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Making a Difference in Malawi and Zambia Through Health Education and Public Health Best Practices

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Abstract

A 2-year U.S. Department of State–funded project* was conducted with the purpose of engaging health professionals from Malawi and Zambia who are actively involved in health care and health education for marginalized populations to develop, implement, and evaluate health education and public health interventions/programs. Twenty-six health professionals from Malawi and Zambia, referred to as Global Health Fellows, participated in the 2-year program, of which the main training component was conducted in the United States. Fellows were exposed to health education and public health best practices and developed an action plan to address a health problem of concern in their respective communities/countries. After completion of the program, Fellows received $300 to implement their action plans. Teams of Americans involved in the training program participated in follow-up visits to Malawi and Zambia to observe real-time progress on Fellows' respective action plans. The

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project was successful in creating an educational experience focused on health education best practices as well as implementation of action plans to address selected health problems in Malawi and Zambia.

Keywords

global health education; millennium development goals; health education in Malawi; health education in Zambia

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Introduction

Background

Malawi and Zambia have a common border and were once one country under the Federation of Rhodesia and Nyasaland. The majority of Malawians and Zambians live in rural areas. Both countries face high levels of poverty with more than 60% of the population living on less than $2 per day (World Vision, 2010). In Zambia, 1 in 5 children is underweight and 46% of the population is undernourished. Malnutrition is also high in Malawi as 47.1% of the children under age 5 are stunted, 12.8% are underweight, and wasting (being of low weight for height) is at 4% (World Vision, 2010). The chronic food crisis is a major cause of malnutrition and has increased risk of disease. The situation is exacerbated by the prevalence of HIV in both countries. According to Malawi Demographic and Health Survey 2010 (National Statistical Office, 2011), 11% of the Malawi adult population (aged 15–49) is HIV positive, whereas 12.7% of the Zambian adult population is HIV positive (UNAIDS-Zambia, n.d.). In Malawi, nearly 53% of the people live below the poverty threshold and nearly 75% of secondary school–aged children are either working or staying at home to care for their siblings instead of going to school.

Both Malawi and Zambia adopted the Millennium Development Goals (MDGs) of the United Nations (2010) and targets for development. These eight goals (eradicate extreme hunger and poverty; achieve universal primary education; promote gender equality and empower women; reduce child mortality; improve maternal health; combat HIV/AIDS, malaria, and other diseases; ensure environmental sustainability; and develop a global partnership for de-

velopment) are the world's time-bound and quantified targets for addressing health and social problems (United Nations Millennium Project, n.d.). These goals are also intended to address human rights including education, shelter, and security. Both countries are committed to achieving the MDGs but have been constrained by insufficient resources. However, with regard to the MDGs relating to health, Malawi and Zambia have been working on the following priorities: reducing the maternal mortality ratio, reducing the mortality rate among children under the age of 5 years, improving hygiene and access to safe water, and improving nutrition.

In Malawi, attaining health-related MDGs is guided by the Health Sector Strategic Plan (HSSP). The HSSP succeeded the Program of Work framework of 2004–2010. The HSSP summarizes 12 priority diseases within the Essential Health Package (EHP) including HIV/AIDS, perinatal conditions, malaria, diarrheal disease, malnutrition, noncommunicable diseases, and tuberculosis. Through the HSSP, the government is putting more emphasis on public health approaches of disease prevention by enhancing integrated and multisectorial health promotion and health education approaches and increasing community participation to prevent the priority diseases of the EHP (Government of Malawi: Ministry of Health, 2011). The attainment of the health-related MDGs in Zambia is guided by the National Health Strategic Plan with the major aim of improving the health status of the Zambian population (Government of Zambia: Ministry of Health, 2011).

Because of the severe shortage of professional staff in the health sectors of both countries, many communities, particularly in rural areas, do not have easy access to public health information and services. According to the World Health Organization (2010), the minimum number of health care professionals (physicians, nurses, and midwives) required to provide key health care services that can meet the MDGs is 23 per population of 10,000. With an average density of seven professionals to 10,000 people, Malawi and Zambia are therefore far below the optimum number of health professionals. This human resource constraint has a serious impact on the two countries' capacities to implement effective and efficient strategies for reducing child mortality and improving maternal health in line with the MDGs, for example, through educating women in reproductive health, nutrition, hygiene, and sanitation.

