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BEYOND THE END OF THE ROAD

Report of a Workshop on Sustaining
the Ivermectin Distribution Program

Garoua, Cameroon, 1993

VBC Report No. 81505-C
Preface

This report examines progress toward integrating USAID-supported ivermectin distribution programs into health care services within regions of Nigeria and Cameroon. Particular attention is given to how these efforts are becoming self-sustaining as the result of partnerships within both the public and private sectors. The report is based on an evaluation workshop held in Garoua, Cameroon in October, 1993 organized by the Office of Health, USAID/Washington. The workshop was preceded by mid-term evaluations of the Adamawa/Taraba Onchocerciasis Program (ATOP) in northeastern Nigeria and the Cameroon River Blindness Program in South Province. These projects are being implemented by Africare and the International Eye Foundation respectively.

The Garoua workshop brought together implementors and evaluators from both projects to elucidate what we have learned to date regarding the long-term sustainability of ivermectin distribution programs. The lessons were expected to extend beyond the potential for making mid-course corrections within the two projects. In addressing the central issue of institutionalizing ivermectin distribution within the infrastructure of the host country's primary health care system, it was hoped that lessons could be found that would be more generally useful to governments, donors, and private voluntary organizations (PVOs).

This document represents the collaborative effort of a number of individuals from USAID and its VBC Project. From within USAID, Charles Oliver was largely responsible for the implementation of the effort. From VBC, Philip Boyle helped coordinate the workshop and recorded and analyzed its findings; James Sonnemann reviewed and contributed to the text; and Barbara Boyd served as senior editor to weave the pieces together. A note of special recognition is extended to Dennis Carroll, Deputy Chief of the Division of Communicable Diseases, Office of Health, USAID, for his leadership in the conceptualization of the USAID-supported Ivermectin Distribution Program and overall guidance in these efforts.

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Introduction

The Disease at the End of the Road

River blindness, known scientifically as onchocerciasis, infects an estimated 18 million people, mostly Africans. Of this number, up to one-third of a million adults are already blind from the disease and an equal number has suffered serious visual impairment. Onchocerciasis is found in 34 countries of Africa, the Middle East, North Africa, and Central and South America.

Known as river blindness because it occurs near fast-flowing streams where the vector lives and breeds, the disease is caused by *Onchocerca volvulus*, a microscopic worm transmitted to humans by the bite of small Simulid black flies. The worms live as parasites in people, with adult worms clustering in nodules under the skin. Immature worms migrate throughout the body and cause a variety of symptoms over months and years of infection. Among the most common complaints are itching, unsightly nodules, roughening and thickening of the skin (lizard skin), unpigmented patches of skin (leopard skin), and gradual loss of sight. Significant disease results from heavy infections; people with light infections may experience no symptoms.

In the 16 African countries with the greatest prevalence of river blindness, eight are engaged in black fly control programs using aerial larvicidal spraying of breeding sites through the Onchocerciasis Control Programme. Unfortunately, spraying to control the vector is expensive, difficult to sustain, and not practical everywhere. Nearly two-thirds of the world’s onchocercal blindness is found in the other eight countries not participating in the spraying program. They include Cameroon, Central Africa Republic, Chad, Ethiopia, Nigeria, Sudan, Tanzania, and Zaire. In these countries an estimated 80 million people are at risk of infection.

Because of the threat of river blindness, cultivation has been largely abandoned throughout vast portions of West Africa’s river valleys as populations migrate, often to marginal lands with poor soil quality, to escape the ravages of the disease. The river valleys they abandoned may be one key to Africa’s agricultural renaissance in the next century. They no doubt contribute to its current economic malaise.

The World Health Organization estimates that the life span of adults is reduced 15 years through blindness. The result is the loss of thousands of person-years of economic productivity. It is also estimated that at least 10 percent of people living in endemic areas have become "economically blind," because they no longer have the ability to provide for their families and themselves. If this disease were controlled, vast areas of fertile farmland could be reclaimed with enormous economic benefit to Africans, including the ability of their children to feed themselves and their families in the next century.

The areas most affected by river blindness are the tens of thousands of small communities remote from population centers where blindness rates are between two and fifteen percent. A majority of these sites are remote from population centers and not reached by existing health
care services. These communities—often literally beyond the end of the road—will continue to experience the scourge of river blindness and its attendant problems unless there is a sustained, coordinated effort to reach residents with the highly effective drug, ivermectin.

The Promise of Ivermectin

In 1987, ivermectin (trade name Mectizan®) was made available by its manufacturer, Merck & Co., free of charge to the international fight against river blindness. As a suppressive treatment for onchocerciasis, ivermectin kills the microfilariae of the parasitic worm rapidly. It generally works with minimal reaction unlike less effective chemotherapeutic agents such as DEC. The drug will not restore sight, but it will arrest further visual impairment. It also prevents most clinical manifestations of river blindness such as undesirable skin changes and itchiness from becoming worse. If treatment coverage rates are adequate, ivermectin's effects on the human microfilarial reservoir can lead to a significant reduction in transmission.

Because the drug leaves adult worms free to reproduce in the body, ivermectin must be taken at least once a year for the life of the worms—about 10 - 15 years. This fact, combined with the remoteness of the communities where river blindness is endemic, poses serious challenges to mounting effective and sustainable disease control strategies. Political disturbances, fiscal constraints, internal strife, wars, and famine are also preventing distribution of ivermectin. If these formidable obstacles can be surmounted, ivermectin holds great promise in liberating endemic communities safely and effectively from the threat of river blindness.

It is important to note, however, that a drug such as ivermectin, or an even more effective macrofilaricide in the future, will not solve the problem of onchocerciasis. Only after local communities and their institutions incorporate sustainable and appropriate development strategies within their own infrastructures will the age-old scourge of river blindness disappear.

Need for Local Acceptance

For people to become free from this disease burden and lead healthier and more productive lives, they must recognize the disease responsible for their blindness and other disease symptoms and accept the fact that they will need to take ivermectin annually for a decade or more. Even in communities beyond the end of the road and far from existing health services, consumer demand for ivermectin must be established to eliminate river blindness effectively.

Crucial to the success of generating self-sustaining demand in these communities is the long-term commitment of two groups—decision makers and health workers. Health officials, politicians, village elders and chiefs, and others of influence within communities can greatly facilitate the supply and acceptance of ivermectin to endemic areas. Health workers have the responsibility for assuring proper distribution and use of the medicine at the community level. Together, decision makers and health workers are key to creating community understanding of
ivermectin’s potential in fighting onchocerciasis, building consumer demand, and obtaining adequate supplies of the medicine to meet this demand.

Creating Sustainability

USAID defines sustainable development as economic and social growth that:
- does not exhaust host country resources;
- respects and safeguards the economic, cultural, and natural environment;
- creates many incomes and chains of enterprises;
- is nurtured by an enabling policy environment; and
- builds indigenous institutions that involve and empower local people.

When sustainable development is the goal, the focus shifts from projects to the web of human relationships influenced by project activities. Sustainable development requires investment in human capital—in the education, health, food security, and well-being of the population. It sparks change from within the society, from the distribution of power to the dissemination of technology.

Sustainable development mandates participation. It is based on the aspirations and experience of ordinary people, their notions of which problems should be addressed, and their consultations with government, outside change agents, and themselves. It involves, responds to, and is accountable to the people who live with the results of development efforts. It must help them build institutions of free discourse and inclusive decision-making.

