

A primary health care intervention to mobilize health workers for HIV prevention in Malawi

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For the last 4 years we have implemented a model to mobilize rural health workers as leaders for HIV prevention in Malawi. We use a conceptual framework that integrates the World Health Organization's (WHO) primary health care (PHC) model, the social-cognitive model of behavioural change, and contextual tailoring of the intervention. Health workers are potential rural HIV prevention leaders because they have community trust and respect. However, their leadership potential has been limited by both *health system barriers* such as inadequate workers, supplies, and training and *personal barriers* such as risky occupational and personal behaviours. In the first phase of the project, we developed collaborative relationships and conducted qualitative research to adapt a peer group intervention for rural health workers and community members. In the ongoing second phase, we trained the health workers, who then volunteered and provided the intervention to adults in the communities their health centres serve. The intervention was adapted for young people through a community participatory process. Currently the adapted intervention is being offered to young people. As a guide to replication, we discuss barriers encountered in implementing this collaborative project and how we overcame them. This project demonstrates that health workers can be effective leaders for community AIDS prevention in African countries. The primary health care model offers a feasible, cost-effective and sustainable approach to maximizing health worker-community collaboration to reduce the spread of HIV.

Key words: AIDS prevention; community collaboration; health worker leadership; participatory research; primary health care

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Introduction

Health workers are a vital resource in the struggle to contain the HIV/AIDS pandemic, so maximizing

their potential leadership is a high priority in Malawi. Recognizing health workers' leadership potential, over the last 4 years we have collaborated with rural health workers to mobilize them as leaders for HIV prevention in Malawi. In this paper, we briefly review the challenges of the AIDS epidemic to the health care system and how health care workers can contribute to HIV prevention. Then we describe the purpose and the conceptual

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framework that guides this project, based on the World Health Organization's (WHO) primary health care (PHC) model, integrated with two behavioural change theories. Next we delineate the research design to implement and evaluate the project. Finally, we summarize our progress and what we have learned to date about using a PHC model to mobilize health workers for HIV prevention to rural communities.

The challenge of AIDS and the health care system

Over 40 million persons worldwide are currently living with HIV/AIDS, and the AIDS pandemic presents a major global public health challenge (UNAIDS and WHO, 2005). Innovative strategies for prevention and care are urgently needed, especially in sub-Saharan Africa, where 60% of all people living with HIV/AIDS reside and where HIV infection rates are the highest in the world (UNAIDS and WHO, 2005). Despite unprecedented world mobilization to make drug treatment more widely available, financial and structural constraints mean that it will be many years before drug treatment is accessible to all who need it (WHO, 2004). Therefore, prevention remains a high priority in the effort to contain the pandemic. The need for HIV prevention is especially great in rural areas because almost all programmes to date have been in urban areas, although the majority of the population is rural.

Many factors make health workers ideal potential leaders for HIV prevention. In Malawi, like many African countries, a free government-supported nationwide health care delivery system based on the WHO PHC model provides a coordinated structure and personnel that penetrate even remote rural areas. Four national central hospitals provide the highest level of care, and cases are referred here that cannot be managed at lower levels. In each of Malawi's 27 districts, the District Management Team and its district hospital and health workers are responsible for coordinating and supervising the health care system. The Management Team includes the district health officer, usually a physician, the district nursing officer, the district environmental health officer, and the hospital administrator and accountant. Each district has a network of rural community hospitals, health centres, and smaller health posts

that provide routine preventative care and simple treatments for the surrounding communities. In addition, Health Surveillance Assistants, usually attached to a health facility, provide preventive services in the rural communities where they live. The rural hospitals and health centres refer more serious cases to the district hospital for care. Most districts also have additional health promotion, primary care, and referral services provided by religiously affiliated hospitals under the Christian Hospital Association of Malawi (CHAM) and private hospitals (Ministry of Health and Population, 1999).