Health education at the school and community levels are necessary and strategic to promote adoption of healthful behaviors to reduce the incidence and prevalence of communicable diseases. In both countries, there are efforts toward promoting community outreach activities so people have the knowledge and capacity to use locally available resources to prevent and reduce disease spread and also to build the community capacity in early identification of diseases and timely referral to health facilities. Malawi has trained high school–educated individuals as health surveillance assistants to serve as a bridge be-

tween communities and health facilities to ensure that diseases are identified early through screening and also to conduct health promotion activities within the communities (Kok & Muula, 2013). In addition to community health education and health promotion, at the facility level, health education is incorporated within routine service provision. For example, at AnteNatal and Under Five clinics, health education is conducted prior to provision of routine care. Topics are usually centered on nutrition, hygiene, family planning, and other health-related topics to promote people's knowledge of personal and community disease prevention behaviors. Unfortunately, male participation in these health education activities is low, yet men are the decision makers of the families. Both countries are also making deliberate efforts to promote males' participation in the health and well-being of their families.

Given that many of the health issues that Malawians and Zambians face could/should be addressed through health education best practices, it is imperative that health workers in both countries become familiar with public health and health education best practices. Two strategic mechanisms chosen to ground this effort were to educate health workers in the art and science of health education and public health and to arrange for them to participate in a health education immersion experience. To that end, a comprehensive health education/public health global health training program was developed and implemented.

Purpose

In February 2010, funding was received from the U.S. Department of State to develop an educational experience for health and media professionals from Malawi and Zambia. The purpose of this project was to engage professionals who are actively involved in maternal and child health care and health education to develop, implement, and evaluate health education/ public health interventions/programs focused on specific health problems. This paper provides a description of how this overall project was conceptualized and implemented.

Method

Accomplishing the purpose of this project required (1) partnering with in-country nongovernmental organizations (NGOs), (2) recruiting health and media professionals in Malawi and Zambia, (3) developing a 4-week educational experience based in the United States, and (4) planning for follow-up visits to Malawi and Zambia by teams of Americans to observe the progress on the Fellows' action plans. The flow of activities can be found in Table 1.

Table 1
Activities Involved in the Global Exchange

Partnerships

The Department of Population Health Sciences and the School of Education at Virginia Tech partnered with the Malawi Health Equity Network (MHEN) in Lilongwe, Malawi, and World Vision in Lusaka (WVZ), Zambia, to recruit professionals from Zambia and Malawi and coordinate experiences for the U.S. teams visiting projects in Zambia and Malawi.

MHEN's goal is to promote equity and equality in health care systems in Malawi (Malawi Economic Justice Network, n.d.). This NGO is active in advocacy and networking with government and communities and places a high

value on the importance of health education. WVZ is a high-profile NGO that provides and sponsors comprehensive health education programs throughout Zambia (World Vision, 2010).

Recruiting Zambian and Malawian Health Professionals

Health education/public health professionals who worked in school or community settings and in particular with maternal and child health issues were eligible for consideration. In addition, media professionals whose work was focused on health communications were also eligible for consideration as candidates for this project. Through radio, newspaper advertisements, and e-mails administrators, MHEN and WVZ conducted the initial recruitment in their respective countries. The initial recruitment announcements yielded hundreds of applicants. MHEN and WVZ evaluated all applications and identified a pool of applicants meeting the criteria for participation.

Sixty (30 from each country) qualified candidates were identified and invited for in-person interviews. Project directors from Virginia Tech traveled to Malawi and Zambia. One week was spent in each country conducting 1-hour interviews with each applicant. The interviewers were the Virginia Tech project directors and administrators/staff from the respective partner agencies. Each candidate was asked the following questions:

- How did you find out about the competition for our program?
- What are the most crucial health education needs in your community?
- Do you have ideas on how to meet those needs?
- Describe your communication style and interactions with others.
- Please give an example of an experience you had when you thought you were particularly successful in something you planned or implemented.
- What is the most challenging aspect of your present work?
- What do you want to learn in the United States?