The Role of USAID

As part of its efforts to foster sustainable development, USAID initiated in 1991 a three-year pilot ivermectin distribution program in targeted countries of Africa and Latin America. The program is designed to fight river blindness as well as assess the feasibility of using US-based nongovernment organizations (PVOs) to strengthen the institutional capacity of host country health care structures to provide cost-effective and sustainable delivery of ivermectin. USAID’s program is a collaborative effort between PVOs, health ministries, USAID missions and the Global Bureau’s Office of Health. The program is operating in Guatemala, Nigeria, Cameroon, Niger, and Burkina Faso.

It is the intention of the ivermectin delivery program to integrate its activities into those of existing health care structures and thereby assist governments in strengthening local capacity to deliver sustainable health care in rural environments. The skills and experience of US-based PVOs are being utilized to guide this process. At the conclusion of each project, local resources should be in position to assume responsibility for sustaining the distribution effort. The challenge for PVOs is to establish their projects within the existing health care infrastructure.
In partnership with host country nationals, the PVOs role is to:
- guide the initial scientific work;
- determine the mode of drug delivery;
- initiate training of health personnel;
- oversee the development of educational materials; and
- establish the initial collaborations with key decision makers within target communities.

At the project's end, the role of the PVO is to see that ivermectin distribution has been successfully transferred to local institutions.

Overview of Mid-term Evaluations and Garoua Workshop

During the second half of 1993, mid-term evaluations of the USAID's projects in Guatemala, Nigeria, and Cameroon were conducted. Readers are referred to the reports of those evaluations for details of findings and references. Overall each team of evaluators found that the potential exists for fully integrating ivermectin distribution into the primary health care system of the respective country. To ensure sustainability, however, there is much that needs to be accomplished before the end of the projects. Selected findings from those evaluations are included in the discussion of sustainability issues which follows.

The Garoua workshop was organized by USAID's Office of Health to address the potential for in-country institutional sustainability of ivermectin distribution. Central to workshop discussions was an assessment of the degree to which the Nigerian and Cameroonian projects have thus far succeeded in strengthening the institutional capacity of the state, local, and private health systems to carry out cost-effective and sustainable delivery of ivermectin.

In the following sections, the sustainability issues are addressed from a number of different vantage points. These include the roles of PVOs and the public sector in preparing for institutionalization; epidemiologic, financial, and management considerations; the importance of health communication; and integrating with other primary health care activities. These issues will be discussed in terms of findings from the mid-term evaluations and the Garoua workshop. The concluding section offers specific suggestions on how ivermectin distribution can be sustained beyond the end of the road to reach individuals at risk of losing their sight to river blindness.

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SUSTAINABILITY ISSUES
I. Role of PVOs in Preparing for Institutionalization

Establishing an Institutional Presence

To get an ivermectin distribution program up and running and, at the same time, foster sustainable development, it is important that the PVO have an institutional presence within the host country. This is where the project needs to be implemented, not from the PVO’s headquarters in the United States. Having a representative in-country and a country agreement signed assures the PVO of visibility, legal safeguards, and credibility.

This was not a problem for Africare in its ATOP program in Nigeria, because Africare has been working in the country since 1986 and has an office in the capital. Active in several sectors, Africare personnel know and are known to government officials, USAID/Nigeria, and others influencing the national policy process. As a result, they could work from the beginning of the project to create local ownership for the program. They were even more credible because they had collaborated with the Ministry of Health, UNICEF and other PVOs to set up Nigeria’s National Onchocerciasis Program.

The International Eye Foundation (IEF), on the other hand, had never worked in Cameroon. They lacked both an office in the capital and a country agreement. At the suggestion of a subcontractor, Tulane University, IEF hired as project director a Cameroonian physician who was completing a graduate degree at Tulane. He was to work out of the project site, far from the Ministry of Health in Yaoundé. Thus, the PVO was not known in the capital and found few opportunities to gain visibility for itself and to make the case for the importance of ivermectin in the Cameroon’s health care strategy. It proved difficult to supervise the project director from the U.S. and the director was absent from the project site and the country for extended periods. When he eventually resigned to pursue other opportunities, IEF and the Ministry were forced to assume control of the project.

Setting Up the Project

To assure sustainability, it is essential for the PVO to work in partnership with host country nationals in project planning from the beginning. This means that officials should participate in the planning and implementation of the epidemiologic and KAP surveys prior to completing a detailed implementation plan. The plan itself outlines all the actions necessary for carrying out the project, including criteria for sustainability. Before beginning distribution of ivermectin, project partners need to develop realistic timetables, identify personnel, meet logistic requirements, and see that management supervision and information systems are in place. They also must arrange necessary training and develop appropriate health communication materials. In undertaking surveys, setting up computer systems, and planning for training, it is important to focus on the needs of the entire health care structure, not just what is needed for the distribution of ivermectin. The hands-on participation of host country partners should facilitate this.
Project implementation never goes as smoothly as planned. In Nigeria, for example, state boundaries were redrawn during the planning phase of the project and the responsibility for primary health care was officially transferred from state to local governments. Africare had intended to assist Gongola state with a program; instead it is now assisting the newly created states of Adamawa and Taraba, in some ways doubling its work load. In planning for the IDP, its partners had been health officials within the state ministry. These officials suddenly had very limited capacity of carry out field work which had become the responsibility of local government area (LGA) officials. In addition, Nigeria's currency, the naira, was revalued. This strengthened the currency's value against the dollar early in the project cycle, further reducing available resources.

The project in Cameroon experienced considerable delays in implementation resulting from poor infrastructure for communication and logistics, an economy in steep decline, and political unrest surrounding presidential elections. Survey work was often delayed, and some scheduled training and supervisory visits had to be postponed.

Finding the Right People for Implementation

Fostering a partnership between USAID, PVOs, and host nations depends upon building ownership through participation. To create an environment for sustainable development, host governments must be equal partners in the process. This means they share the burden of responsibility for executing the project. Host governments, for example, are generally expected to provide office space and other public resources, particularly personnel. What is of even greater importance for sustainability is the sharing of the project's goals. This may be demonstrated when a ministry incorporates these goals into its long-term strategic policy objectives.

When host country nationals from the project area are hired by the PVO, they bring local expertise, language facility, and cultural sensitivity to the IDP that expatriates or staff from other parts of the country cannot provide. When the IEF needed a new project director, for example, they selected the new Chief Medical Officer of the subdivision who speaks the Bulu language. The appointment was approved by the Ministry of Public Health (MOPH). Not only was this a practical choice, it also reflected the emerging partnership between the MOPH and IEF.

During the workshop in Garoua, a participant raised the question of the appropriate staff size for an ivermectin distribution program. In South Province, Cameroon, IEF operated with an extremely small staff compared with their projects elsewhere. To prepare for sustainability by involving governmental health services from the outset, the project relied heavily on local health workers. As a result, the project moved forward at the government's pace and was subject to other priorities of the national health services, as exemplified by the sale of onchocerciasis cards for cost recovery purposes. On the other hand, Cameroonian were and are on the front line of ivermectin distribution. Much of the responsibility for project implementation now resides with the MOPH. The groundwork is being laid for sustainable development.
PVOs work with host country nationals from government, missions/hospitals, and the private sector. They must share the responsibility of ensuring that project staff represent local interests and that the process which selects them is fair. If passive distribution is employed, women are probably already involved as health workers, and women commonly make many health decisions for the household. They may not necessarily be used as CBDs, however, if a male hierarchical structure is in place. Where the community-based distributor (CBD) approach is used, and where it is culturally acceptable to utilize women workers, efforts should be made to use both men and women as distributors.