Because of this network of care, health workers are one of the few groups of trained personnel present in even remote rural areas. Health workers have extensive and sustained contact with community members. They are respected for their health knowledge and viewed as role models by their relatives, friends, and neighbours. In several African studies, health workers were identified by community residents as their most trusted source of information about health issues, including HIV/AIDS (Norr, Tlou, and McElmurry, 1996; Tarwireyi and Majoko, 2003; Rahlenbeck, 2004). Often health workers provide informal information and advice to their families and neighbours outside of the workplace. Even workers at health facilities like guards or cooks who are not involved in patient care may be asked questions by people coming to the health facility and by their neighbours. Thus, health workers have repeated opportunities to spread HIV prevention messages and demonstrate non-stigmatizing attitudes regarding HIV/AIDS at work and in their personal lives.

Despite the potential for health workers to become HIV prevention leaders, numerous health system and personal barriers need to be addressed before this potential can be realized. Even before the epidemic, Malawi's health system had inadequate staff and supplies to meet health needs (Ministry of Health and Population, 1999). Chronic severe staff shortages have been exacerbated by premature illness and death of health workers from AIDS and by aggressive recruitment of trained staff to other countries (Aiken *et al.*, 2004). The AIDS epidemic has greatly increased the burden of patient care. HIV/AIDS-related conditions account for over 40% of all in-patient admissions, and HIV-related conditions such as tuberculosis and cryptococcal meningitis are increasingly common (Garbus, 2003). As antiretroviral (ARV) drug treatment

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is expanded, the burden of direct patient care will decrease but more laboratory and monitoring services will be needed.

Perhaps the most important HIV prevention responsibility of the health care system is the elimination of transmission during health services. However, supplies necessary to practice universal precautions are often inadequate in Malawi and other African countries (Ansa *et al.*, 2002; Garbus, 2003). In Cameroon, Nigeria, South Africa, and Uganda, observations and health worker reports have identified lack of training and inconsistent practice of universal precautions partially attributable to a lack of supplies including soap, gloves, and sharps containers (Mbanya *et al.*, 2001; Walusimbi and Okonsky, 2004; Reis *et al.*, 2005). Families provide much physical care for hospitalized patients in Malawi and other countries but seldom receive education or supplies to prevent HIV transmission. A review by Gisselquist *et al.* (2002) suggested that unsafe practices in both health facilities and the traditional care system may account for much more HIV transmission than previously suspected in Africa. Brody and Potterat (2004) argued that changes in injection practices in and outside health facilities have made a major contribution to lowering HIV infections in Uganda. A WHO (2003) commentary stated that transmission due to unsafe care is much less frequent than Gisselquist *et al.* claim, but agreed that HIV transmission in the health care setting must be eliminated.

Occupational exposure puts many health workers at risk for HIV infection. Although the exact magnitude of occupational transmission is not known in Malawi, two recent studies in Uganda found that 55–57% of hospital workers reported a needle stick injury in the last year (Newsom and Kiwanuka, 2002; Nsubuga and Jaakkola, 2005). Understaffing and lack of training related to higher injury rates (Nsubuga and Jaakkola, 2005; Smit, 2005). All these factors make health workers in many African countries feel afraid, demoralized, and powerless to make positive changes in the health care system (Newsom and Kiwanuka, 2002; Uys, 2003; Walusimbi and Okonsky, 2004; Smit, 2005).

In addition to these health system barriers, health workers' potential as HIV prevention leaders is also limited by personal factors, including stigmatizing attitudes, reluctance to discuss HIV/AIDS and sexuality, and risky behaviours both at work and in their personal lives. Previous research documents

that health workers have negative and stigmatizing attitudes toward persons with HIV and have great difficulty talking to individuals and their families about HIV and AIDS (Mbanya *et al.*, 2001; Atulomah and Oladepo, 2002; Adebajo, Bamgbala, and Oyediran, 2003; Ofili, Asuzu, and Okojie, 2003; Reis *et al.*, 2005). In most African countries, traditional values hinder open discussion about sexuality, especially with young people, and these barriers also affect communication between health workers and clients (Fuglesang, 1997; Lugalla *et al.*, 1999; Susser and Stein, 2000; Uwakwa, 2000). Few studies of health workers' sexual risk behaviours have been reported, but student nurses in Nigeria reported risky personal sexual behaviours (Verkuyll 2000). Tarwireyi and Majoko (2003) pointed out that the reluctance of health workers in Zimbabwe to have HIV testing inhibited their ability to be role models and to discuss HIV/AIDS with clients. Thus, health workers' potential influence is minimized because their attitudes and behaviours mirror the community rather than advocating change to promote health.

