



Center for Cooperatives

UNIVERSITY OF WISCONSIN-MADISON

Occasional Paper Series

December 2010

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The First Mile: The Potential for Community-Based Health Cooperatives in Sub-Saharan Africa

By E.G. Nadeau, PhD¹

Summary

This paper presents a model for community-based health cooperatives in Sub-Saharan Africa that is based to a large extent on a successful community health mobilization program in Kenya.² The paper briefly reviews the persistence of serious health problems on the subcontinent and then presents the cooperative model as an effective means to address health and health delivery issues in the region. The paper concludes by calling for broader application of the cooperative health model and for rigorous research to document changes in health and mortality indicators in communities served by these cooperatives. The paper also includes two appendices that contain focus group and case study results on the community health mobilization program carried out in the Western and Coast provinces of Kenya.

Introduction: The First Mile

By mobilizing community residents to take the lead role in their own health planning and service provision, community-based health cooperatives in Sub-Saharan Africa have the potential to play a critical role in improving health conditions on the subcontinent.

Among international donors and health providers, a widely-acknowledged frustration is the difficulty of getting assistance to rural communities that are often the most in need of health services.³ This gap is sometimes referred to as the “last mile” problem. From the village perspective this same mile is the “first mile” toward accessing health services. This paper proposes that community health cooperatives provide a means for villagers themselves to define their priority health needs and to play the lead role in addressing them. These co-ops have the potential to bridge the “last mile” gap by creating a “first mile” capability at the village level to take care of basic health problems and to reach out to the health delivery system when greater assistance is needed.

¹ E.G. Nadeau is a sociologist and cooperative development consultant who has researched community-based health care in Benin, Burkina Faso, Kenya and Mali.

² The program has been carried out over the past 10 years by CLUSA, a division of the US-based National Cooperative Business Association, and funded by the US Agency for International Development.

³ For example, International Conference on Global Health, 2008: http://www.globalhealth.org/conference/view_top.php3?id=845; USAID Deliver Project: <http://deliver.jsi.com/dhome/topics/supplychain/lastmile>.

Dire Health Statistics a Symptom, Not a Cause

The horrendous statistics related to child, maternal and adult mortality are **symptoms** of Sub-Saharan Africa's health problems. **The underlying problems are health delivery systems** that don't reach the large majority of the subcontinent's residents. It is important to look at the full context of health care delivery in the region in order to develop effective strategies for making improvements.

Grim health data. There is no question that, on average, the almost 50 countries of Sub-Saharan Africa with a combined population of over 800 million people have the worst health problems of all the regions of the world.⁴ As an example, over 150 million children in the region under the age of 5 died between 1970 and 2010.⁵ This number is only slightly less than the death toll of all of the wars of the 20th century.⁶

Availability of simple, inexpensive interventions. The large majority of children's deaths and premature adult deaths in Sub-Saharan Africa are preventable by relatively simple and inexpensive interventions.^{7 8 9}

A flawed health delivery model. It would be a mistake to attribute the failure to adequately apply these simple and inexpensive interventions in the region to the following factors: poverty; a largely rural population; a shortage of health care providers; unstable, often corrupt governments; and insufficient and, sometimes, ineffectively allocated international health assistance. These factors certainly present obstacles to rapidly improving health conditions on the subcontinent, but they are not the underlying problem -- **the lack of health delivery systems that reach down to the local level.**

The Community-Based Health Cooperative Model

How can health services be delivered to villagers dispersed across the countryside?¹⁰

⁴ **The Millennium Development Goals Report**, 2010, United Nations, June 15, 2010. <http://data.un.org/>.

⁵ Unpublished infant mortality data sheet, Institute for Health Metrics and Evaluation, University of Washington, email communication, September 2010.