Selecting Intervention Areas

Considering the already very heavy disease burden facing sub-Saharan Africans and the need to build cost recovery into plans for local institutionalization, it is likely that a high prevalence rate of blinding onchocercal infection be a prerequisite to creating sufficient demand for ivermectin. Otherwise too many competing demands on the very limited resources of service providers and community residents will restrict ivermectin’s appeal. Blindness surveys and other epidemiologic assessments to establish intervention priorities should be carried out before selecting sites for an IDP.

After the initial epidemiologic surveys were conducted utilizing both intensive “skin snip” biopsy and rapid assessment techniques, the latter became the standard mode of assessment in both project areas. High prevalence rates of blindness were found in hyperendemic villages of the ATOP project, particularly in Taraba State. In Cameroon, ophthalmic survey methods were not successful. It was predicted that even if a blindness survey were done, the likelihood of finding a significant proportion of onchocerical blindness in South Province would be negligible given the low intensity of infection suspected and the known characteristics of forest strain of the parasite. The decision to base the IDP in South Province was made prior to the appropriate assessments. One reason was to be able to compare the forest variant of onchocerciasis in Cameroon with the savanna variant in Nigeria. Another was to demonstrate that a PVO can integrate a traditionally vertical program into Cameroon’s rejuvenated primary health care system. USAID has been a major supporter of that integration in South and Adamaua Provinces.

In Nigeria, epidemiologic surveys conducted by the project have confirmed that the public health impact of river blindness in parts of Adamawa and Taraba States is significantly greater than in most other areas of endemic onchocerciasis. In the 100 communities rapidly assessed during the first year of the project, an average of 15 percent of the men were blind. Treatment of onchocerciasis, therefore, is a highly appropriate public health priority, and there exists the potential for creating consumer demand for ivermectin.
Collaborating with Local Government

Maintaining an active partnership between donor agency, PVO, and host country to permit complete transfer of responsibility through the life of the project requires careful and consistent nurturing. Ideally, IDPs should be developed where the Ministry of Health's strategic objectives include control of onchocerciasis. With sub-Saharan Africa's disease burden and the meager resources most of these countries are able to earmark for their health programs, however, combatting river blindness may not always be a priority. Other serious diseases such as malaria and tuberculosis that are all too common in this impoverished part of the world may be of more concern locally than onchocerciasis.

PVOs are perceived by host country counterparts as effective in focusing governmental attention on a particular problem and keeping it there. In the absence of a PVO presence, the Nigerians at the workshop felt that governmental priorities would shift away from ivermectin delivery. The country is currently earmarking funds for IDP activities in the states involved, but the funding could disappear if Africare were to withdraw from the program.

Concern was also expressed at the workshop that government promises to local communities might not be honored were it not for the presence of PVOs at the side of government workers in visits to local communities. It was felt that the continued association of Africare and other PVOs with their former projects will continue to be necessary to assure IDP credibility and sustainability.
II. The Role of the Public Sector

Demonstrating Commitment

Although PVOs and the public sector should share responsibility and work together collaboratively from the earliest stages of project design for an ivermectin distribution program, donors and PVOs should have realistic expectations about the capacity of local governments to absorb new responsibilities. It is unlikely that Ministry of Health facilities will have, for example, good logistic capabilities or a well-developed management information system. Facilities may lack personnel and operating funds. There will probably be staff training needs in project management, monitoring, and evaluation as well as in health communication techniques. Generally not enough time is allowed in a project cycle for these important activities to occur. They are, however, key to developing infrastructure at the local level.

It is at this pre-implementation stage that a determination can be made about how involved local officials and health workers are and whether they are enthusiastic about the IDP. How much time are people committing to the planning process? Are they active participants at meetings? How serious are they about their Ministry's strategic objectives? Are they securing resources to support specific project activities?

Donors and PVOs need to be patient with host country officials in the development of a commitment to the objectives of the IDP. When they are not patient, the experience with other development projects suggests that often officials agree to get the project into the field without doing the detailed planning necessary or really becoming invested in project objectives. In times of increasing economic uncertainty, it is very difficult for host governments to say "no" to a well-funded donor agency. Many problems can result from this unequal collaboration. Donor-driven projects do not always lead to enhanced local capability and sustainability.

In Nigeria ivermectin distribution became integrated into primary health care activities because the State Ministry of Health worked closely with Africare from the beginning. It provided the project with most of the peripheral-level personnel and resources. While Africare continues to provide top management, the mid-term evaluators felt that this function can be taken over by staff from state and LGA health services with relatively little difficulty.

The Ministry of Public Health in Cameroon demonstrated a commitment to the IDP from the outset when it assumed primary responsibility for project implementation. In turn, it has the ongoing responsibility of monitoring the projects activities. How well this is done will depend largely on the commitment of the Chief Medical Officer for Dja et Lobo.
Promoting Linkages with Other Programs

It is important that IDP directors adjust their priorities to fit in with other disease prevention and control activities in their site areas. The more linkages that can be established with other programs, the greater the likelihood that ivermectin distribution will become institutionalized. Such linkages can also help strengthen the quality of top management for the IDP by securing personnel with the qualifications to assume responsibility for several health programs. In Nigeria, Africare's IDP project manager is also managing a USAID-funded child survival project in Adamawa State. Although the two projects remain separate, they utilize some of the same ministry personnel. The training in management skills provided by the IDP to health workers and local officials is now benefitting the child survival project.

Linkages can also be promoted outside the public sector. Workshop participants pointed out that private health care providers in Nigeria are distributing 20 percent of all vaccines in the project areas. Did it not make sense to involve them in ivermectin distribution as well? The issue of cost recovery for the PVOs would need to be worked out, but that is certainly possible. Local health officials were reluctant, however, to use other health care service providers for ivermectin distribution. This "turf protection" is not surprising considering the pre-eminence of the private sector in drug distribution. Perhaps international PVOs can inspire public and private sector leaders to form indigenous PVOs even if their success eventually puts the US-based PVOs out of business in the host country.

One area where it is particularly important to establish linkages is transportation. The absence of adequate transport for the delivery of health care is a ubiquitous problem throughout rural sub-Saharan Africa. Because ivermectin does not have to be kept under refrigeration, getting it to remote sites may be possible in conjunction with the delivery of vaccines or the mail. It is crucial to identify people who can make such systems work.

In Nigeria, Africare collaborated with numerous private organizations and individuals to advance ivermectin distribution. One man, Chief Mathias, decided to commit his own resources to the prevention of river blindness. He invested his own money to make the video, "My Brother's Keeper," documenting the devastating effects of river blindness in Taraba as well as the promise of ivermectin. The film was shown in a series on Nigerian National Television.

In South Province, Cameroon, Sister Mary Gallagher became an important link. In charge of a private mission health clinic in Oveng, she learned of the availability of ivermectin and made arrangements to secure and sell the drug to her community. This was particularly important in that there was no reoriented government health clinic in the area to handle distribution. The commitment and effectiveness of Sister Mary's efforts were well demonstrated. The MOPH's willingness to engage in a partnership with a private sector organization such as the mission in Oveng, however, is uncertain.
Keeping Decision-Makers Involved

People of influence—the country's political leaders, Ministry of Health officials, governors of states and their officials, local government representatives, traditional and religious leaders, village chiefs, heads of women's committees, key business people, directors of mission hospitals and clinics, and other PVOs project managers—have the potential of being very helpful to the process of sustaining ivermectin delivery. From the project's outset, it is important to obtain support from these individuals.