Several previous studies document that the barriers limiting health workers' role as HIV prevention leaders can be overcome. Training that emphasizes social learning and skill building has been shown to increase HIV-related sensitivity (Hewitt, 1993; Selwyn, 1998; Dancy, Desportes, and Razzano, 2000). A recent study in Nigeria found that an intervention that included information, role modelling, and discussion of stigma and human rights significantly reduced health workers' fears and improved their attitudes and perceived counselling and treatment skills in the intervention state compared to a control state (Ezedinachi *et al.*, 2002). However, an earlier Nigerian study found that an intervention improved health workers' knowledge and attitudes but had little impact on practices, in large part due to continued inadequate supplies (Uwakwa, 2000). These studies highlight the importance of simultaneously addressing individual worker and health system barriers. Changing health system barriers is more challenging than changing individual health worker behaviours because of the lack of money and personnel. However, growing decentralization of the health care system in Malawi has placed more authority and budgetary control at the district level, increasing the potential for local change.

Despite the evidence that interventions can help health workers become role models for HIV

prevention, few interventions explicitly utilize health care workers as HIV prevention leaders. Over a decade ago, MacNeil (1992) described an International Council of Nurses project that brought together nursing leaders from five African countries and trained them in HIV prevention in the health care setting and community, but there has been little extension of this work. Most countries have provided some HIV/AIDS education for health workers, but this education has focused on factual knowledge, not community prevention. Some countries have trained selected health workers in voluntary counselling and testing and/or in the coordination of home-based care (Ezedinachi *et al.*, 2002; McCreary *et al.*, 2004). In Malawi, lower level health workers often receive little or no HIV prevention education. A mobile clinic with HIV testing, sexually transmitted disease treatment and educational sessions by health workers increased prevention for HIV-negative truckers in Kenya (Jackson *et al.*, 1997), but this special programme was not part of the regular health care system. No African country to date has trained health workers to be community peer leaders for HIV prevention.

Developing a rural HIV prevention project

In 2000, the Malawi National AIDS Commission urged all institutions to develop significant contributions to the nation's struggle to contain the AIDS epidemic and manage its impacts (National AIDS Control Program, 2004). Also, personal and occupational AIDS prevention for health workers is a priority identified by the Malawi Ministry of Health (Ministry of Health and Population, 1999). This research collaboration of Kamuzu College of Nursing at the University of Malawi (KCN) and the College of Nursing at the University of Illinois at Chicago (UIC) represents the response of our collaborating faculty and the two universities to these challenges. The project's conceptual model and research design were developed in collaborative meetings of the KCN–UIC research team who are the authors of this manuscript. The strategic advantages of mobilizing health workers as HIV prevention leaders convinced the team that an intervention built around Malawi's PHC system would be an effective way to bring an HIV prevention intervention to rural communities.

The purpose of this project is to mobilize rural health workers as HIV prevention leaders and to build on their leadership to bring HIV prevention to rural communities. The specific aims are to:

- To increase the HIV prevention activities of health workers in the health care setting and in the community.
- With health workers as programme leaders, to bring an HIV prevention programme to rural adults and adolescents that is effective in increasing positive HIV-related attitudes, knowledge, and risk-reducing behaviours.

This project builds on the KCN–UIC research team's previous work developing and testing a peer group intervention for HIV prevention for primary school teachers in Malawi (Kaponda *et al.*, 2002; Norr *et al.*, 2004; Kachingwe *et al.*, 2005). Also, this approach takes advantage of the unique strengths of KCN, Malawi's only educator of bachelor's prepared nurses. The faculty have established working relationships with many health care sites where KCN students have clinical experiences. Moreover, many nursing clinical leaders throughout the country were trained at KCN.