⁶ Estimates of war deaths in the 20th century vary. However, many are in the range of 160-200 million. <http://www.scaruffi.com/politics/massacre.html>;
<http://users.erols.com/mwhite28/warstat8.htm>

⁷ Jones, Gareth et al (2005) "How many child deaths can we prevent this year?" **Lancet**.

⁸ "Healthy women, better world," UNICEF, June 2010:
http://www.unicef.org/maternalhealth/index_554.htm.

⁹ Op. cit., **Millennium Development Goals Report 2010**.

¹⁰ The author hypothesizes that the community-based health cooperative model would also be effective in poor urban neighborhoods. However, because the Kenya program on which this model is based is a rural one, the focus of this paper is on the application of the model in rural areas.

This is where the community health cooperative model comes into play. The model takes a comprehensive, village-by-village approach to health problems and solutions. It focuses on the part of the population that the current system is least equipped to serve. And it mobilizes community residents to take the lead role in their own health planning and service provision. The model does not assume that village organizations can solve all of their health problems by themselves. Village health co-ops would need to work with public and private health providers. They would need health education, services and pharmaceutical supplies from outside the local community. However, the biggest gap in current health delivery systems – between health providers and residents of rural communities – would be bridged by villagers meeting their own basic health education and service needs and, when appropriate, by seeking health services from outside the community in an organized manner, instead of relying on an understaffed and underfunded health system to reach out to them.

The CLUSA example in Kenya

In 2001, CLUSA, the international program of the National Cooperative Business Association, began providing community health mobilization services in rural Kenya. Since its first project began in western Kenya, CLUSA has assisted over 2,000 communities to form village, multi-village, women's and youth-based health associations and to develop and implement community health plans. CLUSA has also trained over 4,000 village-based, community health workers. Altogether, over one million community residents in Kenya have benefited from this program.¹¹

The key features of CLUSA's community health mobilization model are summarized below.

Efficient organizational structure. There is a small core and intermediate-level staff, and a large number of village-based health workers. For example, in the Western Province project studied by the author, there were three provincial level staff, 6 field facilitators, 38 volunteer lead community health workers, and 1,520 volunteer community health workers provided training and support services to almost 800 village and multi-village organizations.¹²

Systematic development process. The program has a clear step-by-step process for selecting local staff and volunteers, training them, organizing village and multi-village organizations, assisting in the development of village health plans, and supporting their implementation.

¹¹ At the present time, these associations are not legally structured as cooperatives. However, they generally operate under the same principles as co-ops: voluntary and open membership, democratic member control, member economic participation, autonomy and independence, education and training, cooperation with other health associations, and concern for community.

¹² Nadeau, E.G. (2008) "Synopsis of Community Health Mobilization Research in the Western Province of Kenya," unpublished report prepared for CLUSA.

Low cost per village. The cost of the program is very low – well under \$100 per village per year in the case of Western Province.¹³

Rapid mobilization. A large number of villages can become active participants in the program in a short period of time.

Village-led approach. The decision of whether or not to participate in the program is made in village-wide meetings.

Autonomous and democratically-run local organizations. The village-level health organizations are established and democratically controlled by community residents.

Village-based, volunteer community health workers. Each village health organization selects two local residents to be trained as CHWs.

Health plans and priorities determined by villagers. Village residents are in charge of developing their own health plans with support provided by CLUSA.

Implementation of health plans led by villagers. Local residents play the lead role in implementing their own community health plans.

Additional community-based organizations. Local residents form women's groups, youth groups, HIV-AIDS support groups and other organizations that carry out their own health education, health services, and economic development activities.

Multi-village coordinating organizations. These organizations operate like secondary cooperatives, carrying out joint village activities and providing a stronger voice for communicating and negotiating with health clinics, government agencies, and non-governmental organizations than would be possible by individual village associations.

Positive health and family planning outcomes. Village representatives overwhelmingly report that village health plans are being implemented and that health conditions have improved substantially as a result of better prevention, treatment and maternal care.^{14 15}

¹³ Ibid.