If decision makers see the control of river blindness as a public health priority and are convinced of ivermectin's potential for freeing communities from the threat of the disease, it is important to discuss in detail with these officials what they can do to advance the IDP. It is best to get their commitment in writing. Ongoing meetings and a yearly renewal of the written agreement are important steps in building sustainability for ivermectin distribution.

Coordination of IDP activities with governmental policy makers and other decision-makers in Nigeria is seen as an important activity which must continue after the departure of Africare. In general, advocacy activities within LGAs have required an average of seven visits to each LGA per year. Without such repeated visits, it is felt that IDP activities would soon fail to receive LGA support at the required financial and organizational levels.

In Cameroon, there appears to have been little commitment to ivermectin distribution efforts by the Division Chief Medical Office and some local officials at the beginning of the project. The doctor who replaced him, however, has acknowledged skills, motivation, and commitment to the IDP. As long as he is retained in Dja et Lobo, ivermectin distribution should continue as an integrated part of primary health care services.
III. Forward Looking Financial Options

Cost Recovery

The Bamako Initiative is an attempt to strengthen the delivery of primary health care services in sub-Saharan Africa through community financing, participation, and management mechanisms. Since it was launched in 1988, many countries have organized primary health care programs that rely, at least partially, on revenues generated through user fees. The Bamako Initiative has made it acceptable for governments to ask people to pay something for the health care they receive.

Evidence now suggests that most people do find money to pay for health services, despite the fact that these costs are very high in relationship to the incomes of individuals. When good quality drugs become available at local health centers, people find that the fees charged for care and treatment reduce their travel and time costs. Utilization of services often increases.

The issue of the appropriateness of cost recovery for ivermectin is one that both the public sector and PVOs need to consider carefully. If they decide to charge for ivermectin distribution—the drug itself must be free according to Mectizan Committee policy—the fee should be set after field testing. Care needs to be taken to have the charge appropriate to the local economy.

Of the three mechanisms being used in Africa for cost recovery, fee for service, product charge, and capitation, what option is best for ivermectin distribution? In Nigeria, only one of seven members of the evaluation team felt that it was practical for the project to even experiment with individual user fees for community-based distribution. Evaluators did, however, think it was appropriate for clinics to charge individuals for ivermectin treatment if they already have a user-fee policy for other services. Thus far, individuals are not paying for ivermectin.

Cost recovery discussions recurred often during the Garoua workshop. The consensus of almost all officials and health workers was that cost recovery should not even be experimented with in Nigeria. Nigerian officials stated strongly that delivery should be free for seven to eight years to establish popular demand for ivermectin securely. Throughout Nigeria no fees for ivermectin are currently being contemplated although it is recognized that oil revenues will diminish in the years ahead and health budgets will probably suffer proportionately. The private sector is active in providing health care services across Nigeria and many people, if they can afford it, prefer to use those services for diseases such as malaria and tuberculosis. The common perception is that at public facilities you may have a long wait, your problem may not be solved, and you may not be treated well. Reluctance to involve the private sector may reflect the reluctance of the public sector to give up more of the services it still provides. This does not auger well, however, for the long-term sustainability of ivermectin distribution.
In Cameroon, a revolving fund scheme for drugs functions fairly effectively, although only about a fifth of the health facilities in South Province have been "reoriented" to this new system. To conform with governmental policy, each retreatment with ivermectin should generate an individual fee for service which is to be based on an analysis of marginal cost, consumer demand, and people's willingness to pay. This analysis had not been done by either MOPH or IEF.

The project charges 200 FCFA for two treatment cards which people were told would be valid for 10 treatments. The fee was determined at a meeting of local Chief Medical Officers, primary health care officials, and other government and non-government representatives, but it is now considered too low for the number of treatments required. Malaria treatment, by comparison, costs 400 FCFA for one course of treatment. The mid-term evaluators concluded that cost recovery has been an impediment to high coverage in South Province. This may be less of an obstacle in areas of Adamawa Province, however, where the disease is more severe. They recommend a fee of 100 FCFA for retreatment be considered and tested on a trial basis. If successful, this fee should be integrated into reoriented centers' consultation list.

Community Participation to Support IDP

The strategy of community participation in the provision of health care services is one approach to encouraging the development of a health care infrastructure, and inviting the community to participate in the planning and implementation of the IDP can facilitate local 'ownership' of the program. In the face of mounting financial and economic crises, economic restructuring, and the promotion of competition and individual enterprise, however, it is questionable whether community involvement can be generated and sustained for ivermectin distribution alone. Encouraging community participation to support an integrated package of essential health services is more likely to succeed.

Although communities have raised funds for the development of health communication materials in Nigeria, only some are contributing to the costs of incentives for their community-based distributors. These costs often have been assumed by the LGAs. When communities do make an initial contribution, it is unknown whether financial support can be maintained through the ivermectin distribution cycle of 10 to 15 years. The experience has generally been that recurrent costs are difficult to secure.

Cameroon government policies do not permit the use of community-based distributors at present. IDP activities focus on the community only for the organization of public information campaigns by local authorities in coordination with the MOPH.

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Encouraging Private Sector Distribution

Another way to encourage wider distribution of ivermectin is to permit pharmacists and other private sector health facilities to stock the drug and participate in marketing efforts. Because of the safety of ivermectin, this is an appealing option. It would, however, require changes in policy both at the national level of host country governments and by the Mectizan Expert Committee which was established by Merck & Co. to oversee safety and availability.

The use of community-based ATOP distributors in Nigeria’s Adamawa State who could also do outreach distribution in neighboring Adamaoua Province of Cameroon, another major focus of river blindness, would seem to be a creative way to make the drug available in an area of great need. Unfortunately, this social marketing approach cannot yet and may never be made official given the differing health policies of the two countries on this issue.

Fund Raising for Ivermectin Programs

Another financial option to help sustain ivermectin distribution in-country is raising local funds from private benefactors. This option was suggested by Africare’s ATOP and Nigerian officials at the Garoua workshop. Once the LGAs have established their IDP activities in all endemic areas, they suggest, private contributions and active fund raising may be possible. This is a common means by which monies are raised for public purposes in Nigeria through mechanisms such as road taxes.

Participants felt that the active presence of a PVO is highly desirable to lend credibility and international importance to fund raising activities as well as to encourage governmental financial backing. Raising money for ivermectin from private sources should not be left entirely in the hands of state governments without PVO oversight. Even beyond the issue of potential corruption, state officials might be tempted to employ monies from the fund for more pressing priorities than annual ivermectin distribution.
IV. Need for Good Data

Site Selection Criteria

There is a lack of consensus among public health authorities on what is the minimum prevalence of onchocercal infection to justify mass distribution of ivermectin. Blindness from onchocerciasis is uncommon where less than 40 percent of the entire population is infected. The intensity of infection (i.e., average number of microfilariae in the microscopic field) and the specific strain of the parasite, savanna or forest, are even more decisive indicators. For many communities there will be little or no information available on the prevalence of onchocercal infection. Projects must start from scratch to determine the most appropriate sites for ivermectin distribution programs. Both evaluation teams recommended that epidemiologic assessments be completed prior to the selection of intervention sites.