Deliberations followed the completion of all in-country interviews. Through this competitive process, 28 Zambian and Malawian Global Health Fellows from the health, education, and journalism sectors were selected for U.S. exchanges (seven from each country in Years 1 and 2). Successful candidates, now referred to as Global Health Fellows, were congratulated and invited (required) to attend a Department of State in-service the next day. At this in-service, they learned how to obtain a U.S. visa and the dos and don'ts of behaviors while in the United States. For example, do not hitchhike; do not ask people in the United States about personal income, age, or marital status; and make an appointment before visiting someone. Due to personal reasons, two of the Fellows were not able to participate, resulting in 26 participants.

Malawi and Zambia Global Health Fellows Program Logistics

A program such as this one requires implementation of numerous logistical details. After the interviewing and recruitment of health professionals, project directors needed to work with the U.S. embassies in Malawi and Zambia to get final approval for visas for participants. For the most part, this went smoothly with much embassy cooperation. Round-trip airline flights and hotel accommodations had to be confirmed, and with cooperation from a local travel agency and hotel, both of these activities went smoothly.

Project directors closely reviewed the participants' backgrounds and interests so appropriate educational programs and immersion experiences could be developed. To develop a meaningful experience for participants, project directors worked with faculty from Virginia Tech and community-based health professionals to tailor participants' programs based on their backgrounds and interests. Draft copies of the program were shared with participants and revised to meet their needs and interests.

The last major task was finding American families who would host the Fellows for the third week. This was a requirement of the Department of State grant and necessary because during the third week each Fellow was placed in a different community agency. The purpose was to provide an opportunity for the Fellow to live with an American family and experience how the family functions on a day-to-day basis and gain a better understanding of American culture.

In addition to providing food and shelter to a Fellow, the host family arranged for the Fellow to be transported to and from his or her respective field placement. Host families were volunteers and received no recompense.

Results

Weeks 1 and 2: Classroom Experience

The U.S.-based educational experience lasted 4 weeks (see Table 2). Weeks 1 and 2 consisted of all-day seminars at Virginia Tech. Topics covered included health education/promotion, health behavior, health communication including writing radio scripts, environmental health, epidemiology, health care systems, health evaluation, public health programming, grant writing, and program sustainability.

Table 2
Four-Week Educational Experience

Four-Week Educational Experience
Weeks 1 and 2: Seminars at Virginia Tech Topics • Environmental Health • Epidemiology • Health Education/Promotion • Health Communication • Health Care Systems • Health Disparities • Public Health Programming • Public Health Evaluation • Grant Writing • Program Sustainability
Week 3: Immersion Experience 40-Hour Placement (immersion experience) in • New River Valley Health District • Free Clinic of the New River Valley • Child Health Investment Partnership • Community Services Boards • Roanoke County Prevention Council • Television and Radio Stations
Week 4: Washington, DC U.S. Department of State Conference Networking With Respective Embassies

The seminars were conducted by content area experts and included Virginia Tech faculty, health district professionals, health care professionals, health communication and media professionals, and extension professionals.

At the end of each day, Fellows provided written responses to the following questions: (1) What did you learn about _____? (2) Will you be able to use this information in your work? If so, how? (3) Was anything missing from the presentations that would have been helpful for you? This feedback was then discussed by the coordinators, and if immediate revisions to the program were needed, they were integrated into other presentations.

The in-class education program was well received and in a few instances content was added based on the end-of-day feedback. For example, most of the group wanted more content on health behavior theory, and as a result, a special unit was integrated into the program.

Week 3: Immersion and Family Experience

During Week 3, in addition to living with an American family, each Fellow participated in a 40+ hour immersion experience in a health agency such as the New River Valley Health District, Carilion Health Services, Free Clinic of the New River Valley, Child Health Investment Partnership, Community Services Boards, Prevention Council of Roanoke County, Rescue Mission, and television and radio stations. This immersion experience provided an opportunity for the Fellows to work with a preceptor and also to observe how American health professionals implement American health education and public health best practices in addressing specific health problems. The professionals with whom they worked most closely not only served as mentors but also helped with finalizing their action plans.