¹⁴ See Appendices A and B of this paper; Nadeau (2008) cited above; and "Emerging Community Health Cooperatives in Kenya Save Lives, Improve Village Health," by E.G. Nadeau, in the November/December 2009 issue of the **Cooperative Business Journal**.

¹⁵ Note that these references report on family planning benefits as well as health benefits identified by community residents. Villagers cite access to family planning education and contraceptives as important services provided through the village health associations and by the community health workers. Because Sub-Saharan Africa has the highest average fertility rates in the world, these findings suggest a key role that village health co-ops can play in

Sustainability. The formation and support of multi-level, cooperatively-structured organizations increases the likelihood of sustainable village and multi-village health activities.¹⁶

Adaptability. The program design in Western Province has been adapted to other Kenyan provinces and can easily be adapted to other developing countries.

Converting Cooperative-like Organizations to Cooperatives

The community-based health associations organized by CLUSA in Kenya are usually informal entities. However, it would be a small step to develop the village and multi-village health organizations, and some of the women's, youth and other groups into formally organized cooperatives.¹⁷

There are several advantages to adjusting the CLUSA approach so that the focus is on the formation of registered cooperatives rather than informal organizations:

Transition to Self-Support. Many cooperatives in both developed and developing countries receive outside financial and technical assistance in starting up.¹⁸ The keys to a co-op's successful transition to self-support is that the members develop a strong sense of ownership and commitment to the survival of the organization; that its operation is based on a sound business plan; and that the co-op adapts that plan as the organization and its environment change over time.

Formal Legal Status. Even though the large majority of informal village health organizations developed by CLUSA in Kenya have proven to be sustainable thus far, the fact that most are not registered legal entities could limit their long-term survival.¹⁹

helping rural residents to reduce local birth rates and contribute to a slowing of population growth.

¹⁶ As of March 2008, when the author conducted field research in Western Province, virtually all of the village health organizations formed in 2001 and 2002 were still in operation and the large majority of community health workers trained at that time continued to provide services to their villages.

¹⁷ These informal associations generally operate under the same principles as co-ops: voluntary and open membership, democratic member control, member economic participation, autonomy and independence, education and training, cooperation with other health associations, and concern for community.

¹⁸ Even in the United States, the large majority of agricultural cooperatives, rural electric cooperatives and credit unions would not have gotten off the ground without outside assistance such as agricultural extension agents, federal and state legislative and financial support, and, in the case of credit unions, private philanthropy.

¹⁹ For example, Papa Sene, Djingri Ouoba and the author conducted research on a community health project that CLUSA had carried out in Burkina Faso in the mid-1990s. ("Living Up to the Bamako Initiative: Strengthening Community Participation in Burkina Faso's Health Care System," unpublished paper for CLUSA, 2007.) Largely because of the short duration of the

Business Orientation. People own a co-op and therefore generally have a greater commitment to it than to a non-profit or informal organization. As a business, a co-op is focused on having a positive bottom line and on generating a financial return to its members in order to stay in operation. Non-profits often have an external orientation and are dependent on others for their survival. Because of its business orientation, a co-op is more likely to continue operating after the external funders and organizers are gone.

Next Steps

There are three key next steps for further development of the community-based health cooperative model in Sub-Saharan Africa:

- 1. Continue CLUSA's health mobilization work in Kenya with an explicit emphasis on organizing community-based health cooperatives.** Several CLUSA staff members have already expressed an interest in taking this step during the 2010-2015 funding cycle for the Kenya program.
- 2. Implement the model in other Sub-Saharan African countries.** Expansion of the model to several countries in addition to Kenya would be an excellent means to more broadly determine its effectiveness and to test its adaptability in different political, economic and social contexts. A major constraint to the expansion of the model is the need to secure grant support from USAID and/or other development donors.
- 3. Rigorously evaluate the effectiveness of the model.** Although CLUSA carries out monitoring and evaluation of its health mobilization work in Kenya and the author of this paper has conducted case study and focus group research on the program in the Western and Coast provinces of Kenya, a detailed, longitudinal evaluation of the program should be conducted by an independent, third party entity in order to measure the cooperative health model's effectiveness and to identify ways to refine the model. For example, in the 2010-2015 funding period in Kenya, a university-based research team could collect baseline data on a range of health measures in new communities to be served by CLUSA and in a control group of communities not receiving CLUSA assistance. The research team would then carry out annual updates to determine what, if any, changes have occurred as a result of the program. The same kind of independent research approach could be carried out on the adaptation of the model to other countries.