In Nigeria, the IDP set as an objective to identify all of the onchocerciasis endemic communities in Adamawa and Taraba States through skin snip and/or rapid assessment (nodule palpation) surveys. Skin snip surveys were performed in a small number of sites until research confirmed the reliability of rapid assessment as a substitute for skin snipping. Because of limited government resources and the large number of communities with onchocerciasis, program planners elected to limit active distribution to heavily affected communities where at least 30 percent of men examined had palpable nodules. Research conducted by the World Health Organization indicates that more than 90 percent of the blindness caused by onchocerciasis occurs in such communities. The mid-term evaluators, however, were not convinced that the endemicity data and analysis for Adamawa State are valid.

In Cameroon, epidemiologic surveys included areas considered to be potentially endemic in the vicinity of the Dja/Lobo river system where the vector was reported to exist. Degree of disease prevalence was established both by skin biopsy and by rapid assessment techniques, but without the use of confirmatory blindness surveys. It was found that in the 13 high priority villages examined in Djoum Arrondissement, between 67 and 100 percent of the individuals skin-snipped had microfilaria, but the number of organisms found per specimen was quite low—between three and five per snip.

Importance of Determining Local People's Perception of Onchocerciasis

Given the many health problems they face, it is very important to determine if community residents in the projected intervention sites perceive river blindness as a serious problem. If they do not, it is unlikely that they will demand or expend their resources to obtain ivermectin. Qualitative and/or quantitative research methods can provide information on community knowledge, attitudes and practices regarding onchocerciasis (KAP surveys). This data should be gathered in such a way as to provide useful information to project managers. It is also important that local officials in the health ministry have access to the data on their communities—and all
other indicators generated by the project. See *Talking Drums: A Communication Handbook for Field Managers of River Blindness Prevention Programs* for more on this subject.

In Africare's ATOP project, an external consultant found that onchocerciasis as a distinct disease entity was unknown, largely because its signs and symptoms are extremely diverse. People tended to group together similar symptoms under a single cause. Itching, for example, was classed with scabies, leprosy, and leopard skin while loss of vision loss was considered a separate disease. Itching was believed to be due to causes such as "bad water," spirits, and exposure to field grasses. Blindness was caused by aging, spirits, or unidentified diseases. Names for river blindness disease have recently been developed in local languages. These names usually stress the symptoms of itching or blindness. Because of a lack of knowledge of onchocerciasis, the project employed a very simple health strategy which involved nurses visiting communities to talk about the disease and ivermectin. Community-based distributors then provide a brief explanation as they distribute the drug house-to-house. Whether this is enough to maintain long-term interest in taking ivermectin remains to be seen.

The workshop participants felt that experts in rapid assessment techniques should assist IDP managers in Nigeria in interpreting the data gathered. Both validation and interpretation are important issues with regard to epidemiological assessment. Because the epidemiology of the disease is often a complex mosaic where one village may be highly endemic and another nearby is not, there is interest in plotting survey results on a map by degree of endemicity. Computerized geographic information systems could be useful for this purpose. They could also be of benefit to the MOPH by providing accurate geographic data, perhaps for the first time. Site choices appeared to be appropriate in Nigeria: they include the most hyperendemic areas for river blindness in the world.

In Cameroon, the target population was far less aware of the dangers of river blindness. The disease, in fact, is not severe in the project area, and people are much more concerned about malaria or other diseases. Onchocerciasis is known primarily as one afflicting only the elderly and is consistently confused with loiasis. The generic name for filarial infection in the local language is *minak*, whose symptoms seem far more related to loiasis than to onchocerciasis. To educate the population about the differences between the two diseases, a health education folder was introduced. It uses the French term *maladie du Dja* for river blindness, but this term has no analog in the native language. The project location in Cameroon was selected for political reasons as well as to provide a contrast between savanna and forest strains of onchocerciasis. It is questionable whether this area is a suitable candidate for a self-sustaining ivermectin distribution program.

**Need for Quantitative Indicators**

To access progress towards integration with other health services and local institutional sustainability, quantitative indicators need to be established at the outset of the project. These indicators should include the total population size in target areas; approximate percentage of
ineligible population (pregnant women, those who have given birth within the week, children weighing less than 15 kgs, and the very ill); number of people treated; and the number experiencing side effects. Other indicators should be related to external versus local contributions, such as the percentage of expatriate and local personnel at various stages of the project; passive versus active distribution modes; cost-recovery mechanisms; and how well the project integrates with overall strategic objectives of the host government’s health policy. To encourage sustainability, it is important to help local officials view the collection of such information as a tool for planning and not as a mechanism for identifying project shortcomings.

In Nigeria, the evaluation team felt that field records were appropriately designed and completed. The record forms were simple enough for community-based distributors to complete. Project managers had access to detailed reports on all project activities. How well these data were utilized in decision-making at local and state levels, however, was not clear.

IEF had difficulty in estimating the size of the target population in Cameroon. This was due to the frequency of migration in and out of the area, lack of reliable census figures, and the inability of the project to conduct its own census. In South Province the population denominator was derived from a 1989 population estimate and should have been updated by adding a population increase of approximately three percent per year. A related problem was the difficulty in determining the demographic composition of the population. Because small children, new mothers, and pregnant women are excluded from taking ivermectin, their proportion of the total population plays an important part in estimating the coverage rate. The project assumed an exclusion rate of 35 percent, resulting in a coverage rate of 14 percent. To workshop participants, it was not clear why 35 percent of the population should be considered ineligible. This is unusually high for sub-Saharan Africa. In rural Guatemala, by comparison, only 23 percent was found to be ineligible. The logic behind the rationale in Cameroon is not known, except perhaps to the first project director who has since departed. The project should not have been dependent on just one person in terms of design and implementation activities. From the start, information should have been shared with the MOPH and PVO headquarters, and better documentation should have been required.
V. Overcoming Logistic and Management Obstacles

Managing Projects in Remote Locations

In the countries of sub-Saharan Africa where onchocerciasis is endemic, there are formidable logistic and management obstacles to overcome in establishing an IDP project. River blindness has been called a disease beyond the end of the road because it often occurs in remote communities far from population centers. These sites are frequently not served by health facilities.

There is a distinct advantage in coming to a remote area with new resources. It is unlikely that local communities will ignore them or take them for granted. Every effort should be made to stretch these resources as far as possible, however. They should build upon the local infrastructure and conform to local ways of doing things. If, for instance, per diem or travel allowances are generally paid to MOPH personnel when asked to perform field work away from home, this tradition should be followed. From a management perspective, every effort should be made to support people in doing a good job.

It is important also that host country governments do not unintentionally sabotage project activities. Examples of this include requiring fees to be paid at checkpoints at subdivisional boundaries, road taxes, and currency revaluations.

The part of Nigeria most severely affected by river blindness is in the far east of the country where Nigeria shares a mountainous border with Cameroon. Within Adamawa State Gashaka, Bali, and Ganye LGAs form a single contiguous region that is believed to constitute the most heavily infected focus of onchocerciasis in Nigeria and perhaps in the world. Travel and living conditions in these LGAs are very difficult. With one exception, local governments appear to be adopting the ivermectin distribution project as their own. During its second year, they have dedicated sufficient management capacity to address most of the administrative needs and sufficient funds to pay for at least 75 percent of the of distribution costs.

In South Cameroon, some health centers within the project area were inaccessible during the rainy season. The lack of appropriate vehicles handicapped distribution to the more remote sites and thus contributed to the low coverage rate.