Conceptual model for the intervention

To guide this study, the KCN–UIC research team integrated three conceptual frameworks into a single HIV prevention strategy, as illustrated in Figure 1. The most innovative feature of the conceptual model is the full involvement of the local health care system and community as partners in rural HIV prevention based on the WHO PHC model (WHO, 1978). Since the late 1970s, WHO has promoted PHC as a strategy for ensuring that all people have:

Essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of its development in the spirit of self-determination and self-reliance (WHO, 1978).

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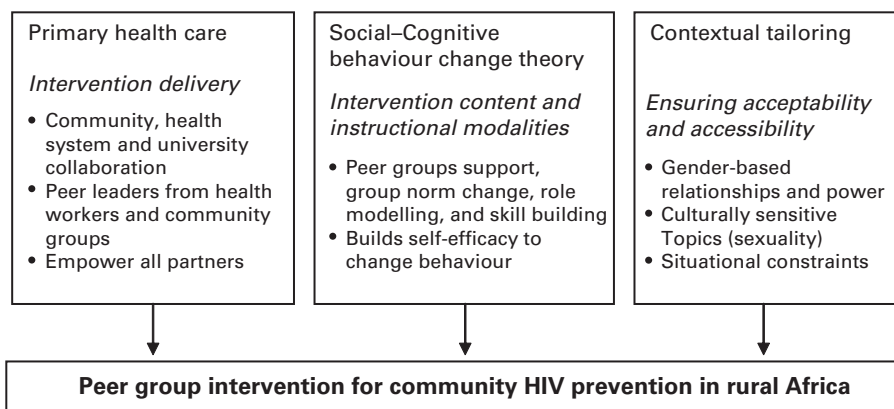


Figure 1 A primary health care framework for rural AIDS prevention

PHC has been demonstrated to be successful in many countries in addressing overall health and specific health problems such as child survival and tuberculosis (Bang *et al.*, 1999; Hill *et al.*, 2000; Katarbarwa and Richards Jr, 2001; Islam *et al.*, 2002). However, no previously published HIV prevention intervention studies have used this approach.

The collaboration of health workers and the community is a key feature of the PHC model. In the KCN-UIC research team's previous work this collaboration was relatively limited. The team trained the volunteers, who then facilitated the peer groups with ongoing support from the team. In this project the KCN-UIC research team has expanded our collaboration to incorporate the district health care system and rural community leaders and members. Thus, the current work integrates the university, health care system, and community to address local problems. A key element is the synergy derived from joining the health knowledge of health workers with community residents' understanding of the local context, including community assets, cultural perspectives, acceptability and feasibility of alternative approaches to improving health. The KCN-UIC research team focuses on fostering the ability of health workers to be community leaders and role models for HIV prevention. The project also will strengthen the research capacities of the collaborating colleges of nursing and the district hospital and rural health centre health workers. The PHC approach is especially important for HIV prevention in Africa because its participatory nature, use of existing infrastructure, and low cost

make it feasible and affordable to disseminate on a large scale.

This approach incorporates elements of community-based participatory research (Minkler and Wallerstein, 2003). Because the focus on HIV prevention was established at the beginning of the project by the KCN-UIC team of investigators, the project cannot claim to be fully participatory. However, this research is built on the participatory research assumption that communities and organizations have the capacity to recognize their problems and resources, and then develop and implement effective solutions. Hills and Mullett (2005) noted that collaboration between health workers and community members is an essential element of PHC, and that community-based research is essential to bridge the gap between the very broad perspective of the PHC model and a health services delivery plan appropriate for a particular context. Previous research has shown that community-based HIV prevention interventions are effective in achieving sustained change in attitudes and behaviours (Elkins *et al.*, 1997; CDC AIDS Community Demonstration Projects Research Group, 1999; Hills and Mullett, 2005). However, no previous community participatory HIV prevention intervention explicitly used the PHC model.