The immersion experiences and family placements were successful. Fellows reported enjoying the immersion experience especially in terms of observing theory to practice and meeting and networking with health education and public health professionals. In all instances, host families were happy to help and were welcoming to the Fellows. Fellows also reported enjoying the family placement, feeling welcomed, and appreciating the efforts families went through to transport them and make them a family member. Lastly, the group members felt that they were able to incorporate what they learned from the classroom-based experience and the immersion experience into their action plans.

Action Plans

Participants developed action plans addressing a health problem in their home countries appropriate for a health education intervention. The action plans were developed in consultation with content specialists from Weeks 1 and 2: the immersion experience preceptor and faculty from the Department of Population Health Sciences. The format of the action plans consisted of documentation of the health problem/issue, measurable objectives, intervention, resources needed to implement the intervention, evaluation, and sustainability plans (see Figure 1).

Goal:						
Objective:						
Activities	Personnel	Resources needed	Cost	Evaluation	Who is responsible?	Timeline
Budget Justification						
Sustainability Plan						

Figure 1. Action plan template.

Participants developed a budget to implement their action plans. Following the budget review, they received a maximum of $300 to implement the plans—a modest budget by U.S. terms but a meaningful amount for Malawi and Zambia.

Action plans were evaluated using a checklist containing the elements necessary for actions plans, namely, (1) successfully framing the health issue/problem, (2) developing measurable objectives to address the problem, (3) developing appropriate intervention(s) to meet the objectives, and (4) developing an evaluation to determine the degree to which the program objectives were reached. The project coordinators reviewed the action plans. Feedback was offered and if necessary action plans were revised.

Action plans were in compliance to the criteria and for the most part required few revisions. A brief summary of each action plan can be found in Table 3.

Table 3
Global Health Fellows' Action Plan Summaries

Country	Project title	Brief description	Impact
Zambia	Income-Generating Activities by HIV-Positive Mothers to Improve Nutrition	10 existing village groups of women and orphans planted gardens where none had existed before to provide produce for better nutrition and to market for money	300 villagers
Zambia	Weekly Health Column in *Times of Zambia*	A weekly health column was initiated	25,000 readers (daily circulation)
Zambia	Songs on Health Issues for Radio Broadcast	Songs written highlighting that TB is not a family disease	100,000 listeners
Zambia	Health Literacy Program for 40 Churches	Church Volunteers trained to work with groups of men and women regarding reproductive health	80 volunteers trained with 1,280 attending the reproductive health workshops
Zambia	School Sanitation Project	Training and skits on how to use hand-washing facilities	1,000 students
Zambia	Youth Sensitization on Malaria Through Soccer Tournaments	Malaria nets are often used for fishing and not for prevention. Message regarding how to use malaria nets disseminated at soccer tournaments	> 10,000 youth
Malawi	Health Action Plan for a Secondary School	Stomach aches and diarrhea are serious problems contributing to absenteeism and decreased educational opportunities. Sink and soaps were purchased and a curriculum developed focused on proper use and risk reduction	400 children
Malawi	Community-Based Food Supplement Sustainability Program	A goat house was built and five goats were purchased to provide nourishment for children under 5. Administered by a local health center and churches. Goat milk can also be sold for revenue	100 children
Malawi	Community Bicycle Ambulance	A bicycle was converted to be an ambulance to transport pregnant and critically ill children	3,000 villagers will have access to the bicycle ambulance

Table 3 (cont.)

Country	Project title	Brief description	Impact
Malawi	Community-Based Support to Vulnerable Children	Project provides nutritious porridge to primary school children	100 children
Malawi	Community Health Scorecard	Comprehensive set of activities to determine factors related to health status, community engagement, resources, and responsiveness	500 villagers
Zambia	Male Involvement in Neonatal Maternal and Child Health	Networking with health care providers and community organizations to increase awareness among men and husbands of pertinent neonatal and child health by inviting men to participate in maternal health care	300 males
Zambia	Improving Households Resilience Through Economic Strengthening	Empowering village women who have been impacted by HIV/AIDS to strengthen their community economically through building a goat shelter and selling goat milk	25 children
Zambia	Expanding HIV Protection for Youth	Development of an intervention to reduce risk and vulnerability to new HIV infections among 5- to 18-year-olds through peer education	150 people
Zambia	Weaning Determines Children's Nutritional Status	Program to educate mothers through effective preparation of food to increase the nutritional status of children	200 village women
Zambia	Modern Family Planning	Health communications broadcasted in multiple languages highlight family planning issues	Thousands
Zambia	Increasing SRH Services for Adolescents	Building capacity of health providers and peer educators to promote contraception with adolescent girls	120 girls
Zambia	Health Practices	Using print media to develop a series of articles to influence government and decision makers	Thousands
Malawi	Chickens for Health	Support for families headed by HIV-positive women with children through building a facility for chickens and raising chickens for food	33 children
Malawi	Community Empowerment for a Vibrant Society	Development of a 1-day workshop for health centers focused on how to communicate with the local hospital	120 center personnel