The Issue of Transportation

One of the biggest obstacles to reaching remote communities is the problem of transportation. There are never enough four-wheel vehicles and motorcycles to go around, and available vehicles are often not running. Because transportation is such an ongoing problem, it is important for project managers to understand how people and supplies get around in intervention sites. It helps to identify those people in the area who are problem solvers and try to interest
them in ivermectin distribution. Because the drug does not require refrigeration, it may be possible to transport it through private sector means.

In Africare's ATOP project, transportation became a problem early on when the division of Gongola State into Adamawa and Taraba States seriously weakened the mobility of state health personnel. Of the six or seven state personnel assigned to the IDP, two were spun off to Taraba without a vehicle for project activities. Africare had budgeted one vehicle for the project, but after 15 months this truck was out of commission. Similar problems had occurred with three new vehicles provided by UNICEF to the Taraba Ministry of Health. Efforts to repair the trucks had not been successful at the time of the mid-term evaluation, and the project had no all-terrain vehicle for use in either state.

State and local governments in Nigeria do have a limited capacity to purchase vehicles and motorcycles. During the mid-term evaluation, the governor of Taraba State promised that the state government would purchase a vehicle for its Onchocerciasis Control Unit. The Director of Disease Control of Adamawa State said that his state might be able to do the same. Government officials, however, have so many competing demands for the available vehicle that they are likely to find it difficult to provide sufficient transportation for ivermectin distribution activities in the future.

One of the biggest problems for the newly trained primary health care coordinators in Cameroon charged with distributing ivermectin to the health centers throughout the project area is the lack of transportation available to them and their supervisors, the chief medical officers of the sub-divisions. Motorcycles exist in all five project areas, and Peace Corps volunteers with motorcycles are assisting with ivermectin distribution in three out of five of these areas. This motorcycle network, however, is inadequate to the task. To assist with distribution, the International Eye Foundation has brought in a vehicle and repaired motorcycles, but these activities are stopgaps that do not necessarily contribute to the project's goal to institutionalize ivermectin distribution at the local level.

**Acquisition of Ivermectin**

As mentioned above, Merck & Co. established the Mectizan Expert Committee to oversee the distribution of ivermectin to any organization having the ability to deliver the drug responsibly and the capacity to prevent its misappropriation. The committee reviews applications from organizations wishing to carry out mass distribution of the drug to communities. Application forms are supplied. They require, among other things, a signature from the Ministry of Health of the country in which the drug is to be distributed.

An important role for the PVO implementing an IDP project is to see that plans are made for ensuring an ongoing supply of ivermectin from the committee. State and local officials should be involved from the beginning in applying for the drug. They or the national onchocerciasis coordinator should take a leadership role in completing renewal applications for Mectizan.
Presently, Africare handles the ordering of Mectizan in Nigeria. The project in Cameroon, however, has institutionalized this step by having the national onchocerciasis coordinator be responsible for ordering sufficient amounts of the drug. Ivermectin is now included as an essential drug in the country's pharmaceutical distribution system.

Training Needs

To enable local authorities to assume responsibility for ivermectin distribution, it is important to provide ministry officials and health workers with specific training. Ministry officials benefit from management training in areas such as project monitoring, supervision, and data collection. Health workers need training in communicating messages about river blindness and ivermectin to community residents. Although training for both of these groups is specific to the IDP project, it should benefit other health service activities as well and contribute to strengthening the skills of public sector workers.

Africare's ATOP project in Nigeria trained staff of the Adamawa and Taraba State Ministries of Health. They, in turn, trained and supervised LGA onchocerciasis workers, who then train and supervise CBDs and others such as directors of private mission health centers and school teachers. Those trained acquire the skills needed to plan all activities for ivermectin distribution, to train and supervise local distributors, to perform rapid epidemiologic assessments, and to undertake KAP surveys. At the time of the mid-term evaluation, all local onchocerciasis workers had been trained and were in the process of training community-based distributors. A training manual had been developed in Hausa as well as English for the training of local distributors.

Although this training appeared to be largely effective, workshop participants stressed the need for ongoing management training for LGA personnel so that they will have the administrative skills to manage ivermectin distribution when Africare withdraws. The national onchocerciasis control coordinator should be encouraged to participate in planning the training and in coordinating the various management systems now being used in the numerous IDPs in Nigeria.

Staff and supervisors from the Ministry of Public Health in Cameroon's South Province received training in the financial and management aspects of the ivermectin delivery program. There is a need, however, to consolidate, standardize, and monitor on an ongoing basis the training of health supervisors. It is important to integrate these activities into the in-service training of the rural primary health care system to strengthen this infrastructure.

Communicating with Host Governments, PVO Headquarters, and USAID

Maintaining regular communication with key policy makers, donors, local leaders, and PVO headquarters staff is an essential component in the process of achieving a sustainable program. These individuals should know about project successes, suggest ways to overcome project
obstacles, and share in the total effort to make the activity self-sustaining. In short, they should be kept in the communication loop.

Communication can take many forms: periodic visits with national officials; written reports to donor agencies; invitations to make site visits; video documentation of project activities; and anecdotal reports from the field. These approaches make it possible for host government officials, PVO directors, and USAID program staff to be involved in project activities in an ongoing fashion.

In Nigeria, evaluators recommended annual meetings with key decision makers and governmental officials instrumental in assisting the IDP, and they suggested that annual written agreements between decision makers and implementors be the rule. In Cameroon, the evaluators recommended a joint meeting of officials from MOPH, South Province, USAID, and PVO staff to develop an action plan for the complete integration of the project within the framework of the reoriented primary health care system. Subsequently, a meeting did take place, and a suitable plan was formulated.
VI. Empowering Communities through Health Communication

Role of Volunteer Health Workers

The Bamako Initiative has encouraged governments and international assistance agencies to experiment with the use of community-based volunteers to strengthen the delivery of health services. Results have been mixed, largely because the volunteers have been compensated in inconsistent ways by their communities.

In Nigeria, Africare specified that ATOP would introduce a system for mass distribution of ivermectin by community-based distributors (CBDs) to be trained and supervised by health workers from local government and/or church clinics. Contrary to the original plan, distribution during the first year was carried out by mobile teams of local health professionals. This permitted the officials who were to be the local onchocerciasis control workers to become acquainted with target communities and with the procedures involved in ivermectin distribution. The second round of ivermectin treatment, however, was done by CBDs. They were selected by community leaders and given two days of theoretical training followed by one to three days of practical training. Pre- and post-training tests were given. Immediately following the training, they returned to their villages to distribute ivermectin. At the time of the mid-term evaluation, this round of distribution was approximately half completed. There was unanimous agreement among health workers, public health officials, and policy makers that the CBD strategy was preferable to distribution by mobile teams of LGA health workers. Concern was expressed at the workshop that there were no female CBDs. The Nigerian representatives (both men) said that cultural factors limited the effectiveness of women, but that they were considering recruiting women in the future.

The community-based strategy is achieving maximum coverage in Nigeria, but at a cost. Workers must be motivated, i.e., paid an incentive, and they must be supervised by a health professional. Thus this strategy can only be sustained if health administrators and/or communities themselves continue to commit funds and attention to the strategy.