Although PHC provides a framework for how to organize an HIV prevention intervention building on existing resources to reach rural communities, it does not inform decisions regarding the content of the intervention. The behavioural change theory of social-cognitive learning (Bandura, 1989) guides

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the content and learning modalities for the intervention. Peer leader and peer group interventions based on the social-cognitive learning model are among the most successful HIV prevention interventions in both developed and developing countries (Kalichman and Hospers, 1997; Ehrhardt and Exner, 2000; Jemmott III and Jemmott, 2000; Merson, Dayton, and O'Reilly, 2000; Rotheram-Borus, Cantwell, and Newman, 2000; Kebaatswe and Norr, 2002; Norr, *et al.*, 2004). Peer groups foster behavioural change in many ways, including the development of group norms that support safer sex and the enhancement of self-efficacy for safer sex behaviours developed through rehearsal and role modelling. These elements are an integral part of the HIV prevention intervention's content and learning modalities.

The content of the intervention is further informed by the perspective of cultural tailoring. For maximum effectiveness, peer group interventions must be tailored to the specific cultural and social environment of the target group (Dancy, 1999; Dancy, 2003). Two particularly important aspects of culture in Malawi and many other African countries are gender inequality and reluctance to discuss sexuality, especially with young people (Veruyt, 1996; Fuglesang, 1997; Kamlongera, 1997; Lugalla *et al.*, 1999; Kesby, 2000; Olayinka *et al.*, 2000; Susser and Stein, 2000). Gender inequality and power imbalances in sexual decision-making interfere with HIV prevention, particularly among women. Likewise, the reluctance to speak about sexuality affects HIV prevention because it limits public dialogue about risky sexual behaviours and private discussions between couples, parents and children, and friends. Additionally, the structural constraints of rural communities affect the times and places where groups can be held. All of these contextual factors need to be addressed in the intervention.

Designing the research

This research has a sequential mixed methods design. In Phase I, the KCN-UIC research team used qualitative methods to identify specific HIV prevention needs of rural health workers and community members. In earlier work, the team developed a peer group intervention tailored to be appropriate for urban residents in Malawi, but we

had done no work with rural residents or with health workers. We needed to adapt our intervention and evaluation tools to be appropriate for rural health facilities and communities. In Phase II, the KCN-UIC research team is implementing and evaluating the intervention using a quasi-experimental design. Guided by a community-based participatory approach, the evaluation examines overall change at the health facility and community levels through surveys before and after intervention, rather than looking at individual change of the intervention participants compared to a control group. The project is located in two adjacent districts with highly similar economic structures and population (around 500 000 residents). These districts had little or no research going on within the health facilities at the time. The KCN-UIC research team designated one as the intervention district and the other as the delayed intervention control district. Before proceeding further the team determined that both District Health Officers were willing to participate in the study.

Progress to date

The first step in Phase I involved obtaining needed permissions, establishing relationships with the District Commissioner and District Health Management Team, selecting the participating rural health centres and villages, and establishing relationships with these communities. The KCN-UIC research team first discussed the project with the two District Health Management Teams and established that they wanted the project in their districts. The team then sought permission from each District Commissioner, the political head of the district. The Commissioners informed us about areas where there were minimal research activities and the project would be especially beneficial. The team also informed other organizations working in this district about our project activities. With guidance from each District Health Management Team, the team identified five health centres in each district with minimal research activities. The KCN-UIC research team and District Management Team agreed that these health centres and the surrounding communities served by each would be the project target areas.

The KCN-UIC research team then obtained permission for the project at the local level. First the

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district health officer informed the rural health centres of his support for the project. Then the KCN–UIC research team met with the administrators of each selected rural health centre. Rural communities are governed by a network of traditional leaders. The Traditional Authority exercises leadership over a large area. Beneath the Traditional Authority are group village headmen/women, each responsible for several contiguous villages, and under them are village headmen/women. The team first met with the Traditional Authorities of the areas where we intended to work, and then with the group headman and village headman for each community. We explained the project, obtained permission to conduct the research there, and began building working relationships. All of the leaders in both the health care system and the selected communities welcomed the project because they had had no previous AIDS prevention projects in these areas.

The next step was to conduct qualitative interviews to provide information to be used to tailor the intervention for rural health workers and communities. The KCN–UIC research team assessed health worker needs through interviews with administrators, focus groups with health workers, observations at health facilities, and client satisfaction interviews. Needs in the rural communities were identified using individual face-to-face interviews with community leaders and focus groups with community men, women, and adolescents.