Table 3 (cont.)

Country	Project title	Brief description	Impact
Malawi	Health and Sanitation Awareness Project	A system for hand washing was built and implemented along with an education component	2,000 students
Malawi	Promoting Access to Youth Friendly Health Services	A community health score card was developed to assess whether community health services were providing youth friendly health services	90 youth
Malawi	Air Quality: My Responsibility	One-day workshop to educate a village about the dangers of burning tires as fuel to make beer for sale and to consider alternatives	450 villagers
Malawi	Peer Education on Sexual Reproductive Health and HIV/AIDS for Secondary School Youth	Program to train nurses to serve as peer educators for youth about sexual practices and protection	100 nurses
Malawi	Peer Educators on HIV/AIDS for Churches	Train pastors' wives to serve as peer educators in HIV/AIDS prevention	225 pastors

A wide range of issues and problems were addressed in the action plans. One plan was focused on installing a sink and developing an educational intervention for hand washing to reduce the spread of disease in the school. Another plan was focused on raising goats for supplying nutritional goat milk to the village and for selling goat milk for village income. Other plans involved health education mass communication messages via print media or radio. Regardless of the focus of the plan, each plan had a health education component that was developed in accordance with best practices.

Week 4: Department of State Conference

The last week, Week 4, was spent in Washington, DC, where the Fellows attended a Department of State conference focused on reviewing best practices and sustainability. The conference also provided each Fellow an opportunity to network with Fellows from other Department of State–funded programs.

End of Program Evaluation

Fellows completed an evaluation at the end of their exchange experience in the United States. The evaluation involved Fellows rank ordering (1) topics that were presented that were most relevant to their work, (2) presentations from which they learned the most, (3) topics for which there was no familiarity prior to the educational experience, and (4) degree of enjoyment for special

events (socials, movies, visits to museums, etc.). Results show minor variations in terms of relevance of the experiences but in all cases were overwhelmingly positive and reflected a program that was meaningful for the Fellows.

Follow-Up Visit

Within 6 months after Fellows returned to their respective countries, two teams of Americans, most of whom had been involved in the educational programs, visited each project in Malawi and Zambia. One team visited Malawi and one team visited Zambia. Each team observed the real-time progress of the Fellows' action plans and if necessary helped with issues and sustainability. Each project was evaluated based on the evaluation framework in the action plan. In all cases, over both years, the Global Health Fellows were successful in achieving the specific objectives in their action plans and the extent to which the projects were felt to be sustainable.

Conclusion

Through partnering with the MHEN and WVZ, Malawian and Zambian health and media professionals who participated in the project learned about U.S. health education and public health best practices through (1) classroom-based delivery of content by experts; (2) participation in an immersion experience in an American health agency; and (3) development, implementation, and evaluation of an action plan focused on a specific health problem.

U.S. professionals who participated in the delivery of the classroom/community-based educational experience or served as preceptor for the immersion experience learned (1) how others work with limited resources in situations of great demand for health services and health education; (2) how others work in environments characterized by limited or lack of communication infrastructure, inadequate health facilities, and poor supply of water and electricity; (3) how others apply networking and skills transfer opportunities; and (4) about impacts of culture on the concept of care and prevention through observing colleagues' attitudes toward "clients." Exposure to different cultural settings helped U.S. participants to appreciate cultural diversity and enhance their openness to different colleagues and clients in today's global village in which they practice their community health–based professions.

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