CLUSA project, the village-based organizations did not have adequate time to develop their own long-term base of support. After CLUSA's departure, the government did not provide adequate follow-up support. As a result, nearly all of the informal village health organizations established during the project had ceased operation by 2006.

Conclusion

This paper has made a case for the application of a community-based health cooperative model in Sub-Saharan Africa. Key potential benefits of the broad application of such a model on the subcontinent are:

- Addressing the “last mile” problem – the persistent inability of current health care delivery systems to effectively reach village residents;
- The potential of village-based cooperatives to be first responders to, and “first mile” providers of, health education and health care;
- The experience of CLUSA’s community health programs in Kenya during the past decade;
- The ability to modify the CLUSA approach into the development of community-based health care cooperatives; and
- The low cost and the potential for rapid expansion and sustainability of the model.

The article presents three next steps to expand and test the model: CLUSA applying an explicit co-op approach to its work in Kenya; expanding the model into other countries of Sub-Saharan Africa; and rigorously and independently evaluating the effectiveness of the model.

Tens of millions of lives are at stake in rapidly identifying and implementing effective ways to improve health conditions in rural communities of the region. Village-based co-ops have the potential to be a key part of a health delivery strategy that could be put in place quickly and on a broad scale.

Appendix A. Focus Group Results from Western Province, Kenya

Following is an excerpt from “Synopsis of Community Health Mobilization Research in the Western Province of Kenya,” that the author wrote in 2008. It presents a summary of the research findings from a set of focus groups conducted with village residents and community health workers.



Community health workers and friend, Western Province

1. Priority health problems

Representatives from 23 villages²⁰ reported the major health problems identified in their village health plans. A list of the health problems reported as priorities in two or more villages are listed in the following table²¹:

²⁰ The village-level list of priority health problems is derived from 5 discussion groups comprised of village-level participants and 2 sublocation-level meetings in which participants from 18 different villages described their village-level health priorities.

²¹ The problems cited only once as priority problems at the village-level were: antenatal care, clinics running out of injectable contraceptives, compulsory inheritance of widows, distance to