Although some 12,000 CBDs had been trained and placed in communities throughout Cameroon for various health promotion activities, the experience has not been successful. A major problem was that after six weeks of technical training, no provision was made to pay CBDs from government funds, and communities were unwilling to assume the responsibility. In a reversal of primary health care policy, the government moved away from the Bamako Initiative regarding CBDs. Thus it was not possible to consider this approach to ivermectin distribution in South Province.
Importance of Village-based Health Committees

Another element promoted by the Bamako Initiative is the creation of health committees at the village level. These committees are to function as a link between community residents and the health care system. Committee members also disseminate health education messages and serve as advocates for health care services. They have great potential for creating and sustaining demand for ivermectin, and they are an important component of Africare’s ATOP project in Nigeria.

At the workshop, a Cameroonian participant observed that although present health committee members are generally distinct from the former CBDs, much of the enthusiasm of health committee members has waned since their formation several years ago. The primary reason for this is they are not compensated for performing their management duties. This may call for new efforts to train community volunteers or for committee members themselves to distribute ivermectin, but the ministry is not yet considering these approaches.

Training of Health Workers

To be successful in eliminating river blindness from endemic communities, people need to be convinced of ivermectin’s effectiveness and the need to take it annually for a decade or more. Health workers are key to building this community support. It is their responsibility to communicate IDP messages to people and to ensure community participation for ivermectin distribution. If possible, it is best to use health workers already active in target communities and provide them with specific instruction on onchocerciasis and ivermectin.

In Nigeria, local onchocerciasis control workers fulfilled this function. More than 150 of them were trained by state onchocerciasis control workers. Local workers, in turn, trained the community-based distributors whom they then supervise. It is this approach to training which will help strengthen the skills and effectiveness of local workers in the long term.

In-service training of health workers was undertaken in Cameroon. It was also recommended that on-the-job training in ivermectin delivery be conducted in health centers as part of supervision activities by District and Divisional officers. This training should be integrated into Provincial primary health care refresher courses. A training module on onchocerciasis should also be developed in collaboration with the Ministry of Public Health for inclusion in health center training.

Health Communication Strategies

Different materials and approaches are needed for different audiences in the fight against river blindness. Community leaders and key government officials are important in getting the message out on the potential benefits of ivermectin. Mass media, videos, community dramas
and skits, and posters and flip charts can be effective. If possible, these materials should be developed locally and pretested on target audiences. The IDP health communication handbook *Talking Drums* addresses the subject of communication at length.

In Nigeria, an external consultant was brought in to assist in the development of a health education strategy. She conducted focus group discussions and interviewed key informants to obtain information for a set of health education brochures. The brochures were not completed, but the mass media was effectively used to create awareness of ivermectin's potential. When mobile teams arrived in villages to begin the first round of distribution, people had already begun to line up to receive the drug.

Health communication messages were presented verbally by nurses and CBDs, and school children were taught a song about onchocerciasis and ivermectin. A small sample of individuals was interviewed to determine the impact of this simple publicity campaign. Men appeared to have retained most of what they had been told about onchocerciasis and ivermectin. Women and children had absorbed less of the message, however. It appeared that the all-male CBDs may have neglected to speak to these subgroups. For ivermectin to be successful in combating river blindness, men, women, and school-age children must all understand its potential.

Local village chiefs were mobilized by the Ministry of the Interior in Cameroon to spread the ivermectin message to the population and to summon people for treatment. No house-to-house canvassing was conducted. Health education messages and onchocerciasis brochures are delivered at health facilities. Mobile teams also disseminated health education messages during the active phase of ivermectin distribution. Some promotional activities were conducted in schools.

Workshop participants questioned the adequacy and transmission of health messages in South Cameroon. Distortions in basic messages were noted by the evaluation team in interviews with different population groups. This was particularly true for the messages concerning exclusion criteria and adverse reactions: some people had no memory of this message. Some information provided was simply incorrect, e.g. the prohibition of alcohol, tobacco, and sometimes sex three days prior to and two-to-three days after taking ivermectin. In other cases, rumors of death from ingesting ivermectin circulated and taken seriously by people over a large part of the project area. Immediate action needs to be taken by the health system to investigate and resolve such rumors as they occur.

**Building Grassroots Demand for Ivermectin**

As has been mentioned, the successful institutionalization of an ivermectin distribution program must be accompanied by the creation of consumer demand for the drug in the isolated, rural communities where the disease is endemic. This is a considerable challenge, particularly given the expectation that ivermectin will have to be taken for a period of 12-15 years to be completely effective.
In the project intervention sites in Nigeria onchocerciasis is such a significant public health problem that little publicity was required to convince people to take the drug. Thus far ivermectin distribution has been a very popular service. Whether this demand can be sustained once the novelty wears off remains to be seen.

In Cameroon the project achieved a coverage of only 20-25 percent. Ivermectin was the only drug available at some centers, and it was mostly older people who were interested in obtaining the drug. How much of this lack of demand was attributable to the fee charged and how much to a lack of interest in the drug's potential benefits is unknown. River blindness is not perceived to be a serious health threat in the project area, and it appears doubtful that long-term consumer demand can be generated. At the workshop, the concomitant impact of the drug on control of other diseases was discussed. Ivermectin may be demonstrated to be a more cost-effective agent against helminthic infections such as roundworm and hookworm than drugs currently used. Policy decisions from both the Ministry of Public Health and the Mectizan Expert Committee would be required, however, before ivermectin could be included in the national formulary as an anthelminthic.
VII. Integrating into Existing Health Care Structures

End of the Era of Vertical Programs

During the past 40 years donor agencies have established many vertical programs in the developing world—from malaria control to family planning and oral rehydration therapy. Results from these well intended efforts have too often been disappointing. There is now a consensus between donor agencies and host country officials that new programs should be integrated into existing sector structures. This, planners believe, will strengthen those structures to create and sustain long-term development. In very difficult economic and political circumstances both Nigeria and Cameroon are attempting to phase out vertical programs.

One of the fundamental pluses with the IDP in South Province is the policy and institutional framework into which it was placed. All health care activities are now mandated to be integrated into the new health care system.

Fitting Ivermectin into National Health Programs

With their severe economic constraints, health care structures have a difficult time maintaining adequate supplies of drugs. Cost recovery mechanisms are helping to boost drug availability, but it is still common for clinics to be out of essential drugs and other supplies for months at a time. Much needs to be done to improve the management aspects of securing and monitoring supplies at the local level. With the new resources of IDP coming into rural areas, there is an opportunity to broaden the delivery of health care services.

The remoteness of many of the intervention sites for ivermectin distribution in Nigeria has meant that they are beyond the reach of existing clinic outreach programs, so community-based distributors are not integrated into the primary health care system. The distributors are, however, supervised by LGA officials and supplied with ivermectin and drugs to counter side effects. Evaluators felt that Africare’s ATOP had made considerable progress towards establishing primary health centers where none had existed before.

In Cameroon’s South Province, the project area was just beginning the process of reorientation of the primary health care centers in Dja et Lobo Department. The new policy makes existing health centers the cornerstones of health care delivery for which fees are charged. Local people are targeted to co-manage essential drug provision to these centers. All health care delivery functions now have to pass through the reoriented system.

Training in finance and management has improved the skills of local Ministry of Public Health officials, but this training has not been integrated into the in-service training of the health care system. To ensure project supervision and management, a simple data collection system was developed. It has not been automated, however, due to successive equipment failures. A
mechanism has not yet been established for the integration of the project data into the ministry's information system. The concept of using ivermectin distribution activities in non-reoriented centers as a springboard for their reorientation faces serious obstacles. While an appealing idea, the geographic priorities for reorientation and ivermectin delivery often differ.