The KCN–UIC research team then analysed the results of Phase I to tailor the intervention we had previously used in urban areas of Malawi for the HIV prevention context of rural health workers and rural adults. Since we planned to work with adolescents only after the intervention was implemented with community leaders and adults, we delayed developing the adolescent intervention to take advantage of the lessons learned through offering the intervention to health workers and community adults. The original peer group intervention had six sessions:

- 1) the impact of the AIDS epidemic and stigma associated with HIV/AIDS;
- 2) human sexuality and sexually transmitted diseases;
- 3) facts about HIV/AIDS, including the course of the infection, transmission, and prevention;
- 4) partner communication and negotiation for safer sex;

- 5) condom information, values clarification and correct use;
- 6) fostering HIV prevention throughout the community and especially to young people.

For rural adults, the research team did not change the content but we used rural examples and role-plays derived from the qualitative focus groups and interviews. We added discussion of specific rumours and negative attitudes and values, especially related to condoms. We greatly simplified the language and modified the presentation to be appropriate for a largely non-literate audience. For example, writing key points on a flip chart was greatly reduced.

Then the KCN–UIC research team focused on adapting the intervention for health workers. Because the research team wanted the health workers to become volunteer peer leaders for community residents, we decided that they should first participate in the six peer group sessions for community adults described above. To meet the unique needs of health workers identified during Phase I, we also developed four new sessions for health workers only. These included: a brief explanation of how testing and ARV drugs work and how to manage HIV/AIDS in Malawi where ARV therapies are not yet widely available, implementation of universal precautions, ethical behaviours for health workers, and teaching HIV prevention to clients and families.

Phase II of the project began by providing the peer group intervention for health workers at the district hospital. The KCN–UIC research team and additional KCN faculty were the peer group facilitators for the initial group of 50 health workers. As health workers completed the peer group sessions, they had the opportunity to volunteer for further training so they could become peer group facilitators. We trained 25 district hospital workers as peer group facilitators. We then offered the intervention for all district hospital workers who wished to participate. A total of 243 hospital workers, nearly the entire work force, completed the training.

The KCN–UIC research team had intended to first offer the intervention to the district hospital management team, but they were not initially available. There was a high turnover of staff in the management positions; within a six-month period, three officers in management left for different reasons. Due to this turnover, there was a lack of continuity of collaborative activities. The management team resisted being trained in the intervention in the

same way as their staff. Instead, they requested that they be given the manuals to study on their own. Since the group process was a major component of the intervention expected to promote behavioural change, the KCN–UIC research team felt that merely reading the manual would be ineffective. Instead, we opted not to start the intervention with the management staff but to offer it to the other health workers. This plan worked well in that we provided the peer group intervention to all levels of health workers below the management team. These health workers began to put into practice components of the intervention, such as increasing client education about HIV prevention and demanding adequate hand-washing equipment and gloves. Then the management team realized that the intervention involved more than just learning facts and requested that they receive the intervention as originally intended, in a group.

The next stage of the project was bringing the intervention to rural community health centre workers and community leaders. Over 90 health centre workers and 60 community leaders participated. Following their participation, the health centre workers were also invited to become peer group facilitators. The KCN–UIC research team and district hospital trained peer group facilitators trained an additional 24 health centre workers as peer group facilitators from the five health centres. Community leaders facilitated the introduction of the intervention into the community, but their ongoing community responsibilities kept them from becoming peer group facilitators.

Then the peer group intervention was made available in the targeted villages to all adults who wished to participate. After the first round of peer groups in the communities, the KCN–UIC research team and experienced peer group facilitators trained approximately 40 volunteer community members as peer group facilitators. Most peer groups for community adults were facilitated by a team consisting of a trained health worker and a trained community leader. Married adolescents are considered socially adults and were included in the adult intervention. The participants were very enthusiastic, and over 2200 adults participated, almost twice as many as we had originally estimated. At the end of the six sessions all those who completed the series received a certificate and became eligible to volunteer and be trained as a peer group facilitator.