Priority Health Problems Cited at the Village Level

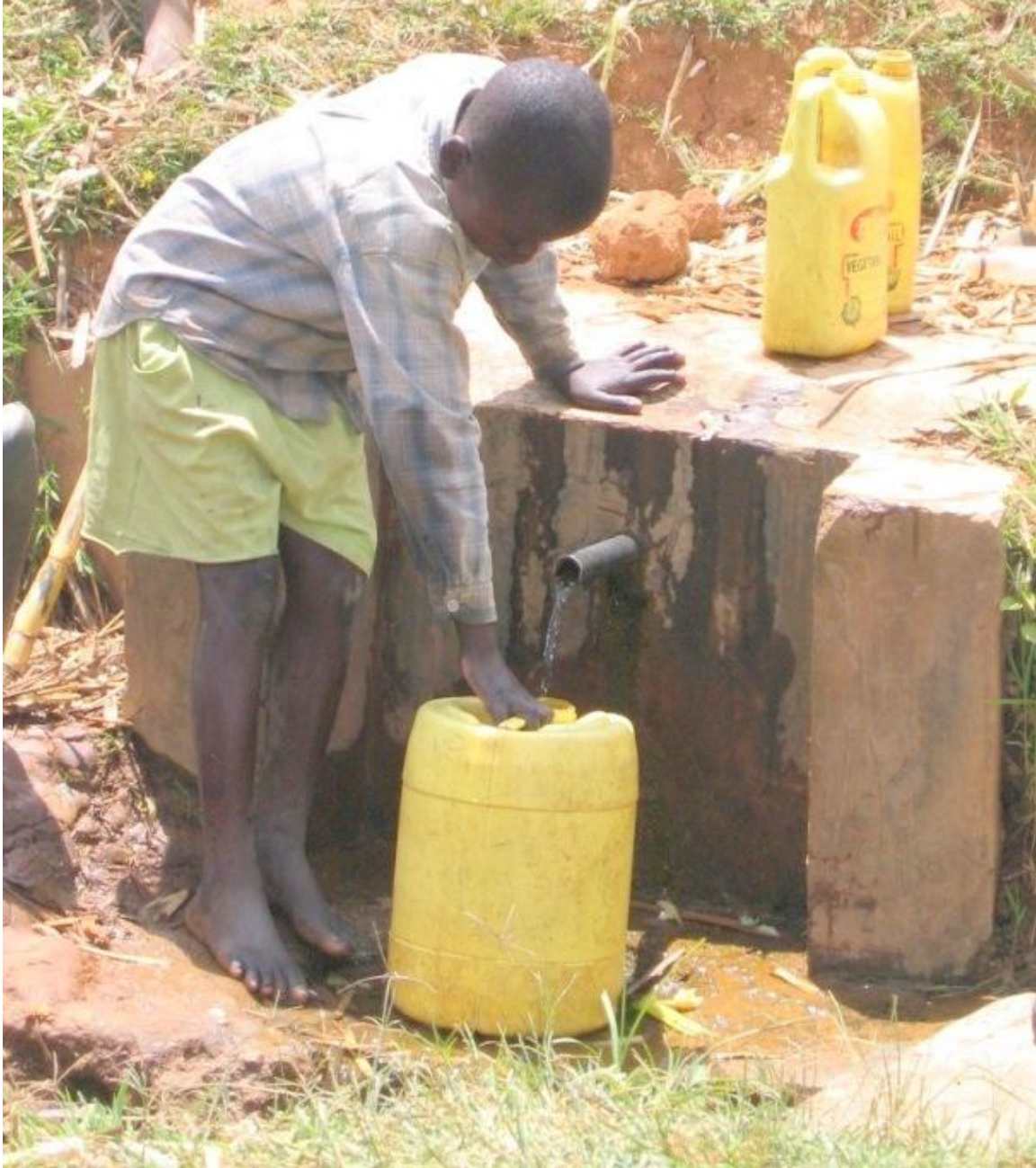
Malaria	16
Dirty water, typhoid	15
TB	12
HIV/AIDS	11
Family Planning	7
Poverty	7
Sexually transmitted infections	5
Pregnant mother to child HIV transmission	4
Orphans and widows	3
Child immunization	2
Sanitation	2

2. Health actions at the village level

For every health problem cited, participants in the interview groups gave examples of actions being taken to address them. Following is a brief presentation of preventive and treatment approaches that participants described for these priority health problems:

- a. To reduce the incidence and severity of **malaria**, villagers identified preventive measures such as providing insecticide-treated mosquito nets for children and parents; clearing brush and filling in potholes near homes; and treatment measures that focused on awareness of symptoms, over-the-counter medicines, and treatment at the health clinic for persistent high fevers.
- b. For **dirty water/typhoid** respondents mentioned two approaches: making sources of water sanitary by constructing sanitary springs or protected borehole wells, and/or by using Waterguard or boiling water to make drinking water potable.

the nearest clinic, early pregnancies, faithfulness, ignorance about health, people living with HIV/AIDS, poor attitude of health providers, youth abstinence, and youth crime.



