDS affect our organization and our work both now and in the future?
2. How may our work mitigate or aggravate susceptibility to HIV infection and vulnerability to the impacts of AIDS?
3. Where does our comparative advantage lie in responding to those effects?

Based on this guideline, RWS embarked upon the challenge of AIDS mainstreaming. Table II outlines the activities undertaken before and after the strategy was put in place.

OUTCOMES

The internal domain – The workplace

In 1998, project management responded to employee requests for assistance in combatting diarrhea and malaria for themselves and their families. A social marketing non-governmental organization (NGO) conducted health education sessions about malaria, diarrheal diseases, sexually transmitted infections (STIs) and AIDS and made their products available. Subsequently, condoms were made available in first aid kits. Reactions from employees and management were mixed, emphasizing the need to develop a comprehensive workplace strategy.

In 2004, 25 employees were trained as AIDS Peer Educators (PEs). They represented all sections of the project including the private drilling company. A baseline survey was conducted to measure the effectiveness of the PEs and a three-month work plan was developed. The work plan

of one topic per week proved to be too ambitious because PEs did not have daily contact with peers. Their revised plan covered one topic per month and included five large employee health meetings throughout the year to reinforce peer education. Health education materials were distributed and condom delivery was changed from passive supply to active distribution via PEs; the demand for condoms rose dramatically.

Drafting of an AIDS workplace policy for the project was initiated and while it has yet to be completed, an informal code of practice has been developed that accommodates the needs of ill employees.

The external domain – The usual work

From 1999, RWS attempted to include AIDS messages in community meetings and trainings. However, because the connection, among AIDS, safe water and sanitation were unclear to the trainers, the topic was often avoided or abbreviated into a preventive message. Subsequently, to avert this situation, a series of five clear messages was developed that made the connections between safe water and AIDS (Table III). Community meetings, health and hygiene trainings, and technical workshops provided a forum for the inclusion of the messages. In-house training and educational resources were made available to increase the trainers' comfort level in integrating the messages. Inclusion of AIDS information was made mandatory and monitoring revealed that trainers consistently delivered the messages.

Two community theatre groups supplemented the meetings with drama presentations. In addition to water and sanitation education, AIDS messages were presented. The repertoire of AIDS plays was expanded from prevention messages to include more complex messages about stigma and

TABLE II
Summary of AIDS Mainstreaming Activities

	Activities Before 2003	Activities After 2003
Target Communities	<ul style="list-style-type: none"> • Participation in World AIDS Day • AIDS education in workshops for health workers • Drama – simple presentations on HIV prevention only 	<ul style="list-style-type: none"> • Participation in World AIDS Day • Systematic inclusion of AIDS prevention and education in community meetings, health and hygiene meetings, health workshops, all technical and social trainings (well committee, caretaker and pump mending trainings; district maintenance team training) • Drama – multiple complex messages – prevention, stigma, VCT, opportunistic infections, sexually transmitted infections • Stand-alone AIDS education presentations for villagers
Workforce	<ul style="list-style-type: none"> • Occasional Employee Health Education sessions led by outsiders – general health topics • Passive supply of condoms through First Aid Kits 	<ul style="list-style-type: none"> • Pre-planned Employee Health Education Program led by Peer Educators – sexual and general health topics • 25 trained and active Peer Educators • Referral of Employees to Voluntary Counselling and Testing (VCT) centres • Active and continuous supply of condoms – freely available through Peer Educators • Provision of health education materials (English and vernacular languages) • Workplace Policy in progress • Strategy paper presented • Best Practices presentation for UNAIDS
Policies	<ul style="list-style-type: none"> • None 	

TABLE III
Messages Concerning Safe Water and AIDS²

Staying Healthy

• Diarrhea and skin diseases are common opportunistic diseases that can be reduced by safe water and sanitation. Hygiene promotion that focusses on safe water handling and appropriate sanitation practices is necessary. Attention should be given to those who are HIV positive and their caregivers.

Home-based Care

• Home-based care is common in Zambia and it is essential.
• A safe and reliable water source is needed for bathing, washing, cleaning, disinfecting the home environment, and for taking drugs. Latrines are needed to avoid contamination of water sources. These things increase the dignity of the patients.

Labour Saving

• With improved access to water supply, there are labour-saving benefits to the household affected by AIDS.

Water for Productive Use

• Access to water increases food security and this allows people to remain healthy. Nutrition can be improved by softening people’s food with safe water, and this makes it easier to eat when a patient has mouth ulcers.
• Income generation is made possible when safe water is available – activities such as food production, tending livestock, brewing beer.

Infant Feeding

• If breastfeeding is impossible due to a mother having HIV infection, it is possible to bottle-feed a baby only if safe water is available. It is an uncommon practice in rural communities due to cost.

discrimination, voluntary counselling and testing (VCT), STIs, nutrition, tuberculosis, and traditional practices of polygamy and sexual cleansing.

Through the delivery of water services, RWS training teams noted the uneven coverage of AIDS awareness and education in villages. Consequently, they investigated what AIDS resources and services existed in each district so they could connect and link needy villages to district AIDS services, and vice versa. While the training teams could answer many AIDS-related questions, they were reassured that they could make referrals; their knowledge of AIDS did not have to be as extensive as their water and sanitation knowledge.