After leaders and adults in the target communities had participated in the intervention, they realized the importance of HIV prevention for young people in their communities. In a series of community meetings, the KCN–UIC research team shared results of the Phase I focus groups revealing risky behaviours among youth, and the community developed the format and content of a youth intervention. A key finding was that young people hid their risky behaviours from parents. The strong cultural taboo against discussion of sexuality between adults and young people, and especially between parents and children, reinforced the lack of awareness of youth activities by community adults. Although community adults agreed that these problem behaviours existed and needed to be addressed, many were in denial regarding behaviours of their own adolescents. There was strong agreement that the youth should be divided by age (10–12, 13–15, and 16–19 years), with intervention content adjusted to be age appropriate. All of the young people's sessions would be facilitated by respected male and female adults chosen by the community. There would be separate groups for boys and girls, as the villagers preferred. All young people would receive information about physical, cognitive, and social development. The community meeting participants were comfortable with comprehensive HIV prevention education for the 16–19-year olds and agreed that the intervention for the 16–19-year olds should be conducted like the current adult intervention. However, there was not consensus about the content of the intervention for younger adolescents. Despite strong evidence of risky behaviours well before age 16, some communities felt that those under 16 should not receive information about sexuality or condom use as a prevention strategy. Some of the KCN members of the research team were reluctant to force this issue, in part because of their own strong sense of cultural inappropriateness. The team decided that we risked not being able to offer the programme at all unless we heeded the wishes of a substantial portion of the community.

The project is now offering the youth intervention, tailored to the wishes of the community. Over 600 young people have already participated and this activity is ongoing. Peer group facilitators and parents are beginning to realize that it is important to present comprehensive information in an age-appropriate way to all young people. There is also

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growing awareness of the importance of parents talking with their own children about this serious new threat despite cultural norms that make such conversations extremely difficult. The KCN–UIC research team, peer group facilitators, and the community are already planning to add sexuality and condom use content in future peer groups for younger adolescents as well as supplemental sessions for those who already received the intervention.

The last stage of the project, which will begin in 2006, will be a post-intervention evaluation of the health workers, community adults, and adolescents in the control communities. Then the project team and intervention district peer group facilitators will make the intervention available in the delayed control district.

Lessons learned: implications for community-based primary health care projects

In any new venture many lessons are learned along the way. We already discussed some of the challenges we encountered. While community-based projects must always adapt to the unique features of their specific context, we believe that many of the lessons

we learned are broadly applicable for PHC projects in many different settings and with many different goals. Here we share the implications of these and other lessons learned for community-based PHC research projects, so that others can implement similar projects with fewer bumps in the road.

- This project made it clear that adding behavioural change theories to the PHC model was important in enabling us to develop an intervention that is conceptually sound and readily replicable. In most PHC projects, explicit theory relevant to the health promotion focus should be brought in.
- The first discovery was that the health workers needed more support to fully implement universal precautions and other HIV prevention activities in their facilities than we had anticipated. Devoting the time needed to help workers change these factors was essential because health workers cannot be models for change if their own facilities are potential sources of infection. Success in improving their facility empowered health workers, giving them confidence in their capacity to be effective leaders for community HIV prevention.
- Another very important lesson was how difficult it is to establish relationships of trust and

Lessons learned for collaborative primary health care research projects

- Linking the primary health care model with behavioural change theories provides a conceptual framework to guide both the service delivery process and the content and learning modalities of an effective programme to change health behaviours.
- Health workers need to address issues in their own facilities related to the health promotion issue before they can become community leaders. Success in their own facility empowers health workers and builds future success.
- Building both collaborative relationships and collaborative structures is important and requires substantial inputs of time and energy.
- It is essential to begin where collaborators feel a need for change even when this is not what the academic research partners feel is optimal. As communities gain experience with a programme, their vision of what is possible may change, and the programme can then be modified.
- Incentives for participants are frequently an issue that requires careful consideration to ensure programme sustainability.
- Primary health care programmes need to be prepared to modify successful programmes to improve accessibility and acceptability when expanding to new groups, even in the same community.
- Logistical challenges in community work, especially in rural and hard to reach areas, will almost always require more time, effort, and money than initially planned.