Sanitary spring constructed by villagers in Western Province

- c. The emphasis described for **TB** was educating people about symptoms and encouraging those with symptoms to be tested and treated at a clinic.

- d. The approaches described for **HIV/AIDS** were a combination of preventive education, distribution of condoms, identification of people who show signs of being infected, encouraging them to be tested and to get on ARV treatment if appropriate, and providing support for home-based care in the village.

- e. Approaches described for **family planning** were also diverse, including education about options such as breast feeding, various contraceptive techniques, vasectomies and tubal ligation. Contraceptives are supposed to be available at primary health centers (although supplies are reported to be erratic) and surgical procedures are available at secondary health facilities.

- f. In many of the group interviews, **poverty** was cited as the primary cause of health problems. It was also seen as a very difficult problem to solve. Most of the communities were carrying out business development activities to improve economic conditions, but the participants in the group discussions generally believed that a lot more needed to be done. Business activities include group projects (e.g., carried out by village health committees, women's groups, or sublocation committees); projects promoting individual and family businesses; and projects with both group and individual components. Examples included: vegetable and other crop production and marketing; beekeeping; livestock projects (poultry, goats, sheep and dairy cows); a bakery; and agroforestry.



Bakery run by village women's group, Western Province

- g. The approach to **sexually transmitted infections** featured education on prevention and treatment, and promotion of the use of condoms.
- h. The approach to **preventing mother to child transmission of HIV** was a combination of education, encouragement of HIV/AIDS testing, and, for all pregnant women, prenatal clinical visits.
- i. Many of the group interview participants described efforts to donate food to, and raise money for, **orphans and widows** in their communities. Despite the efforts of sublocation health committees, village health committees, and women's groups to help these vulnerable community residents, participants reported that they could not keep pace with the problem without outside assistance.
- j. For the most part, **immunization** was not seen as a priority problem, because already kids had access to immunization services. For example, the village and sublocation health committees work with nearby clinics to provide mobile health services. In several cases, the committees raise funds to pay for transportation costs that allow clinic staff to have periodic (for example, monthly) outreach clinics that include immunizations and other health services.
- k. **Sanitation** was not considered a major problem in most villages. The primary sanitation issue mentioned was the construction of latrines. A few participants indicated that some villagers were slow to build latrines.

Appendix B. Case Study Examples from Coast Province

Following is an excerpt from “Emerging Community Health Cooperatives in Kenya Save Lives, Improve Village Health,” by the author of this paper, published in the November/December 2009 issue of the **Cooperative Business Journal**.

1. Village Health Meeting, Kilifi, Northern Coast Province

Kilifi is located high up in the hills, 8 miles on bad roads from the nearest clinic. As I sat in a meeting with about 20 men and women, they talked about how health conditions had improved since NCBA helped to organize a village health organization, a women’s group, a youth group, and started providing training to community health workers.

In the village health plan (developed in 2007 and revised each year since then), villagers identified malaria, teen pregnancy, lack of testing for HIV/AIDS, and maternal mortality as priority health problems.

Then they described what they have been doing about each of these problems.

Clearing brush in and near the village and filling in low-lying areas where standing water accumulates have greatly reduced the mosquito population. Most kids under 5 years of age and pregnant women now have insecticide-treated mosquito nets. For those who do get malaria, village residents have learned to recognize the early signs and have access to inexpensive treatment.

One woman from the village quantified the impact of the village plan as it relates to teen pregnancy. In 2006, 20 out of about 180 school girls were pregnant. Now, only three school girls are pregnant. How did they achieve this dramatic reduction? Sex education, including the encouragement of abstinence, but, at the same time, making condoms easily available for non-abstainers.