The areas in which this project has a comparative advantage in responding to the effects of the AIDS pandemic in the target communities include:

Water Point Siting: By bringing the water point as close as possible, women and girls are relieved of the threat of assault, possible rape and infection by HIV while collecting water from faraway places. Women spend less time and energy collecting water. It is more easily accessible for those who are sick and using a hand pump requires less strength and energy than traditional water-rising methods.

Quality of Materials: The project uses high-quality materials (stainless steel) for riser pipes and rods to avoid rust, corrosion

and perforations. With fewer expected repairs, there is less expense to the rural community through lowered maintenance costs, and poverty alleviation is achieved.

Women as Pump Menders: The project has trained a team of women to repair hand pumps. As pump menders, they charge communities a nominal fee for their work. By training and equipping these women with income-generating skills, there is less need for them to resort to other means, such as survival sex, to obtain money.

Scope of Influence: RWS has wide geographic coverage and a large workforce, so it has access to a large population. Through the water-related activities, the project is able to reach remote villages to disseminate AIDS information and provide linkages to other organizations. The technical and community training is sector specific and subject to service delivery constraints, however RWS is in a position to make linkages with AIDS partners that have smaller coverage areas.

DISCUSSION

AIDS mainstreaming is a relatively new initiative within the water sector and there is no mainstreaming blueprint to follow. The RWS project embarked on AIDS mainstreaming mid-phase and with no designated budget. However, because project structures were pre-existing, AIDS activities could be integrated and synergies created to ensure efficient use of resources. With less than \$2500, an AIDS Workplace

NGO conducted the baseline survey and PE training. They procured health education materials and condoms, advised and facilitated other aspects of the workplace program. Modifications to community meetings and training workshops were completed with in-house expertise, thus incurring no extra expense.

A post-intervention survey is planned for the end of the phase, but the positive impact of AIDS mainstreaming has been observed – most notably in the dialogue that has emerged both in the workforce and the target population. Employees talked about risky field behaviours, multiple partners, condom usage by husbands and wives, VCT and anti-retroviral (ARV) treatment. As employees became involved and identified their own risks, they became the driving force behind the employee health program and took ownership of it. Peer education was a positive contribution to them, their families and communities. As they learned more about AIDS, their concern then extended to the communities in which they worked to provide water.

Mainstreaming is not a one-time event; it is an ongoing dynamic process that involves finding initiatives that “fit” the sector. It requires a commitment to innovation, and recognition that process (in design and implementation) is very important.⁷ It should be budgeted for because of ongoing expenses for mainstreaming activities. For example, focal points and peer educators require periodic refresher training as incentive, and supervision is crucial for effective mainstreaming. The characteristics of the water sector demand flexibility and willingness to try different approaches to find what works best.

CONCLUSIONS

It is undeniable that in its present structure, the water sector unintentionally provides an environment wherein HIV may be spread between workers and the general population. The nature of providing water

requires workers to travel away from their families into under-served areas. Being in remote areas limits access to health treatment and preventive services for workers and villagers. In turn, this puts families at risk. Consequently, AIDS mainstreaming becomes important. While it does not change the mandate or the working of the sector, mainstreaming intentionally and proactively addresses a problem that threatens to reverse the development successes.

Water projects, by nature, tend to be geographically extensive. The distribution system developed through the provision of water points provides access to large numbers of villages and people. As AIDS impacts the productive sector in rural communities, their capacity to obtain and maintain water services is compromised. If water is essential for life, then the connection between water and AIDS increasingly must be acknowledged for those who benefit from employment and for the others who benefit from the water.

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RÉSUMÉ

Objectif : Sachant que le sida est un problème de développement transversal, un projet zambien d'alimentation en eau potable en milieu rural a amorcé une nouvelle initiative pour intégrer la question du sida dans le secteur de l'eau.

Lieu et participants : Le travail d'alimentation en eau potable éloigne des travailleurs (principalement des hommes) de leurs épouses et de leurs familles lorsqu'ils séjournent pendant de longues périodes dans les villages ruraux de la Province Orientale de la Zambie. Avec un taux de prévalence du VIH atteignant 16,1 %, le risque d'exposition au virus est bien réel, tant pour les travailleurs que pour les villageois. On a donc conçu à l'intention de ces deux groupes des activités intégrant la lutte antisida.

Intervention : On a élaboré une stratégie d'intégration de la lutte antisida en cernant les éléments qu'il était possible d'influencer à l'externe (le travail habituel de l'organisme) et à l'interne (le milieu de travail). On a posé des questions de base : comment le sida touche-t-il l'organisme, comment le travail habituel pourrait-il exacerber la vulnérabilité aux infections à VIH, et où se situe l'avantage comparé?

Résultats : On a instauré pour les employés un programme en milieu de travail incluant un volet d'éducation par les pairs, un volet d'éducation sanitaire des employés (y compris la sensibilisation au port du condom) et une politique en milieu de travail. Pour la population cible, on a élaboré une série de cinq messages faisant un lien entre l'eau potable et le sida, que l'on a diffusés par le biais de spectacles de théâtre éducatif, de rassemblements et de formations communautaires, puis intégrés dans les activités ordinaires d'alimentation en eau, d'assainissement et d'hygiène.

Conclusions : En tant que mesure d'utilisation efficiente de ressources ayant un vaste impact, l'intégration de la lutte antisida dans le secteur de l'eau ne modifie pas le mandat de ce secteur, mais tire parti de la vaste couverture géographique et du réseau de distribution naturel des projets d'alimentation en eau pour diffuser de l'information sur le sida et créer des maillages avec des partenaires de la lutte antisida.