Dealing with Other Potential Providers

Religious missions and community pharmacies both have the potential for assisting in the distribution of ivermectin to populations at-risk for river blindness. Often religious missions have been in an area long before the establishment of primary health care facilities. Local people are used to visiting mission clinics for their health needs. They also buy drugs from community pharmacists, traditional healers, and marketplace traders. As discussed earlier, there is as yet no mechanism for making ivermectin available through these sources. If such a mechanism could be created, this would probably be a very effective way to get the drug into the hands of people who really need it.

At the Garoua workshop, the possibility of involving religious missions and other private hospitals or dispensaries in the distribution of ivermectin was raised. Africare's attempts to utilize these facilities faced two major problems: (1) missions have cost recovery systems which are not acceptable to the state and local governments in their activities; and (2) religious mission coverage is limited to a small catchment area, not particularly useful in the overall scheme of extensive community-based coverage adopted by Africare for the ATOP project. Africare and Nigerian officials are hopeful that the issue of cost recovery can be worked out in the future, allowing missions to retain their fee structure for ivermectin while expanding their catchment areas. It was agreed that active and passive modes of distribution could coexist in project areas, but that they should be carefully coordinated through ongoing discussions with all key parties.

In Cameroon the mission hospital in Oveng and the Nden private hospital have the potential to be very helpful for passive ivermectin distribution. A mechanism needs to be developed to integrate these facilities into the public sector's cost recovery systems whenever feasible. Such an action would be more cost-effective and avoid needless duplication.

Influencing the Policy Process

Integrating a new service into an existing health care structure requires a mature, well-functioning system at the beginning of the project. This is rarely the case in sub-Saharan Africa. Most health care structures are either weak or only semi-functional. When a donor agency undertakes a new activity, there is an important potential for influencing the host country policy development process. Care should be taken, however, not to overburden fragile institutional structures, and patience is needed by PVOs who may be used to operating at a faster pace than their project partners.
In Nigeria, Africare was perceived as playing a critical role in focusing government attention on onchocerciasis and keeping it there. In the absence of some PVO presence, Nigerians associated with the project felt that governmental priorities would shift away from ivermectin delivery in the future. It was important, they said, for Africare and other IDP-implementing PVOs in the country to retain some visibility in the ongoing effort to eliminate river blindness, if only as formal evaluators or expert consultants. While Nigeria presently earmarks funds for IDP activities at the state level, this support could easily fade without external advocates for the program at various political levels. Because of the unstable political situation, the national health ministry has had less of a role in the IDP project. At present, the onchocerciasis program coordinator lacks experience and has little access to ministry officials.

In Cameroon, the political dimension to site location was significant. The director of the highly centralized MOPH was involved in project decisions at several levels including selection of the project site and naming of the second project director. The onchocerciasis program director was a part of ministry decision-making. It was easier for him to interface with the MOPH then for IEF who lacked the needed clout. On the other hand, USAID's health officer—perhaps due to his higher status—had frequent access to MOPH officials.

These findings from the mid-term evaluations of the ATOP and South Province projects and the Garoua workshop exemplify the myriad details that have to be successfully dealt with by PVOs and their partners if ivermectin distribution is to be maintained well beyond the life of the projects. Such institutionalization is rendered particularly difficult by the frailty of primary health care structures in these countries as well as their unstable political situations. Lessons gathered at the Garoua workshop concerning sustainability and the use of PVOs as agents of change are the subject of the concluding section of this report.
A GUIDELINE FOR THE FUTURE
Lessons Learned during the First Two Years

What sustainability lessons can be learned after two years from Africare's Adamawa/Taraba Onchocerciasis Program in northeastern Nigeria and the Cameroon River Blindness Program in South Province in Cameroon? By focusing attention on the issue of institutionalizing ivermectin distribution within these two countries, certain recommendations can be made on how activities can be sustained beyond the life of the two projects. These suggestions are offered in the context of combating river blindness worldwide, but they may be applicable to many other development efforts as well.

Components of Sustainability

With these projects, each team of evaluators found that the potential existed for fully integrating ivermectin into the primary health care system. They pointed out, however, that success in liberating whole communities in onchocerciasis-endemic areas from the threat of river blindness will depend on:

- developing functional health centers within intervention areas;
- institutionalizing commitment from ministry officials at national, state, and local levels;
- transferring crucial skills and management methods to host country institutions through effective training;
- making the drug available and affordable through public and, where possible, private sectors;
- establishing ongoing consumer demand through appropriate site selection and effective health communication; and
- providing ongoing visibility and advocacy for ivermectin distribution.

PVOs as Agents of Change

How effective are PVOs in creating an environment for sustainable development? Although both Africare and the International Eye Foundation have encountered numerous challenges in their projects, they have been successful in building partnerships between sectors and strengthening the institutional capacity of state and local health systems to carry out ivermectin distribution.

The ATOP evaluation team felt that Africare must attempt to strengthen the health structure at the state level before the departure of its management team. In addition, state ministries will need increased LGA support. To accomplish this, the evaluators suggested that Africare appoint a Nigerian project manager for each state who will act as leading managers for project activities and regularly hand over more and more management responsibility to state officials. It was also
recommended that Africare establish and equip an office for each of the state onchocerciasis control units to help institutionalize their role within the health care system.

At the project’s midpoint, Nigerian officials were claiming full integration of ATOP with governmental health services because LGA workers were performing all delivery activities and had trained and were supervising community-based distributors. At the same time, officials indicated that Africare and other IDP-implementing PVOs in Nigeria should retain some visibility in future ivermectin distribution, if only as formal evaluators or expert consultants. The Nigerians felt that sustainability of ATOP and other IDPs depends on a continued PVO presence. It may be possible to establish a transition period during which the PVO would return to provide occasional expertise or evaluation. Such an arrangement would support the international image of the IDP, maintain governmental focus on the program, and work to promote long-term continuity in management structure and program efficiency.

The International Eye Foundation also needs to take steps to integrate ivermectin distribution into South Province’s health care system by the end of the project. Evaluators recommend that a cost-sharing system for ivermectin delivery be integrated into the MOPH as it already is in the Dja et Lobo Division. A plan for the prompt turnover of funds collected from the sale of onchocerciasis cards at health facilities needs to be developed. Included in this plan should be a strategy for utilizing only the essential information from project forms so this information can be included in the existing management information system of the provincial system.

To encourage sustainability, IEF needs to take a leadership role in developing and standardizing appropriate health education messages. Evaluators recommend that this activity be part of the new integrated plan for retraining and supervision which IEF will continue monitor. They should also see that ivermectin continues to be made available to all reoriented hospitals and health centers. Stock remaining at project headquarters should be turned over and accounted for by the ministry’s provincial distribution system. IEF should also replace the project’s computer so that the newly developed ivermectin distribution management system software can be utilized. Together with the MOPH, the project director needs to determine exactly what data elements from the information system are to be incorporated into the ministry’s system.

IEF quickly followed up on an evaluation recommendation to hire a new project director, and they are to be commended on what appears to be an excellent choice. With his background, it is anticipated that the new director will be successful in turning the responsibility for ivermectin distribution over to Cameroon officials.

It is instructive to note how much the two projects in two adjacent countries differ, even though they focus on the same health problem. There is clearly no single pattern to be recommended. Each program is approaching institutionalization in its own way, appropriate to its own context. The ability to be so flexible in approach is one of the real strengths of PVOs as agents of change. Future reports from Nigeria and Cameroon will demonstrate how well they succeeded.
Appendix

List of Participants

Garoua Workshop
October 1993

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