In many African communities, there is a stigma about HIV/AIDS. People don’t want to talk about it. They don’t want to be tested to see if they have it. They often shun those who they think are HIV-positive. As one Kilifi resident said, “The problem seemed so big and inevitable, that we didn’t know how to begin to address it.” (An estimated 8% of Kenya’s 15-49 year old population is HIV-positive.) Now, after three years of education and discussion, there is a dramatically different attitude in Kilifi. The villagers at the meeting were openly proud of the change. They reported that:

- More than half the adult population has been tested.
- People who need anti-retroviral treatment are receiving it and are able to remain in their homes in the village.
- Use of condoms is actively encouraged as a preventive.

What had been a taboo topic isn’t anymore. People who are HIV-positive are treated “just like anybody else in the village.”

Before the program, almost all women in Kilifi gave birth at home with the assistance of a traditional attendant. This resulted in a high rate of death and injury for both mothers and children and also the transmission of the HIV virus from mothers to infants. (This transmission is avoidable with proper treatment at birth). Now, almost all births take place at the clinic, even though this entails 4-5 hours of carrying the expectant mother on a litter to the distant facility.

Kilifi residents also cited “poverty” as one of their top health problems. They recognize that if they had more money as individuals and as a village, they could improve health conditions. As a result, one of the major health solutions identified in the village plan is “income generating activities.” In Kilifi and other villages I visited, these projects are all over the map. Many involve raising vegetables, other crops and livestock for the market to increase individual income as well as revenue for village projects. One income generating project in Kilifi is the construction of a new building that is currently serving as a tea house and, within the next year, will also provide a site for a small village pharmacy staffed by a community health worker. In the longer term, the village health organization’s goal is to build a small health center, including a birthing room, to avoid the arduous 8 mile walk to the nearest clinic.

2. Women’s Self-Help Association, Mbokweni, Southern Coast Province

Every week, members of this emerging co-op get together to discuss health issues and to plan and carry out income generating activities. During my meeting with fifteen members of the group, they were weaving mats from palm leaves as we talked. Sale of these mats is one of their sources of revenue. Others include a tree nursery, vegetable marketing, and rental of plates and utensils for weddings and other gatherings. Association members report that they generate income for group investments, donate some of the profits to orphans and “vulnerable children” in the village, and divide up some of the income among group members.



Women's group members weave and sell mats, Coast Province

3. Puna and Kavironde Village Health Organizations, Central Coast Province

Participants in this joint village meeting cited malaria, respiratory problems and lack of pharmaceutical supplies at the nearby health clinic as three of their major problems.

Since the NCBA program began, villagers have become well-versed in steps to prevent and treat malaria. Respiratory problems are proving more complicated. Participants in the meeting mentioned a nearby cement factory and a recently completed diesel-powered, electrical generator as major culprits. Dust particles from the cement factory are visible on coconut palm leaves in the area. The villagers can treat the symptoms of asthma and other respiratory problems with inhalers and other products, but their petitions to government officials to clean up the sources of the pollution have so far gone unheeded. Compounding the problem, the local health facility often doesn't have respiratory medicines in stock – not to mention anti-malarials, contraceptives and other health supplies needed in the two communities.

The two village organizations want their own small pharmacy so they don't have to be dependent on the local clinic for health-related supplies. One income generating

idea we discussed to finance the pharmacy was developing a market that made use of the thousands of coconut trees in the area.

Twenty years ago the Rabai Farmers Co-operative was a thriving business in the community, with its primary income from the sale of copra (the dried meat of the coconut that is used to produce coconut oil). The price of copra dropped and the co-op became dormant.

Now there is interest in revitalizing the co-op. One possible product is coconut oil for use as a biodiesel fuel. Since the new diesel generator is located virtually in the center of this major coconut growing area, the old co-op and the emerging health co-ops could get together to explore joint production and marketing to the diesel plant and to other coconut oil buyers. Not only that, the old co-op building is still in good shape and is well-located to be the site of the proposed joint village pharmacy.



Community-run pharmacy in Burkina Faso



Exploring the potential for linking a dormant farmers co-op with 2 village health co-ops, Coast Province