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collaboration both with the health workers and with the communities. Both health workers and communities have heard promises from researchers, high-level administrators, and politicians many times before, and they have watched these same people leave their facilities and communities as soon as the outsiders' agendas were satisfied. These experiences have left people wary and undermined our efforts to build trust. A related barrier that we had not anticipated was that the health workers, and especially the district level management team, had high turnover. The management team was frequently away attending off-site meetings and conferences. When introducing a project, local protocol must be followed so no important group or leader is left out. In a PHC collaborative project, initially the university partners must be prepared to earn trust of the local health care system and community by demonstrating their long-term commitment. A PHC project needs to devote time to relationship building and to building organizational structures to sustain the programme despite personnel changes.

- Two experiences demonstrated the importance of starting a project in a way that is acceptable to the health worker and community partners even when that is not what the academic research partners believe is optimal. Although the District Health Management team believed that the intervention would be good for their workers, initially they did not feel the need for such an intervention themselves. They asked for the intervention only after they saw changes in the workers who had participated in the intervention. The community members did not want discussion of sexuality or condoms with the younger adolescents even though they recognized that young people had sexual experiences early. Based on what all partners have learned in the peer groups with youth about their sexuality, the KCN–UIC research team and the volunteer peer group facilitators are negotiating with community members to offer the full interventions for all young people over 12 years. These experiences taught us that it is essential to begin a programme in a way that is acceptable to the health workers and community partners, even if it is not what university partners feel is ideal. As communities gain experience with a programme their vision of what is possible may change, and the programme can then be modified.

- Some prior research studies have offered incentives that easily become coercive for underpaid health workers and poor rural communities. Many people felt they could not refuse requests from outsiders lest they lose potential future benefits. They also expected to receive large incentives, which we had deliberately avoided so that the project could be potentially sustainable by a rural community. Eventually we had frank discussions with health workers and community members about incentives to develop consensus on the role and appropriate levels of incentives in our project.
- Although the intervention for rural adults was well established, new challenges emerged when we began the intervention with young people. Young people were more mobile than adults, and many had jobs that took them outside the village regularly, making offering the intervention more difficult. PHC programmes need to be prepared to modify successful programmes to improve accessibility and acceptability when expanding to new groups, even in the same community.
- We underestimated the logistical challenges and costs of bringing the interventions to rural areas. Arrangements for community activities had to be done in person due to the absence of mail or phone services. Sometimes the peer group facilitators would arrive only to discover that a funeral or other community activity was in progress so no project activities could occur. Some communities are inaccessible during the rainy season; the KCN–UIC research team had to postpone collecting baseline data in some communities because the only bridge was washed out. Inflation also drove up the costs of travel greatly. These logistical challenges and costs need to be considered in planning and in judging progress; for example, we now plan all major community activities so they occur during the dry season.

This research shows that the PHC model can provide an effective framework for developing an HIV prevention programme through collaboration among health workers, rural community members, and university researchers. Although PHC has provided the basis for health worker–community member collaboration to improve other health

situations, this is the first time the model has been used for HIV prevention. HIV prevention in a rural health care system required changing both system-level factors and individual worker practices. Modifying sexual behaviours to reduce risk of HIV infection for both health workers and community members challenges existing values and social relationships. Changing factors as complex as these requires strong, respectful working relationships and creative problem solving. Bringing together the expertise of all three partners greatly enhances understanding of current practices and potential facilitators and barriers for change. University faculty bring an awareness of the results of HIV prevention efforts elsewhere, the health workers bring their health knowledge and understanding of the local health care system, and the community leaders and members understand the local context for HIV prevention, including both barriers and potential resources. When perspectives of all three partners are integrated, a strong evidence-based HIV prevention programme results. Pride in what has already been accomplished has energized both health workers and community residents and inspired them to continue working to improve community health and health care.

Twenty years ago, WHO urged universities throughout the world to recognize their role in advancing PHC and 'place themselves at the disposal of communities to the maximum of their capacity for the promotion of health and provision of health care' (WHO, 1984). This PHC project, a collaboration of two universities with the local health care system and community, represents our response to the WHO challenge and serves as a model for university engagement in local efforts to address the AIDS epidemic.

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